BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION AT NEW DELHI

PETITION NO. 4/SM/2021 (Suo Motu)

IN THE MATTER OF:

Commission on its own motion ... **Petitioner**

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BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION AT NEW DELHI

PETITION NO. 4/SM/2021 (Suo Motu)

IN THE MATTER OF: **A mechanism to determine Compensation on account of installation of Emission Control System by the generating companies in compliance with the Revised Emission Standards issued by Ministry of Environment, Forest & Climate Change (MoEFCC), Government of India, vide Environment (Protection) Amendment Rules, 2015 on 7th December, 2015 in respect of the Thermal Power Generating stations whose tariff is determined through competitive bidding under Section 63 of the Electricity Act, 2003**

AND

IN THE MATTER OF:

Commission on its own motion … **Petitioner**

SUBMISSIONS ON BEHALF OF THE COASTAL GUJARAT POWER LIMITED

I. Background

1. On 05.09.2020, this Hon'ble Commission issued a staff paper on *'Mechanism for Compensation for Competitively Bid Thermal Generating Stations for Change in Law on account of Compliance of the Revised Emission Standards of the Ministry of Environment, Forest and Climate Change, Government of India (MoEF&CC)'*, seeking comments from all the stakeholders, to be provided by 04.10.2020.

2. After considering the comments received from all the stakeholders, on 12.04.2021, this Hon'ble Commission issued a public notice as well as draft Order dated 12.04.2021 ("**Draft Order dated 12.04.2021**") in the present matter, seeking comments/ suggestions from all concerned on the draft order issued by it. In terms of this Hon'ble Commission's Notice dated 30.04.2021, the comments/ suggestions are to be provided by 31.05.2021.

3. Accordingly, Coastal Gujarat Power Limited ("**CGPL**") is filing its comments/ suggestions on the draft Order. It is noteworthy that, on 03.10.2020, CGPL's holding company i.e. The Tata Power Company Limited (hereinafter referred to as "**Tata Power**"), had filed its detailed comments on the said Staff Paper. Below submissions/ comments are in addition to the submissions dated 03.10.2021 filed by Tata Power and in case of

any deviation or variation in comments/suggestions, the present submission be considered. **CGPL also requests this Hon'ble Commission to provide an opportunity to make oral submissions before the final order is passed**.

II. Relevant Facts

4. In order to appreciate CGPL's submissions it is necessary to note the following relevant facts, being:-

(a) On 19.01.2005, Ministry of Power, Government of India issued "Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees" (with amendments dated 28.02.2006, 18.08.2006) under Section 63 of the Act ("**Competitive Bidding Guidelines**"). Pursuant to the Competitive Bidding Guidelines, the Ministry of Power, Government of India finalized Standard Bid Documents ("**SBD**") in consultation with the concerned stakeholders and issued the SBD on 31.03.2006. These guidelines have been subsequently amended from time to time. A copy of the Competitive Bidding Guidelines (with amendments dated 28.02.2006, 18.08.2006), as was prevalent at the time for submission of bid for Mundra UMPP, is annexed hereto and marked as **Annexure-1.**

(b) Pursuant thereto, RFQ and RFP was issued. Tata Power qualified as a successful bidder. On 22.04.2007, PFC transferred all the shares held by it in CGPL to Tata Power, whereby CGPL became wholly-owned subsidiary of Tata Power. On the same date, PPA was executed between CGPL and the Procurers of the State of Gujarat, Maharashtra, Punjab, Haryana and Rajasthan. The provisions of the PPA are based on the Model PPA issued along with the bid documents. Article 13 of the PPA is the relevant clause which provides the meaning of Change in Law provision and its consequence in case such Change in Law event takes place. A copy of the PPA is annexed hereto and marked as **Annexure-2.**

(c) On 07.12.2015, MoEFCC notified MoEFCC Notification, amending/ introducing the standards for emission of environmental pollutants by the Thermal Power Plants. By the said amendment, MoEFCC:-

(i) Revised emission parameters of Particulate Matter (PM).

(ii) Introduced new parameters qua Sulphur Dioxide (SO_2), Oxides of Nitrogen (NOx) and Mercury (Hg).

(iii) Directed that all Thermal Power Plants with Once Through Cooling ("**OTC**") shall install Cooling Tower ("**CT**"); and

(iv) Introduced/ prescribed a limit to the amount of cooling water to be used per unit.

The generating companies were initially required to comply with these standards within a period of 2 years from the date of MoEFCC Notification. However, on 11.12.2017, CPCB issued a letter extending the time limit for complying with the emission norms, viz.:- (i) Sulphur Dioxide for all the 5 Units by 31.03.2022. In this regard, different cut-off dates were provided for each Unit viz., Unit 10 by 30.06.2020, Unit 20 by 31.03.2021, Unit 30 by 30.06.2021, Unit 40 by 31.03.2022 and Unit 50 by 31.03.2022); and (ii) Nitrogen Oxide ("**NOx**") by the end of the year 2022 for all the 5 Units of Mundra UMPP. Recently, on 31.03.2021, MoEFCC had issued a notification stating that a task force is being constituted comprising of representatives from MoEFCC, MoP, CEA and CPCB to categorise the thermal power plants in various categories as stated therein. Further, the timeline for compliance has been extended till December 2022, December 2023 or December 2024, depending upon the category, as determined by CEA, in which a thermal power plant would fall. Since the list is yet to be notified, the exact deadline for CGPL shall be ascertained only after its notification. A copy of Notification dated 31.03.2021 is annexed hereto and marked as **Annexure-3.**

(d) On 09.05.2016, CGPL filed a Change in Law Petition (Petition No. 77/MP/2016), seeking the following reliefs which are reproduced hereinbelow for ease of reference: -

"(a) Declare that the MoEFCC Notification dated7.12.2015 constitutes a Change in Law event in terms of Article13 of the PPA read with paragraph 4.7 of the Competitive Bidding Guidelines.

(b) Grant in-principle approval to prudently incur any consequential capital cost to comply with MoEFCC Notification dated 7.12.2015, as also on account of change in operational parameters.

(c) Prescribe, devise and apply appropriate norms for computing the adjustment in tariff to offset the additional investment/increase in costs due to MoEFCC Notification for justly restituting the Petitioner to the same economic position as if such Change in Law event had not occurred.

(d) Prescribe any safeguards/ guidelines to be followed in implementation/ carrying out necessary changes for complying with the MoEFCC Notification.

(e) Pass any such other and further reliefs as this Commission deems just and proper in the nature and circumstances of the present case…."

(e) On 17.09.2018, this Hon'ble Commission passed its Order in Petition No. 77/MP/2016 ("**Order dated 17.09.2018**") holding that **MoEFCC Notification amounts to Change in Law in terms of Article 13 of the PPA**. **This Hon'ble Commission granted liberty to CGPL to approach this Hon'ble Commission** qua

the methodology for recovery of expenditure to be incurred by CGPL for implementing the revised norms prescribed in the MoEFCC Notification, in accordance with the Guidelines issued by CEA. In this regard, the relevant part of this Hon'ble Commission's Order dated 17.09.2018 is reproduced hereinbelow for ease of reference:-

"44…. the Change in Law will be applicable on those items of cost or revenue which the Petitioner has claimed and is approved by the Commission. The Petitioner shall implement the revised environment norms to comply with the MoEFCC Notification and approach the Commission for determination of the increase in cost or/and revenue expenditure on account of implementation of such Change in Law in terms of guidelines to be prepared by CEA as stated in para 47 of this Order. ***At that stage, the Commission will determine the mode of recovery of the cost or/and revenue expenditure for the Petitioner through monthly tariff which shall be incurred for compliance with the MoEFCC Notification****….*

"…. Summary of our Decisions

49. Summary of our decisions in this order are as under:

(a) MoEFCC Notifications, 2015 prescribing the revised environmental norms in respect of thermal Power plants which has been issued after the cut-off date of Mundra UMPP are in the nature of Change in Law in terms of the PPA dated 22.4.2007 and the MoP directions issued under Section 107 of the Act.

(b) The Petitioner has given notice regarding Change in Law arising out of MoEFCC Notification in terms of the PPA.

(c) The Petitioner is required to take steps to implement revised norms in respect of Sulphur Dioxide, Nitrogen Oxide and water consumption. The Petitioner has taken up the matter with MoEFCC for exemption from implementing the norms for water consumption and therefore, the implementation of the norms of water consumption shall be dependent on the decision of MoEFCC in this regard

(d) Mundra UMPP meets the norms prescribed in MoEFCC Notification, 2015 with regard to particulate matters and mercury and accordingly, the Petitioner has not claimed the relief under Change in Law.

(e) The Commission has directed CEA vide its order dated 22.7.2018 in Petition No. 98/MP/2017 to prepare guidelines specifying the suitable technology for each plant and operational parameters such as auxiliary consumption, Station Heat Rate, O&M expenses, norms of consumption of water, lime stones etc. for implementation of revised environmental norms. The Petitioner shall implement the revised norms as per the MoEFCC Notification, 2015 in consultation with CEA.

(f) There is no provision for in-principle approval in the PPA. However, the Commission has decided that MoEFCC Notification, 2015 is in the nature of Change in Law. Accordingly, ***the Petitioner shall approach the Commission for determination of increase in cost or/and revenue expenditure on account of implementation of revised norms in accordance with the Guidelines to be issued by CEA and the mode of recovery of the same through monthly tariff****…"*

(f) In term of the liberty granted by this Hon'ble Commission in its Order dated 17.09.2018, on 12.06.2019, CGPL filed Petition No. 168/MP/2019 before this Hon'ble Commission for seeking approval of Capital Cost (including recovery of other ancillary expenditure/ loss) and Operational Cost proposed to be incurred by CGPL for installing FGD so as to meet the revised MoEFCC emission norms

regarding Sulphur Dioxide.

(g) On 22.06.2020, this Hon'ble Commission passed its Order in Petition No. 168/MP/2019, approving the capital and operational expenditure considered by CGPL. While this Hon'ble Commission approved certain cost components/norms during operational period, like auxiliary consumption, O&M expenses etc., as regards mechanism for computing adjustment in tariff, **this Hon'ble Commission stated that there needs to be a uniformity regarding compensation mechanism regarding all the generating station**. In this context, this Hon'ble Commission has stated that a staff paper would be floated **on the issue of compensation mechanism and tariff implications** on account of MoEFCC's Notification dated 07.12.2015, in cases where PPA does not have an explicit provision for compensation mechanism during the operational period and the PPA requires the Commission to devise such mechanism. For completion of record, it is stated that, CGPL has filed a review petition (being Review Petition No. 30/RP/2020), seeking review of the said order to the limited extent this Hon'ble Commission has allowed recovery of capital and operational cost on pro-rata basis corresponding to the capacity of 4,000 MW whereas the cost for CGPL would be considered on capacity of 4150 MW. A copy of the Order dated 22.06.2020 is annexed hereto and marked as **Annexure-4.**

(h) It is in this context, that the staff paper was issued by this Hon'ble Commission and now the draft order has been issued.

III. CGPL's Preliminary Submissions

A. Terms for setting up of Mundra UMPP and execution of PPA between CGPL and the Procurers

5. In order to implement the provisions of the Electricity Act:-

(a) On 19.01.2005, the Government of India issued competitive bidding guidelines under Section 63 establishing a framework for competitive procurement of power supply.

(b) In January 2006, to meet the growing energy needs of the economy, MoP notified Policy for the development of Ultra Mega Power Projects of around 4,000 MW capacity each under the tariff based competitive bidding route. These projects were to be set up using supercritical technology, either at pit-head or in costal region. CGPL was one such UMPP to be set up at Mundra, Gujarat (imported coal-based project).

(c) The Competitive Bidding Guidelines were subsequently modified on 28.02.2006 and 18.08.2006, before the bids were invited for Mundra UMPP. The Competitive Bidding Guidelines specifically provided that:-

(i) **The term of the PPA would coincide with the term of expected life of the project, i.e. 25 years**. Accordingly, the tariff was to be quoted for 25 years, being the expected life of the project **[Bullet 3 of Clause 5.4 (i)].** Relevant extracts are reproduced below:

> *"5.4 Standard documentation to be provided by the procurer in the RFQ shall include,*
> *(i) Definition of Procurer's requirements, including:*
> *…*
> *Term of contract proposed:* ***As far as possible, it is advisable to go for contract coinciding with life of the project in case of long term procurement.*** *The bidder shall be required to quote tariff structure for expected life of the project depending upon fuel proposed by him.* ***The expected life project is estimated to be*** *15 years for gas/liquid fuel based projects,* ***25 years for coal based projects*** *and 35 years for hydro projects…"*

(ii) **If there is a requirement of transfer of assets by the selected bidder to the procurer at the end of the term of the PPA, the same needs to specified in the bidding document [Clause 5.4 (iv)].** The relevant extracts are provided below:-

> *"……*
> *(iv) Requirement of transfer of assets by the selected bidder (if any) to the procurer at the end of the term of the PPA."*

6. In terms of the Competitive Bidding Guidelines, on 31.03.2006, RFQ was issued by PFC (bid co-ordinator/ nodal agency) for Mundra UMPP on behalf of the state utilities of Gujarat, Maharashtra, Haryana, Rajasthan, and Punjab. Proposals were invited for supply of 4,000 MW (plus/minus 10%) of power at the generator switchyard bus-bar for the Procurers. The RFQ also contained a Model Power Purchase Agreement, stipulating the terms and conditions on which electricity was to be purchased by the Procurers. The relevant provisions of the RfQ are reproduced herein below for ease of reference:

> *"1.1 Costal Gujarat Power Limited, a subsidiary of Power Finance Corporation Limited (A Government of India Undertaking), Chandralok Building 36, Janpath, New Delhi 110 001 (hereinafter to be referred to as the "Authorised Representative")* ***on behalf of state electricity boards / electricity distribution companies /state electricity utilities of Gujarat, Maharashtra, Haryana, Rajasthan, Punjab and Uttar Pradesh, (hereinafter to be referred as the "Procurers")****, wishes to invite Bids for purchase of power on a long-term basis.*
>
> *1.3 The objective of this Bidding process is* ***to identify Bidders for supply of minimum 3600 MW and maximum 4400 MW of power for a period of 25 years as may be defined in the RFP****. The successful Bidder shall enter into a Power Purchase*

Agreement (PPA) as detailed out in the Model PPA forming part of this document…

1.7 ***Project includes establishment, operation and maintenance of 4000 MW power plant based on imported coal for its life – cycle****. ……*

1.8 The Procurers will transfer the project site to Coastal Gujarat Power Limited to implement the project after signing and as per the terms of PPA at a price to be indicated in the RFP. The responsibility of the Resettlement & Rehabilitation lies with the Procurers.

….

1.10 ***The contracted power shall be sold only to the Procurers as per the terms and conditions of a Power Purchase Agreement (PPA).*** *The Model PPA is attached in Annexure 6. Such Model PPA may be modified in accordance with Guidelines for Determination of Tariff by Bidding Process.* ***The Procurers would retain dispatch rights over the contracted capacity of the generating station, during the term of the PPA, which has been allocated to it by the selected Bidder and Coastal Gujarat Power Limited.***

……

2.2.1 ***Procurers plans to procure power to the extent of 4000 MW (plus/minus 10%). The power shall be delivered at the generator switchyard bus-bar.*** *…."*

Schedule 6 – Model Power Purchase Agreement

Recitals

A. The Procurers has identified the project for the generation and supply of electricity to the Procurers, namely the location of the project/fuel to be used generation linked with captive mines/ and to be allocated by the Procurer and other details as set out in the Schedule 1. The Procurer takes the responsibility of Rehabilitation and Resettlement….

C. The Procurers are in a position to give the vacant possession of the land for the construction of the generation project and ***also transfer of other consents in favour of Bidder who may be selected in a competitive Bidding process for construction and commissioning of the project and also for generation and sale of electricity from the project****.*

D. The Procurers have initiated a competitive Bidding process for vesting in a selected Bidder of the above facilities related to the generating project including the detailed project report prepared by the Procurer along with all initial consents, fuel linkages to a Bidder selected in the process as per the Bidding guidelines notified by the Central Government.

E. ***The Seller has been one of the Bidders to participate in the competitive Bidding process for the above project and has offered to construct the project for a generating capacity of [ ] MW and sale and supply of electricity in bulk there from to the Procurers****.*

……..

4. Article 4 Development of the Project

4.1 The Seller's obligation to build, own and operate the Power Station

4.1.1. Subject to the terms and conditions of this Agreement, the Seller undertakes to be responsible at the Seller's costs and risks for:-

….

(c) Owning the Power Station throughout the term of this Agreement free and clear from all encumbrances except those expressly permitted by Article 0;

4.3 Purchase and sale of Available Capacity and Electrical Output

4.3.1 ***Subject to the terms and conditions of this Agreement, the Seller undertakes to sell to the Procurers, and Procurers undertake to pay the Tariff for all of the Available Capacity and Electrical Output of the Power Station throughout its Operating Periods.***

4.3.2 The Seller shall sell all the Available Capacity, unless otherwise instructed of the Power Station to each Procurer in proportion of each Procurers allocated Capacity pursuant to Dispatch instructions given by each of such Procurers.

4.4 Right to Electrical Output

4.4.1 Subject to the provisions of Article O, the entire capacity of the project and all units in the project shall at all times be for the exclusive benefit of the Procurers and the Seller shall not grant to any third party or allow any third party to obtain any entitlement to the Available capacity and Electrical Output.

4.4.2 Notwithstanding the foregoing, the Seller shall be permitted to sell power amounting to a part of the Available Capacity of the Power Station to third parties if:

(a) there is a part of Available Capacity which is not Dispatched by the Procurer, ordinarily entitled to receive such part; and

(b) there is prior written consent by the Procurer ordinarily entitled to receive such part; and

(c) such part has first been offered to the other Procurer who was not ordinarily entitled to receive such part and he has chosen to waive or not exercise his first right to receive such part of the Available capacity or his first right to nominate a third Party to receive such Available capacity, within one (1) day of being so offered the opportunity to receive such part.

4.4.3 If the Procurers do not avail generation up to the declared capacity by the Seller, as mentioned in Article O, the same energy can be sold to the third party by the Seller, and the sale realization in excess of Energy Charges, shall be equally shared with the Procurers and among Procurers in the ratio of their Allocated Capacity. During this period the Seller will also continue to receive the capacity charges from the Procurers. The sale under Unscheduled Interchange shall not be considered as sale of third party…."

A copy of the relevant pages of the RFQ are annexed hereto and marked as **Annexure-5.**

7. On 22.06.2006, RFP was issued to all shortlisted bidders, which reiterated the terms provided in the RFQ. Thereafter, on 22.04.2007, PPA was executed, relevant provisions of the PPA are as under:-

"Recitals

D In accordance with the Competitive Bidding Guidelines (as defined hereunder), the Procurers, through its Authorised Representative, had initiated a competitive bidding process through issue of ***RFQ and RFP for selecting a Successful Bidder to build, own, operate and maintain the Project.***

….

4. Article 4 Development of the Project

4.1 The Seller's obligation to build, own and operate the Power Station

4.1.1. Subject to the terms and conditions of this Agreement, the Seller undertakes to be responsible at the Seller's costs and risks for:-

….

(c) Owning the Project throughout the term of this Agreement free and clear from all encumbrances except those expressly permitted by Article 16;

4.3 Purchase and sale of Available Capacity and Scheduled Energy

4.3.1 Subject to the terms gad conditions of this Agreement, the Seller undertakes to sell to the Procurers, and the Procurers undertake to pay the Tariff for all of the Available Capacity up to the Contracted 'Capacity and Scheduled Energy of the Power Station, according to their then existing Allocated Contract Capacity, throughout the term of this Agreement.

4.3.2 Unless otherwise instructed by all the Procurers (jointly), the Seller shall sell all the Available Capacity up to the Contracted Capacity of the Power Station to each Block in proportion of each Procurer's then existing Allocated Contracted Capacity pursuant to Dispatch Instructions.

4.4 Right to Available Capacity and Scheduled Energy

*4.4.1 Subject to other provisions of this Agreement**, the entire Contracted Capacity of the Power Station and all the Units of the Power Station shall at all times be for the exclusive benefit of the Procurers and the Procurers shall have the exclusive right to purchase the entire Contracted Capacity from the Seller**. The Seller shall not grant to any third party or allow any third party to obtain any entitlement to the Available Capacity and/or Scheduled Energy**.*

4.4.2. Notwithstanding Article 4.4.1; the Seller shall be permitted to sell power, being a part of the Available Capacity of the Power Station to third parties if:

(a) there is a part of Available Capacity which has not been Dispatched by the Procurer, ordinarily entitled to receive such part (Concerned Procurer'); and

(b) such part has first been offered, at the same Tariff to the other Procurers (by the RLDC and/or the Seller), who were not ordinarily entitled to receive such part and they have chosen to waive or not to exercise their first right to receive such part of the Available Capacity within two (2) hours of being so offered the opportunity to receive such part.

4.4.3 If a Procurer does not avail of power upto the Available Capacity by the Seller corresponding to such Procurer's Allocated Capacity, and the provisions of Article 4.4.2 have been complied with, the Seller shall be entitled to sell such Available Capacity not procured, to any person without losing the right to receive the Capacity Charges from the Concerned Procurer for such un-availed Available Capacity. In such a case, the sale realization in excess of Energy Charges shall be equally shared by the Seller with the Concerned Procurer. In the event, the Seller sells such Available Capacity to the shareholders of the Seller or any direct or indirect affiliate of the Seller/shareholders of the Seller without obtaining the prior written consent of the Procurer, the Seller shall be liable to sell such Available Capacity to such entity at tariffs being not less than the Tariff payable by the relevant Procurer whose capacity is being sold pursuant to this Article. If more than one Procurers do not avail fully of their Allocated Contracted Capacity, provisions of this Article shall be applicable to them mutatis mutandis and in such case, fifty percent (50%) of the excess over Energy Charges recovered by the Seller from sale to third party shall be retained by the Seller and the balance fifty percent (50%) shall be provided by the Seller to the Concerned Procurer/s in the ratio of their Available Capacity not dispatched by such Concerned Procurer/s and sold by the Seller to third parties. During this period, the Seller will also continue to receive the Capacity Charges from such Procurers. Upon the Procurers or any Procurer who has not availed of the Available Capacity, as envisaged under this Article, intimating to the Seller of its intention and willingness to avail of the part of the Available Capacity not availed of and therefore sold to the third party, the Seller shall, notwithstanding anything contained in the arrangement between the Seller and said third party, commence supply of such capacity to the Concerned Procurer/s from the later of two (2) hours from receipt of notice in this regard from the Concerned Procurer/s or the time for commencement of supply specified in such notice. ……..

7. On the analysis of the Competitive Bidding Guidelines, bid documents and the

PPA, it is evident that:-

(a) The entire project is executed for the benefit of the Procurers.

(b) The term of the PPA is 25 years, which coincides with the term of expected life of the project.

(c) The capital expenditure incurred by CGPL for setting up Mundra UMPP is to be recovered by it from the Procurers by way of Capacity Charges within the term of the PPA.

(d) The Project would be owned and operated by the successful bidder and in the absence of any provision for the transfer of the project back to the Procurers upon the expiry of the term of the PPA, the same shall remain with the successful bidder.

(e) If a Change in Law event occurs during the term of the PPA (whether during Construction Period or Operating Period), the impact of such a change in law is to recovered during the term of the PPA. This is evident from Article 13.2 of the PPA. Thus, the entire capital cost being incurred by CGPL during the MoEFCC's Notification ought to be recovered during the term of the PPA.

8. Thus, any capital expenditure to be incurred by CGPL to adhere to the stringent norms prescribed by MoEFCC's Notification dated 07.12.2015 is for the benefit for the Procurers and the same ought to be recovered from the Procurers within the term of PPA, i.e. 25 years.

B. Powers of Commission in case of occurrence of a Change in Law event and scope of the present proceedings

9. Article 13 of the PPA provides for the meaning of Change in Law provision and its consequence. Article 13 of the PPA is reproduced hereinbelow for ease of reference:-

> ***"...13. ARTICLES 13: CHANGE IN LAW***
>
> ***13.1 Definitions***
>
> *In this Article 13, the following terms shall have the following meanings:*
>
> *13.1.1 "Change in Law" means the occurrence of any of the following events after the date, which is seven (7) days prior to the Bid Deadline:*
>
> *(i) the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal, of any Law or (ii) a change in interpretation of any Law by a Competent Court of law, tribunal or Indian Governmental instrumentality provided such Court of law, tribunal or Indian Governmental Instrumentality is final authority under law for such interpretation or*
>
> *(iii) change in any consents, approvals or licenses available or obtained for the Project, otherwise than for default of the Seller, which results in any change in any cost of or revenue*

from the business of selling electricity by the Seller to the Procurers under the terms of this Agreement, or (iv) any change in the (a) Declared Price of Land for the Project or (b) the cost of implementation of the resettlement and rehabilitation package of the land for the Project mentioned in the RFP or cost of implementing Environmental Management Plan for the Power Station mentioned in the RFP, indicated under the RFP and the PPA;

but shall not include (i) any change in any withholding tax on income or dividends distributed to the shareholders of the Seller; or (Ii) change in respect of IJI Charges or frequency intervals by an Appropriate Commission.

Provided that if Government of India does not extend the income tax holiday for generation projects under Section 80 IA of the Income Tax Act, upto the Scheduled Commercial Operation Date of the Power Station, such non-extension shall be deemed to be a Change in Law.

13.1.2 ***"Competent Court" means:***

The Supreme Court or any High Court, or any tribunal or any similar judicial or quasi-judicial body in India that has jurisdiction to adjudicate upon issues relating to the Project.

13.2 ***Application and Principles for computing impart of Change in Law***

While determining the consequence of Change in Law under this Article 13, the Parties shall have due regard to the principle that the purpose of compensating the Party affected by such Change in Law, is to restore through Monthly Tariff Payments, to the extent contemplated in this Article 13, the affected Party to the same economic position as if such Change in Law has not occurred.

a) Construction Period

As a result of any Change in Law, the impact of increase/decrease of Capital Cost of the Project in the Tariff shall be governed by the formula given below:

For every cumulative increase / decrease of each Rupees Fifty crores (Rs. 50 crores) in the Capital Cost over the term of this Agreement, the increase/decrease in Non Escalable Capacity Charges shall be an amount equal to zero point two six seven (0.267%) of the Non Escalable Capacity Charges. Provided that the Seller provides to the Procurers documentary proof of such-increase/ decrease in Capital Cost for establishing the impact of such Change in Law. In case of Dispute, Article 17 shall apply.

It is clarified that the above mentioned compensation shall be payable to either Party, only with effect from the date on which the total increase/decrease exceeds amount of Rs. fifty (50) crores.

b) Operation Period

As a result of Change in Law, the compensation for any increase/decrease in revenues or cost to the Seller shall be determined end effective from such date, as decided by the ***Central Electricity Regulatory Commission*** *whose decision shall be final and binding on both the Parties, subject to rights of appeal provided under applicable Law.*

Provided that the above mentioned compensation shall be payable only if and for increase/ decrease in revenues or cost to the Seller is in excess of an amount equivalent to 1% of Letter of Credit in aggregate for a Contract Year.

13.3 ***Notification of Change in Law***

13.3.1 If the Seller is affected by a Change in Law in accordance with Article 13.2 and

wishes to claim a Change in Law under this Article, it shall give notice to the Procurers of such Change in Law as soon as reasonably practicable after becoming aware of the same or should reasonably have known of the Change in Law.

13.3.2 Notwithstanding Article 13.3.1, the Seller shall be obliged to serve a notice to all the Procurers under this Article 13.3.2 if it is beneficially affected by a Change in Law. Without prejudice to the factor of materiality or other provisions contained in this Agreement, the obligation to inform the Procurers contained herein shall be material. Provided that in case the Seller has not provided such notice, the Procurers shall jointly have the right to issue such noticed to the Seller.

13.3.3 Any notice served pursuant to this Article 13.3.2 shall provide, amongst other things, precise details of:

(a) the Change in Law; and

(b) the effects on the Seller of the matters referred to in Article.

13.4 ***Tariff Adjustment Payment on account of Change In Law***

13.4.1 Subject to Article 13.2, the adjustment in Monthly Tariff Payment shall be effective from:

(i) the date of adoption, promulgation, amendment, re-enactment or repeal of the Law or Change in Law; or

(ii) the date of order/judgment of the Competent Court or tribunal or Indian Governmental Instrumentality, if the Change in Law is on account of a change in interpretation of Law.

13.4.2 The payment for Changes in Law shall be through Supplementary Bill as mentioned in Article 11.8. However, in case of any change in Tariff by reason of Change in Law, as determined in accordance with this Agreement, the Monthly Invoice to be raised by the Seller after such change in Tariff shall appropriately reflect the changed Tariff…."

10. Change in law (amongst others) are risk allocation clauses which provides for adjustment in tariff upon occurrence of events which are beyond the control of the parties. Since the PPA is a long-term contract, it is not possible for parties to foresee each and every event which could have an impact on the economics of the project. Consequently, the parties to the PPA had agreed and provided for relief upon occurrence of such events. In this context, the Change in Law provision along with the relief for change in law provision was provided in the PPA.

11. The scope of Change in Law and the role of a Commission (especially this Hon'ble Commission) in deciding a Change in Law during the operating period has been recently decided by the Hon'ble Appellate Tribunal for Electricity ("**Hon'ble Tribunal**") in its Judgment dated 27.04.2021 in Appeal No. 172 of 2017 & Batch, qua the facts of CGPL's PPA, as under:-

(a) Article 13 enshrines the restitutive principle which is to be borne in mind when compensation for increase or decrease is determined by this Hon'ble Commission. Article 13.2 has an in-built mechanism to restitute (through monthly tariff

payments) the party affected by Change in Law to the same economic position as if such Change in Law has not occurred. [**Para 30**]

(b) PPA gives express right to an affected party to claim compensation if the event qualifies as a Change in Law event in terms of Article 13 of the PPA. **Once Change in Law is established, undoubtedly compensation in terms of restitutionary principles must follow**. [**Para 33**]

(c) Regulatory authority **cannot introduce any extraneous words or qualifications** to limit or whittle down the scope of Article 13 with respect to what constitutes Change in Law and how the relief has to be computed. **Its role is limited to**:

(i) Determining whether a Change in Law event has occurred i.e. whether the qualifications provided under Article 13.1 are met;

(ii) Determining whether such a Change in Law event has an impact on the business of generation and sale of electricity; and

(iii) If the answers to the first two questions be in the affirmative, to **provide restitutive compensation (i.e. on actuals) to the affected party**. [**Para 34**]

In other words, this Hon'ble Commission is under a mandate, inter-alia, to compensate the **affected party on actuals** to enable restitution to the same economic position as if the Change in Law had not occurred.

12. As is evident from above, once an event is declared as a Change in Law which has an impact on the business of generation and sale of electricity, the role of this Hon'ble Commission is restricted to restitute the affected party on actuals such that the affected party is placed *'to the same economic position'* as if the change in law event had not occurred. This Hon'ble Commission does not have the power to introduce any condition to whittle down the restitutive principles. In other words, this Hon'ble Commission does not have an **unfettered** jurisdiction to determine the impact of Change in Law (as stated in Para 11(d) of the Draft Order dated 12.04.2021]. This Hon'ble Commission is required to provide restitutionary relief on actuals, such that the party affected by the Change in Law event is restored to the same economic position prior to the occurrence of such Change in Law event.

13. In the facts of the instant case, the issue whether the MoEFCC Notification is a Change in Law event is no longer *res-integra.* MoEFCC Notification has already been held as a Change in Law event (in the facts of CGPL's case) by this Hon'ble Commission in its Order dated 17.09.2018 in Petition No. 77/MP/2015. Hence, while providing the relief to CGPL, scope of this Hon'ble Commission is restricted to compensate CGPL such that it is

fully restituted (on actuals) on account of capital and operational expenditure to be incurred by it on account of installation of emission abatement equipments, as if such Change in Law event has not taken place. In other words, CGPL is entitled for the recovery of the entire capital and operating expenditure to be incurred by it on account of the Change in Law. Any decision to the contrary is in teeth of the principles under Article 13 of the PPA.

14. Even otherwise, this Hon'ble Commission, (in the facts of CGPL's case) by its Order dated 22.06.2020 in Petition No. 168/MP/2019, has already decided the provisional capital cost and certain operational expenditure components which CGPL is entitled to recover from the Procurers. The staff paper was to be issued only for the limited purpose of providing compensation mechanism and computation of revised tariff, since the same is not present in the PPA. The purpose of the staff paper and consequently the scope of the present proceeding is not to reduce, directly or indirectly, the compensation payable to the generating companies from the Procurers. **Any such direct or indirect reduction tantamount to a sou-moto modification of the Order dated 22.06.2020, which is impermissible and cannot be done in the present proceedings**.

15. It is further submitted that, the compensation on account of Change in Law is to be determined in terms of the facts of each case, applicable provisions of the Competitive Bidding Guidelines/PPAs, such that the developer of the power plant is fully restituted. In this regard, this Hon'ble Commission may take note of the legal principles mentioned above and appropriately address the issues in the final order. Further, in case the mechanism proposed is in deviation of the Guidelines/ bidding documents/ PPA, the mechanism has to be applied with such modification that the change in law provisions are duly implemented.

IV. CGPL's Para wise Submissions

16. CGPL's para-wise submissions are provided in the table below:-

S. No.	Relevant Part of Draft Order	CGPL's Comments/ Suggestions
Re.	**Legal Framework and Jurisdiction and Principles of Compensation [Paras 7 to 17]**	
1.	*"11. The provisions of the Competitive bidding Guidelines, the Model PPA under Case-1 and DBFOO model are analysed as under:-* *….* *c) In the Model PPA under Case-1, there is a specific formula for Change in Law during the*	• CGPL submits that it has provided the interpretation of Change in Law and the principle on which the relief to be granted, as interpreted by various courts, in Para 9 to Para 14 above. This Hon'ble Commission, in para 11 (b) and 11(c) of the draft order, has correctly stated that the restitutive relief has to be granted in case of occurrence of Change in Law event. However, the principles for quantification of relief hasn't been spelt out. Further, **this Hon'ble Commission has also erred in stating that it has complete discretion to determine the compensation payable** during the operating period. As regards Change in Law during the

S. No.	Relevant Part of Draft Order	CGPL's Comments/ Suggestions
	construction period. However, for Change in Law event during the operation period, no specific formula has been provided. The determination of the compensation for any increase/decrease in revenue or cost to the Seller on account of change in law during operation period including its effective date has been left to be decided by the Commission. It further provides that the decision of the Commission shall be final and binding on both the Parties. ***In other words, the model PPA under Case-1 vests unfettered jurisdiction on the Commission to determine the impact of change in law on cost or revenue during the operation period and the effective date from which it is to be implemented****…"*	operating period, while this Hon'ble Commission has the power to determine the compensation mechanism, the same has to be determined such that the party affected by Change in Law is restituted on actuals, such that the affected party is restored to the same economic position as if such a Change in Law event has not taken place. This Hon'ble Commission has no discretion to ignore the restitutionary principles spelt out in the PPA.
Re. Economic Restitution [Para 14]		
2.	*"14. The proposed mechanism provides for the methodology for computation of compensation during the operating period on account of Change in Law events for installation of emission control systems.* ***The standard bidding documents issued by the Central Government under Section 63 of the Act do not provide any specific formulation for computation of compensation during the operating period, but contain the principle of restitution to restore the affected party to the same economic position as if the change in Law event has not occurred.*** *It is left to the Commission to determine the compensation that will be admissible on account of change in law during the operation period, which shall be binding on the parties. The Commission is of the view that* ***a suitable compensation mechanism can be devised by the Commission to compensate the affected***	• As observed by this Hon'ble Commission in para 14 of the draft order, the primary requirement of the change in law provision is to satisfy the principle of economic restitution and for that purpose Hon'ble Commission may determine the mechanism to appropriately compensate the affected party. • In the facts of the CGPL's case as well, the parties affected by Change in Law event is required to restitute the affected party such that the affected party is restored to the same economic position as if such a change in law event has not occurred. The mechanism of this economic restitution is provided in paras 8 and 9 of the Draft Order. However, for any increase in cost or decrease in net post tax return or other financial burden due to Change in Law, in DBFOO model PPA there is a specific test prescribed under Clause 34.3, quoted at para 14 of the Draft Order, to check whether compensation is adequate/correct or not. This clause stipulates that *the parties shall rely on the Financial Model to establish a net present value (the " NPV") of the net cash flow and make necessary adjustment in costs, revenues, compensation or other relevant parameters, as the case may be, to procure that the NPV of the net cash flow is the same*. • Thus, all the model PPAs require increase in expenses/costs/burden (increase in Cash Outflow) or decrease in revenue/net post tax revenue (decrease in Cash Inflows) of the Seller company to be compensated through monthly bills to satisfy economic restitution. The DBFOO PPA further clarifies that the test for economic restitution shall be on NPV basis as follows: (a) NPV for Net Cash Flows (i.e. Revenue – Cost or Cash Inflow – Cash Outflow) before Change in Law to be computed

S. No.	Relevant Part of Draft Order	CGPL's Comments/ Suggestions
	party during the operation period by invoking the principle of restitution contained in the PPA."	(b) NPV for Net Cash Flows after Change in Law with increase in costs/decrease in revenue to be computed (c) Increase or decrease in NPV and Net Cash Flows to be computed as difference of (a) and (b) (d) Adjustments to revenues/costs to be done through additional compensation to ensure that NPV before Change in i.e. (a) equals NPV after Change in Law with compensation i.e. (a) equal (b) plus (c) • Mathematically, for ECS installation for n years, the relationships are (a) NPVb = NPV of Net Cash Flows before CIL = Summation upto n (Rbn – Cbn)/(1+r)n , and (b) NPVa = NPV of Net Cash Flows after CIL without compensation = Summation upto n (Ran – Can)/(1+r)n (for increase in cost or decrease in revenue, this will be lower than NPVb) (c) NPVc = Change in NPV of Net Cash Flows without compensation = NPVa – NPVb = Summation upto n [(Ran-Rbn) – (Can-Cbn)]/(1+r)n = Summation upto n (Rcn – Ccn) (for increase in cost or decrease in revenue, this will be negative), where Rcn = Ran – Rbn and Ccn = Can -Cbn are impact of ECS installation i.e. changes in Revenue and Cost each year due to installation ECS (d) NPVd = NPV of Compensation/relief required each year with additional Cash Inflows of Rpn each year = Summation upto n Rpn/(1+r)n • Thus, to satisfy clause 13.3, (a) must be equated to (b) plus (c), i.e. NPVb = NPVa + NPVd Or NPVb – NPVa = NPVd Or -NPVc = NPVd Or NPVc+NPVd = 0 • Thus, effectively it has to be ensured that NPV of change in Cost (Cash Outflow)/Revenue (Cash Inflow) is fully offset by compensation payable/receivable to make their sum zero and leaving original revenues/cost unchanged. This condition can be expanded as follows: Summation upto n [(Ran-Rbn) – (Can-Cbn)]/(1+r)n + Summation upto n Rpn/(1+r)n = 0 Or Summation upto n [(Rcn – Ccn) + Rpn]/(1+r)n = 0 Or Summation upto n [(CIFcn – COFcn) + Rpn]/(1+r)n = 0 (as Rcn = Change in Cash Inflow and Ccn is Chang in Cash outflow) Or Summation upto n [NCFcn + Rpn]/(1+r)n = 0 Where, NCFcn = Change in Net Cash Flows/Impact for year n due to installation of ECS = CIFcn – COF cn = Change in Cash Inflows for year n – Change in Cash Outflows for year n • Since Change in Cash Flows/Impact of ECS installation is negative, taking absolute numbers in the above equation, we get: Or Summation upto n [Rpn – NCFcn)/(1+r)n = 0 • The above equation is stating that NPV of yearly differences between compensation and impact of Change in Law must be Zero with Cost of Debt as discounting factor. In effect, it means that the annual differences have been considered to have a cost of capital

S. No.	Relevant Part of Draft Order	CGPL's Comments/ Suggestions
		equal to Cost of Debt. The above derivation also shows that equating NPVs before and after Change in Law with compensation as stipulated in the Model PPA is equivalent to making NPV of yearly differences between compensation and Net Cash Flow Impact due to ECS equal to Zero. In case, we know exact impact on yearly Cash Flows due to ECS, we do not need to compute NPV of Cash Flows before Change in Law and after Change in Law with compensation. We can straightaway check the NPV of differences between Impact of ECS on yearly Cash Flows and Compensation and ensure that it equates to Zero. • For NPV of differences to be Zero, (i) either the yearly differences can be made equal to zero, i.e. compensation equal to Impact of ECS or (ii) the yearly compensation can be so structured that NPV of differences at Cost of Debt is Zero. Specifically, in the first case, since r is the discount factor and is always positive, this implies that each years term in the above summation has to be individually equal to zero, i.e. Rpn - NCFcn= 0 Or Yearly Compensation Rpn = NCFcn = Rcn – Ccn • In effect, each year's compensation has to be equal to the sum of that year's increase in cost and decrease in revenue. It may also be noted that discount factor although specified as cost of debt, ultimately does not affect the computation of compensation in this case. Although, the discount rate used would affect the values of NPVs to be computed, but since compensation can be computed directly without use of NPV as derived above, it is immaterial to choose/apply any other discount rate as the same would also yield same amount of compensation. In fact, clause 13.4 of DBFOO Model PPA also echoes the same spirit that each year's compensation is normally to be demanded in the same year with 2 years grace being provided. • This Hon'ble Commission has also precisely applied the above methodology of first case to compute the compensation for decrease in revenue, i.e. Rcn, due to Auxiliary Consumption of ECS by adjusting the Contracted Capacity and quoted Capacity and Energy Charges. It has tested and satisfied the condition that the Capacity Charges and Energy Charges for each year are restored back to the same level as they would have been without impact of ECS Auxiliary Consumption. • In nutshell, the Model PPAs, including CGPL PPA, require compensation to be worked out in two steps viz. (i) to first estimate the impact of ECS installation and (ii) then in the second step to fix the compensation to satisfy restitution principle through NPV test. As stated above, this Hon'ble Commission's methodology of computing Decrease in Revenue is not correct i.e. yearly compensation equal to yearly impact. Therefore, we request Hon'ble Commission to allow compensation for each year equal to the impact of ECS on Cash Flows i.e. Increase in Cost Plus Decrease in Revenue. • This Hon'ble Commission has also extracted the relevant provisions of these documents which clearly show that the mechanism has to satisfy the principle of restitution of generating company to the same economic position as it would have been had no change in law taken place i.e. the compensation has to be

S. No.	Relevant Part of Draft Order	CGPL's Comments/ Suggestions
		exactly equal to the incremental cash flows due to change in law. In fact, this principle has been correctly applied by this Hon'ble Commission in the Draft Order while specifying compensation for Auxiliary Consumption on Existing Capacity and Energy Charges by ensuring that cash flows to the developer before and after implementation of ECS are exactly equal. Further, this Hon'ble Commission also has powers to carry out prudence check on components of cost needing compensation and can limit those components to normative/industry average levels if they are excessive and are not project site/technology specific. However, in doing so Hon'ble Commission cannot bring the compensation level itself down, which is much below the industry average. • Therefore, all the proposals in the Draft Order have to satisfy the principle of restitution and no additional condition can added to disturb this principle specified in the statutory documents. As stated by Hon'ble Commission carrying cost on compensation is also to be allowed under the principle of restitution. This Hon'ble Commission is also requested to specify principles for recovery of carrying cost. It is proposed to allow carrying cost on actual cost of debt for meeting the shortfall or in the absence of the same at the same rate at which loan for the ECS project is taken and if both are not available at SBI MCLR plus 350 basis points as opportunity cost with monthly compounding as the PPA provisions provide for monthly billing/payment and Change in Law provisions require same provisions for billing/payment to be applied. • As stated above, any increase in expenses/costs/burden (increase in cash outflow) or decrease in revenue (decrease in Cash Inflows) of CGPL and/ or the Procurer is to be compensated through monthly bills such that the compensation is granted on actuals. Though this Hon'ble Commission has, while computing the impact of capital cost (i.e. Depreciation and Cost of Capital), stated that the mechanism proposed satisfies the restitution principle, this Hon'ble Commission has not demonstrated that the mechanism in reality restitutes the generating companies. In fact, the mechanism proposed leads to less recovery than actual cost to be incurred by the generating company leading to violation of principle of restitution as has been shown subsequently and needs the modifications proposed by CGPL below for its correct application.
	Re. Applicability of the proposed compensation mechanism [Paras 18 to 22]	
3.	*"18. We agree with the suggestions of the stakeholders that there needs to be clarity regarding applicability of the mechanism for compensation. The Commission is of the view that the proposed Compensation Mechanism shall be applicable as per the following principles:* *…* *(c) In cases where the power purchase agreements do not provide for a mechanism for*	• In para 18(c), this Hon'ble Commission has stipulated that for mutually agreed mechanism also the compensation worked out under the proposed compensation mechanism shall be the ceiling. The said condition is arbitrary and contrary to the principles of freedom of contract amongst the parties and tantamount to a regulator adding terms to the contract. At best, this Hon'ble Commission can do a prudent check such that no unreasonable cost is being passed on to the consumer.

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	compensation but the parties to the power purchase agreements have agreed mutually to a compensation mechanism, ***the compensation worked out by this proposed Compensation Mechanism shall be the ceiling compensation****;* *…* *20. Due to installation or augmentation of emission control system, there would be additional capital expenditure and increase in expenses….* ***The increase in expenses for servicing additional capital expenditure needs to be assessed based on cost components such as depreciation and cost of capital employed****…"*	
4.	*21. …. Therefore,* ***there is a need to assess the components impacting the increase in expenses or decrease in revenue, which is consistent with the provisions as given at Clause 10.3.2 of the Model PPA****.* *22. Some stakeholders have suggested that there should be separate methodology of reimbursement for PPAs under Case-1 bidding and Case-2 bidding. We have perused the provisions of the PPAs and bidding guidelines under Case-1 bidding and Case-2 bidding and acknowledge that the Model PPA under Case-1 bidding and that under Case-2 bidding are different due to several distinguishable features. Therefore,* ***we are of the view that the proposed mechanism of compensation will be made applicable on case to case basis, consistent with the provisions of the respective PPA."***	• CGPL agrees that as per the restitution principle each component impacting revenue and cost needs to be assessed, including but not limited to depreciation, cost of arranging capital, spares, O&M expenses, Interest on Working Capital, compensation for increase in auxiliary consumption, heat rate, shutdown cost et al. • CGPL submits that, this Hon'ble Commission in its Order dated 12.06.2019 in Petition No. 168/MP/2019 has already approved the elements of some cost components in operation period e.g. operational expenditure which would be impacted once FGD is installed by CGPL. • CGPL also agrees that the proposed mechanism needs to be applied on case-to-case basis as per the applicable provisions in each case. Further, the payment of compensation be made in accordance with PPA provisions.
Re. Capital Expenditure [Paras 23]		
5.	*"23. …. The proposed Compensation Mechanism deals*	• CGPL agrees that the cost of expenditure incurred is to be decided on case-to-case basis.

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	with the methodology to work out the compensation based on capital cost admitted by the Commission. The Commission expects that the hard cost of emission control system would be discovered through a process of transparent competitive bidding. An inclusion or exclusion of any other expenditure shall be decided on case to case basis. Once the capital cost is determined, the compensation mechanism can be made applicable to work out the compensation."	• This Hon'ble Commission may kindly note that, the generators would be able to recover the entire capital cost incurred by it only upon filing of a Petition after the Date of Operation (ODe) of ECS. Hence, it is imperative that clarity be provided qua procedure for computing and raising the provisional monthly invoices/ supplementary invoices towards the additional capital cost incurred by the generators upon commissioning of the ECS till final tariff is approved by this Hon'ble Commission. In this regard, this Hon'ble Commission may consider providing clarity/ time-lines regarding exchange of relevant documents between the generators and the procurer and agreement amongst them for provisional raising of bill subject to final approval. • CGPL submits that this Hon'ble Commission may approve the methodology wherein the generator would propose the provisional compensation payable based on provisional capital cost and as per mechanism approved by Hon'ble Commission at least 3 months prior to the commissioning of ECS alongwith relevant supporting documents. The Procurers shall convey their agreement or disagreement with reasons and correct computation within a period of 1 month to the generator. Similarly, the generator shall convey its agreement or disagreement with reasons or computation given by procurers within 1 month. The generator shall start provisional billing from ODe based on (i) mutually agreed provisional compensation, if an agreement is reached or (ii) provisional compensation proposed by generator in case no agreement is reached and shall file Petition for final determination of Capital Cost and resolution of dispute on computation of compensation within 3 months of ODe. Such provisional billing shall continue till final determination of Capital Cost and resolution of dispute, if any, by Hon'ble Commission. Further, if Capital Cost is determined on Cash basis as on ODe and certain expenditure or payment is deferred due to warrantees etc., then Ceiling of Capital Cost based on generator's proposal may also be determined and generator may be allowed to re-compute and bill compensation to beneficiaries based on auditor's certificate on incurring such expenditure within the ceiling approved by Hon'ble Commission. In case, ECS for different Units of a generating station are commissioned on different dates, then proportionate compensation may be billed by generating company from date of operation of respective Units, which may be proposed to be corrected based on actual expenditure in true-up Petition. Moreover, even the auxiliary consumption would be higher till all the Units get commissioned and, hence, a proposal in this regard, if any, may be made by generating company in the true-up Petition. Further, the Supplementary Energy Charges for ECS should not be added for Energy Charge Rate used for merit order desptach until all the generators in the Region install requisite ECS.
Re. Structure of Compensation [Paras 24-29]		
6.	*"28. Therefore, in case of two-part tariff structure, the recovery of compensation would be through supplementary capacity charges and supplementary energy*	• CGPL agrees that compensation structure should be in line with the PPA provisions such that the compensation is allowed on actuals.

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	charges. In case of consolidated tariff, the recovery of compensation shall be through supplementary tariff. ***The structure of compensation shall be in line with tariff structure in the Power Purchase Agreements, as supplementary capacity charges and supplementary energy charges or supplementary tariff, as the case may be****."*	
Re. Supplementary Capacity Charges (Deprecation) [Paras 31-35]		
7.	*34.* ***We are of the view that the useful life of the generating station is to be considered 40 years in line with the Companies Act, 2013****. The Commission has considered the useful life of the generating station based on life cycle of major equipment of thermal generating station. The life of emission control system has been considered as 25 years in line with the other major equipment of generating station. The Commission observes that as on today, there are no generation projects with competitively bid tariff which have completed more than 15 years of life.* ***Therefore, based on 40 years of life of generating stations, in all cases 25 years of life of emission control system would be available for recovery of depreciation. Thus, the proposed approach for recovery of depreciation in 25 years balances the interest of the generating companies and procurers.*** *35. Accordingly, in all cases irrespective of balance useful life of the generating plant, 90% of additional capital expenditure on account of installation of ECS (considering salvage value of 10%) shall be recovered by the generating company in 25 years as depreciation (straight line method @3.6% per year)…"*	• This Hon'ble Commission has accepted the contention of the procurers that the life of thermal generating station should be considered as 40 years as given under the Companies Act, 2013. Further, the generating companies are permitted to recover capital expenditure by way of depreciation for 25 years at rate of 3.6% on straight line method with 10% residual value. This is being done to balance the interest between the generating companies and the Procurers. • It is submitted that, in effect the aforesaid mechanism allows generating companies (such as CGPL) to recover only a part of its capital expenditure. The said mechanism is not only contrary to the principles down under Article 13 of the PPA, the same is also contrary to the entire basis on which Mundra UMPP was set up. In this regard, it is stated that:- ➢ As stated in Paras 9 to 14 above, once an event is declared a Change in Law, the power of this Hon'ble Commission is restricted to allow relief/ compensation only on actuals. In other words, CGPL is entitled to recover the entire capital expenditure to be incurred by it for the purpose of installing system for meeting revised norms stipulated by MoEFCC within the term of the PPA, i.e. 25 years, from the Procurers and not based on provisions for accounting in Companies Act. This Hon'ble Commission does not have the plenary power to decide the compensation payable de-hors the scope of the PPA and and/ or to whittle down the scope of Change in Law compensation. ➢ Further, as per the Competitive Bidding Guidelines, the expected life of the power plant was assumed for 25 years. It is in this context, the term of the PPA was considered as 25 years and the tariff (including capacity charges) were fixed for 25 years where the entire capital expenditure of the plant was to be recovered from the Procurers within 25 years **[Ref:- Bullet 3 of Clause 5.4 (i)].** The mechanism suggested by this Hon'ble Commission mid-way changes the useful life of the project from 25 years to 40 years, which amounts to shifting the goal-post which is impermissible and vitiates the bid submitted by Tata Power. ➢ As demonstrated in Paras 6 and 7 above, Mundra UMPP has been set for the exclusive benefit of the Procurers. Further, the retrofitting of the plant is also being done for the exclusive

S. No.	Relevant Part of Draft Order	CGPL's Comments/ Suggestions
		benefit of the Procurers. Hence, even in equity, the Procurers are required to pay the entire capital and revenue expenditure/cost to be incurred to CGPL within the PPA period of 25 years. Spreading the capital cost for compensation beyond 25 years would amount to re-writing terms of PPA without the consent of CGPL. • The term 'useful life' of the project has been interpreted by the Hon'ble Supreme Court in the case of DERC v. BSES Yauma Power Limited & Ors: (2007) 3 SCC 33, wherein the Hon'ble Supreme Court held as under:- *"43. Before concluding, we may state that the basic object of providing depreciation is to allocate the amount of depreciation* ***of an asset over its useful life and not actual life so as to exhibit a true and fair view of the financial statements of an enterprise. Useful life is a period over which a depreciable asset is expected to be used. Useful life of an asset in a capital intensive industry is generally shorter than its physical life. Useful life is predetermined by contractual limits or by amount of extraction or consumption dependent on the extent of use and physical deterioration on account of wear and tear which depends on operational factors such as the number of shifts, repair and maintenance policy of the utility and reduced by obsolescence arising from technological changes, improvement in production methods, etc.*** *In the present case, DERC has not considered the difference between the physical life of an asset and the useful life of the asset."* • In terms of the above, Judgment of the Hon'ble Supreme Court, it is clear that the useful life of the project is to be considered as 25 years (being the contractual arrangement with the Procurers and as provided in the Competitive Bidding Guidelines). • Even otherwise, the useful life of Mundra UMPP (along with all major equipments) ought to be treated as 25 years (and not 40 years), being an industry wide practice, on account of the following:- ➢ Prior to the enactment of the Electricity Act, MoP had, vide its Notification dated 29.03.1994, had prescribed the useful life of the thermal power plant along with the rate of depreciation to be computed under straight line method. In terms of the said notification, the useful life of major components (i.e Plant & machinery including foundation viz. Boiler, Turbine and Generator-BTG) of the thermal power plant is considered as 25 years. A copy of MoP's Notification dated 29.03.1994 is annexed hereto and marked as **Annexure-6.** ➢ At the time of setting up Mundra UMPP, this Hon'ble Commission had issued Tariff Regulations (for Section 62 PPA) which also recognizes useful life of the thermal power plant as 25 years. In fact, in all its Tariff Regulations till date, this Hon'ble Commission has considered the useful life of the thermal generating stations as 25 years only. ➢ CEA's (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010 are the relevant regulations on the basis of which generating stations were designed and constructed. Regulation 5 of the said Regulations also provides that thermal power plants would

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		have a minimum life of 25 years. Relevant part of the said Regulations is reproduced below: *"5. General Technical Requirements – (1)* ***The coal or lignite based thermal generating stations shall be designed to give life of not less than twenty five (25) years.*** *Gas turbine based Stations and IC engine based Stations shall be designed for life not less than fifteen (15) years."* ➢ Technically, most of the power plants would be able to work for 25 years. Typically, continuing with the power plant after a period of 25 years requires an expenditure on renovation and modernization of the plant. In this regard, it is noteworthy that, CEA in its "Guidelines for Renovation And Modernization/Life Extension Works Of Coal/Lignite Based Thermal Power Station" published in October 2009 (as amended from time to time most recent being in 2020) has stated that life of main equipment is designed for 25 to 30 years, however, many equipment become prematurely weak due to operational stresses and hence taking life more than 25 years is not practical. Relevant portion is reproduced below for ease of reference: "4.2 R&M PROGRAMME WITH LIFE EXTENSION (LE) & UPRATING (LE&U) ***4.2.1 The equipment subjected to fatigue stresses and creep due to high temperatures such as turbine rotor and casings, HP piping, boiler headers, Boiler drum, main steam piping and valves, feed discharge lines etc. are designed for a given fatigue life of about 25-30 years of operation. However, many equipment/ components might become prematurely weak metallographically due to various operational stresses like frequent temperature and pressure excursions, full load trippings, frequent start and stops etc. and accordingly there is need to check the remaining life of these components after about 20 years of life or 1,60,000 hours of operation lest it may result into serious failures.*** A systematic study called the Residual Life Assessment (RLA) study involving non-destructive and destructive tests would reveal the remaining life of various critical components of plants and equipment so as to take steps to extend the life of the plant by a further period of about 15-20 years by appropriate repairs/replacements. A RLA study may be carried out earlier, say after 15 years or 1,00,000 hrs. of operation if the plant condition so necessitates and as stipulated in IBR 391 A." • Without prejudice to the above, it is submitted that reliance placed by this Hon'ble Commission on the Companies Act, 2013 for assuming the useful life of the project as 40 years is erroneous as:- ➢ The industry wide practice for the purpose of computing the useful life of the project is 25 years and not 40 years, as demonstrated above. ➢ Competitive Bidding Guidelines applicable to CGPL itself provided that the useful life of the project would not be considered more than 25 years. Hence, the entire bid was

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		predicated on this assumption, changing of which would amount to shifting of goal post mid-way. ➢ Based on the above and RFQ provisions, Mundra UMPP has been designed and constructed for useful life of 25 years with corresponding guarantees from manufacturers. ➢ Without prejudice to the above, the provisions of the Companies Act are applicable for the limited purpose of computing the statutory accounts of the companies, whereas the compensation for Change in Law is to be determined on the basis of the PPA and the norms qua useful life of the project considered as per the bidding guidelines or generally accepted norms in the power sector. In any case, this Hon'ble Commission has selectively applied the provisions of the Companies Act, 2013 while ignoring the other provisions. In this regard, the relevant extract of Schedule II of the Companies Act, 2013 is given below: *"**SCHEDULE II2*** ***(See section 123)*** ***USEFUL LIVES TO COMPUTE DEPRECIATION*** ***PART 'A'*** *1. Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life. The depreciable amount of an asset is the cost of an asset or other amount substituted for cost, less its residual value.* ***The useful life of an asset is the period over which an asset is expected to be available for use by an entity****, or the number of production or similar units expected to be obtained from the asset by the entity.* *2. For the purpose of this Schedule, the term depreciation includes amortisation.* *3. Without prejudice to the foregoing provisions of paragraph 1,—* ***3[(i) The useful life of an asset shall not be longer than the useful life specified in Part 'C' and the residual value of an asset shall not be more than five per cent of the original cost of the asset:*** ***Provided that where a company uses a useful life or residual value of the asset which is different from the above limits, justification for the difference shall be disclosed in its financial statement.*** ***…*** ***PART 'C'*** *5. Subject to Parts A and B above, the following are the useful lives of various tangible assets* *…* *IV Plant and Machinery* *(ii) Special Plant and Machinery* *(f) Plant and Machinery used in generation, transmission and distribution of power [NESD]* *1. Thermal/Gas/Combined Cycle Power Generation Plant ……...40 years* *….* ***Notes.—***

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		… ***3. The following information shall also be disclosed in the accounts, namely:—*** ***(i) depreciation methods used; and*** ***(ii) the useful lives of the assets for computing depreciation, if they are different from the life specified in the Schedule.*** *4. Useful life specified in Part C of the Schedule is for whole of the asset. Where cost of a part of the asset is significant to total cost of the asset and useful life of that part is different from the useful life of the remaining asset, useful life of that significant part shall be determined separately."* ➢ It is clear from clause 3(i) and proviso thereto in Part A, entry for Thermal/Gas/Combined Cycle Power Generation Plant in Part C read with Note 3(ii) that, 40 years is the maximum life that can be considered by generating plant. It does not mean that the useful life is 40 years. Moreover, any significant part of the asset can be assigned different life than that of whole plant as per Note 4. Further, Note 3(i) gives an option to choose method of depreciation i.e. straight line, WDC or differential depreciation with proper disclosure in accounts. Even the residual value can be lower than 5% for reasons to be disclosed in the accounts. Thus, even with 40 years of life and choosing WDV method, the rate of depreciation works out as 5.2% p.a. with almost 85% depreciation recovery in 25 years. i.e. close to 90% allowed by Hon'ble Commission. This, as stated earlier can go upto 95% if life is considered as 25 years. ➢ It is also unclear as to why the norms under the Companies Act are preferred over other statutes like Income Tax Act. As far as Income Tax Act is concerned, Rule 5(1), of the Income Tax Rules 1961 states that the companies engaged in generation of power have an option to choose the rates specified in Appendix I (general) or IA (for generation of power), which provides the same rates as were specified in MoP's Notification dated 29.03.1994 and adopted by Hon'ble Commission in its Terms and Conditions of Tariff Regulations for section 62 projects in 2001 and 2004. Relevant extract are as under: *"Depreciation.* *5. (1) Subject to the provisions of sub-rule (2), the allowance under clause (ii) of sub- section (1) of section 32 in respect of depreciation of any block of assets shall be calculated at the percentages specified in the second column of the Table in Appendix I to these rules* ***on the written down value of such block of assets*** *as are used for the purposes of the business or profession of the assessee at any time during the previous year:* *[(1A) The allowance under clause (i) of sub-section (1) of section 32 of the Act in respect of depreciation of assets acquired on or after 1st day of April, 1997 shall be calculated at the percentage specified in the second column of the Table in Appendix IA of these rules on*

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		the actual cost thereof to the assessee as are used for the purposes of the business of the assessee at any time during the previous year *Provided further that the undertaking specified in clause (i) of sub-section (1) of section 32 of the Act may, instead of the depreciation specified in Appendix IA, at its option, be allowed depreciation under sub-rule (1) read with Appendix I, if such option is exercised before the due date for furnishing the return of income under sub-section (1) of section 139 of the Act,* *(a) for the assessment year 1998-99, in the case of an undertaking which began to generate power prior to 1st day of April, 1997; and* *(b) for the assessment year relevant to the previous year in which it begins to generate power, in case of any other undertaking :* ➢ Clause (i) of sub-section (1) of section 32 of the Income Tax Act referred to above is relating to power generation undertakings, which provides as under: *"Depreciation.* *32. (1) In respect of depreciation of—* *(i) buildings, machinery, plant or furniture, being tangible assets;* *(ii) know-how, patents, copyrights, trade marks, licences, franchises or any other business or commercial rights of similar nature, being intangible assets acquired on or after the 1st day of April, 1998,* *owned, wholly or partly, by the assessee and used for the purposes of the business or profession, the following deductions shall be allowed—* ***(i) in the case of assets of an undertaking engaged in generation or generation and distribution of power, such percentage on the actual cost thereof to the assessee as may be prescribed***" ➢ Therefore, even Income Tax Act gives option to choose rates of depreciation and to apply WDV which allows faster recovery of depreciation. Further, the rates for power generation companies in Income Tax Act (Appendix IA) are exactly the same as given in MoP Notification of 1994, which also gave the life of different assets in a thermal generating station. Importantly, the life of Main Thermal Generating Plant, i.e. Boiler, Turbine and Generator (BTG) Installation, has been specified as 25 years with some civil structures having lives upto 50 years. Since BTG is the main equipment in a thermal generating station and accounts for almost 80-90% of the Capital Cost of the station and generation cannot take place if their useful life is over even if other small value assets still have some useful life, the life of thermal generating station cannot be considered more than 25 years. Life of generating station beyond 25 years may be considered only after huge renovation and modernization expenditure and only when the term of PPA are extended by the parties on mutually agreed terms. Hence, historically useful life of the thermal generating station has been specified as 25 years not only in Ministry of Power

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		notifications but also in Hon'ble Commission's Terms and Conditions of Tariff Regulations specified till current ones upto 2019. ➢ This Hon'ble Commission has considered 10% residual value with straight line method, whereas Companies Act permits residual value only upto 5% and allows WDV or even differential depreciation approach also to be followed, which ensures faster and higher than proposed recovery of depreciation. In view of the above reasons, it is stated that the approach adopted by this Hon'ble Commission is not correct and equitable. ➢ DBFOOT Overview of Model PPA, enclosed as **Annexure-7**, issued with Bidding Documents in September 2013: *"Elements of financial viability - Need to reduce capital costs* ***The three critical elements that determine the financial viability of generation projects are the concession period, fuel costs and capital costs. The concession period for a generation project should be fixed keeping in view the expected life of the generating plant. It could be fixed for a period of about 30 years, including the construction period**, with a provision for extension of 15 years at the option of either the Concessionaire or the Utility. Yet another extension of upto 15 years can be undertaken if both the parties so agree. This timeframe should enable a robust project structure. So far as the Fuel Charge is concerned, the MPPA makes it a pass through, subject to appropriate safeguards, which would address a major risk faced by power producers due to uncertainty relating to fuel prices over the medium and long term. **Since two of the three parameters stated above would be virtually pre-determined, capital cost is the variable that will determine the financial viability of a Power Station**. Adoption of cost-effective specifications would, therefore, be essential for reducing capital costs that would ensure a competitive Fixed Charge.* ***…*** ***Termination*** ***In the event of termination, the MPPA provides for a compulsory buy-out by the Utility**, as neither the Concessionaire nor the lenders can use the Power Station on their own for recovering their investments. This arrangement also provides the requisite protection of public resources like fuel, land and water which would revert to the Utility in the event of termination.* *…* ***Upon expiry of the specified concession period, the Concessionaire would be entitled to a termination payment which will be a pre-determined multiple of monthly Fixed Charge.** However, either Party would have the right to seek an extension of 15 years in the concession period and in such an event, no termination payment shall be due and payable after expiry of the extended period."*

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		➢ Therefore, under DBFOOT route the assets of generating station have to be compulsorily passed on to the Utility upon expiry of contract period at pre-determined price unless PPA gets extended. Therefore, Hon'ble Commission's presumption that the generating company would be able to run the plant after PPA life of 25 years is not correct for DBFOOT projects. Hence, recovery of depreciation has to be made within contract period of 25 years. ➢ For Model PPA of DBFOO projects, enclosed as **Annexure-8**, relevant extract of which is as follows: *"34.1 Increase in costs* *If as a result of Change in Law, the Supplier suffers an increase in costs or* ***reduction in net after-tax return*** *or other financial burden for and in respect of Contracted Capacity,…* *…* *34.3 Protection of NPV* *Pursuant to the provision of Clauses 34.1 and 34.2 and for the purpose of placing the Supplier in the Supplier in the same financial position as it would have enjoyed had there been no Change in Law affecting the costs, returns or other financial burden or gains, the* ***parties shall rely on the Financial Model to establish a net present value (the " NPV") of the net cash flow and make necessary adjustment in costs, revenues, compensation or other relevant parameters, as the case may be, to procure that the NPV of the net cash flow is the same as it would have been if no Change in Law had occurred. For avoidance of doubt, the Parties expressly agree that for determination of NPV, the discount rate to be used shall be equal to the weighted average rate of interest at which the Supplier has raised the Debt Due under its Financing Agreements."*** ➢ It is clear from the above that increase in cost or reduction in net after tax return is to be discounted by weighted average rate of interest of Debt for the project to see that NPV of the investment made is Zero. In other words, the cost of capital for Depreciation under-recovery/ over-recovery shall be considered as cost of debt. Accordingly, for a period of 15 years balance PPA life and with 9% as cost of debt, the NPV considering repayments in 12 years and 70% debt, works out to be negative at rate of depreciation proposed by Hon'ble Commission. Even with useful life of ECS taken as 25 years proposed in the Draft Order, the NPV would still be negative mainly due to non-consideration of loan repayment requirement. The NPV is Zero if (i) For Projects with life more than 15.43 (90%x12/70%) years, the Depreciation of 90% of Capital Cost is allowed equal to repayment during loan repayment period and balance depreciation is paid by equally spreading in balance PPA life or (ii) For Projects with life <= 15 years, Depreciation is allowed equally at the rate of 6% or more (90%/15). The computations of NPV is annexed hereto and marked as **Annexure-9**. ➢ Spreading depreciation over balance PPA life would not unjustly increase the tariff considering the fact that in overall Capital Cost of the Project, the Capital Cost of ECS shall only

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		be about 10-15% (about 40 paise/unit increase in overall tariff of about Rs. 3.00 per unit, i.e. total Rs. 3.40/unit) and even in the worst case, increase in tariff by reducing depreciable life from 25 years to 15 years would impact the tariff by only 4-5 paise/unit i.e. 100x5/340= 1.5%. Irrespective of impact, the Change in Law provision needs to implemented in letter and spirit and accordingly restitutive relief is to be granted to the generator. This Hon'ble Commission is required to spread depreciation such that the entire capital cost is recovered withi the balance PPA term. ➢ Taking life of the project beyond 25 years would obviously lead to lesser recovery during the remaining contract period than amount invested for ECS installation and, hence, would be against the principle of restitution. Not only the overall recovery would be less than increase in cost in the entire tenure of contract, even for repayment of loan with tenure of 10-12 years (and hence repayment requirement @ 5.83%-7% p.a. of Capital Cost with 70:30 debt:equity ratio) proposed depreciation of 3.6% shall fall short by 2.23%-3.4% of Cost (Cash outflow) each year for first 10-12 years. Again, the requirements of principle of restitution are not met. ➢ Even in terms of the finding of Hon'ble Commission at para 28 of Draft Order on Structure of Compensation, that it has to be in line with tariff structure in the Power Purchase Agreements, as supplementary capacity charges and supplementary energy charges or supplementary tariff, as the case may be, the compensation has to be within the period of contract as there is no structure of tariff available after the contract period in the respective PPAs. ➢ Therefore, it is proposed that life of generating may be considered as 25 years and not 40 years, unless the PPA term is extended by the parties on mutuall agreed terms and conditions. • CGPL submits that this Hon'ble Commission may consider spreading of 90% depreciation over balance life of the generating station (out of the remaining 25-year period) such that the the generating company is restituted to the same economic position as if such a change in law event has not occurred. In this, Hon'ble Commission could consider providing accelerated depreciated such that the entire cost is recovered during the PPA tenure. In this regard, it is noteworthy that: ➢ Accounting Standard 6 – Depreciation, issued by ICAI, prescribes that any asset added to an existing asset, for depreciation on the new asset its useful life should be considered as balance useful life of the existing asset. Further, it clearly stipulates that useful life may be considered as life of new asset addition only if it can be used on standalone basis without existing asset. Since ECS cannot be utilized fully beyond the useful life of generating station unless the term of the PPA is extended (which would be at the fag end), useful life for depreciation on ECS cannot be considered as estimated life of ECS even though it may go beyond useful life of generating station. The definition of Useful Life also stipulates that it is the period over which depreciable asset is expected to be used by the enterprise. Obviously, after useful life of generating station, the ECS cannot be used by the generating company for

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		generation of electricity and, hence, Useful Life of ECS has to be co-terminus with that of generating station i.e. 25 years. Relevant extracts of AS-6 are as follows: *"3.3 Useful life is either (i)* ***the period over which a depreciable asset is expected to be used by the enterprise****; or (ii) the number of production or similar units expected to be obtained from the use of the asset by the enterprise.* *…* *24.* ***Any addition or extension which becomes an integral part of the existing asset should be depreciated over the remaining useful life of that asset.*** *The depreciation on such addition or extension may also be provided at the rate applied to the existing asset. Where an addition or extension retains a separate identity and is capable of being used after the existing asset is disposed of, depreciation should be provided independently on the basis of an estimate of its own useful life."* ➢ Similar requirement is also echoed in Cost Accounting Standard 16 issued by ICMAI, which has similar wording and is reproduced below: *"4.11. Useful life of asset: Useful life of asset is either:* *(a)* ***the period over which a asset is expected to be available for use by an entity*** *; or* *(b) the number of production or similar units expected to be obtained from use of the asset by the entity.* *…* *5.6. Depreciation of any addition or extension to an existing depreciable asset which becomes an integral part of that asset shall be based on the remaining useful life of that asset.* *5.7. Depreciation of any addition or extension to an existing depreciable asset which retains a separate identity and is capable of being used after the expiry of the useful life of that asset shall be based on the estimated useful life of that addition or extension."* ➢ Even Ind AS-16 on Plant, Property and Equipment lays emphasis on depreciation of assets over a period in which economic benefit flows to the company. Since there would not be any economic benefit available from ECS after useful life of 25 years of generating station is over, it cannot be depreciated beyond 25 years and, hence, entire 90% depreciation is to be recovered upto generating station's useful life. Relevant extract of Ind AS-16 is reproduced below: *"6. Definitions* *Useful life is:* *(a) the period over which an asset is expected to be available for use by an entity; or* *(b) the number of production or similar units expected to be obtained from the asset by an entity.* *…* *56 The future economic benefits embodied in an asset are consumed by an entity principally through its use. However, other* ***factors, such as technical or commercial obsolescence and wear and tear while***

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		an asset remains idle, often result in the diminution of the economic benefits that might have been obtained from the asset*. Consequently, all the following factors are considered in determining the useful life of an asset:* *57* ***The useful life of an asset is defined in terms of the asset's expected utility to the entity. The asset management policy of the entity may involve the disposal of assets after a specified time or after consumption of a specified proportion of the future economic benefits embodied in the asset. Therefore, the useful life of an asset may be shorter than its economic life.*** *The estimation of the useful life of the asset is a matter of judgement based on the experience of the entity with similar assets."* ➢ **Even the generation tariff regulations of Hon'ble Commission for Section 62 projects allow depreciation on Additional Capitalization (other than ECS) to be recovered over balance useful life of the generating station, which has been clearly stipulated as 25 years**. However, for ECS, this Hon'ble Commission has erroneously prescribed different periods for depreciation recovery of 90% based on age of the generating station going beyond useful life of 25 years, which as stated above is not correct in the absence of PPA/life extension. Relevant extracts of Hon'ble Commission's CERC (Terms and Conditions of Tariff) Regulations, 2019 is reproduced below: *"33. Depreciation* *…* *(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the assets of the generating station and transmission system:* *Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets."* ➢ From the above, it is clear that as per statutory requirements and industry practice depreciation on ECS cannot be spread beyond 25 years useful life of generating station unless the same is extended after mutual agreement between the parties. ➢ Further, all the above quoted Accounting Standards provide liberty to the company to choose the method of depreciation i.e. straight line, WDV or differential depreciation (i.e. different rates of depreciation for different periods with reasons). In the proposals given in Draft Order, Hon'ble Commission has limited the depreciation method to only straight line. ➢ It is further submitted that remaining capital invested is not always equal to Net Fixed Assets (i.e. Gross Fixed Assets – Cumulative Depreciation). For the period loan repayment is required, depreciation can be used for it, which also has been the practice in electricity sector and, hence, NFA can be used as Capital invested for this period. However, beyond the loan repayment period, depreciation cannot be used to reduce equity and, hence, capital invested in the business as equity

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		money once invested cannot be taken out until winding up of the company. Therefore, Capital Employed after loan repayment should remain constant at value of equity invested till the end of useful life. In other words, return on Capital Employed should be constant and computed on the amount of equity after loan repayment. This principle is also used in tariff determination of section 62 projects on cost plus basis. ➢ It is submitted that for spreading of depreciation, the following needs to be satisfied: (a) Allowable 90% has to be recovered in balance useful life of the generating station (minimum value of which may be specified as 5 years so that Projects that have shorter balance life are not required to install ECS, this is also in line with latest notification of MoEFCC dated 31.03.2021); and (b) While spreading depreciation, the principle of restitution is applied i.e. the cost and revenue shortfall attributable to depreciation are fully allowed in each year. The next question is what is cost attributable to depreciation and what is revenue shortfall, if any. The allowable compensation as depreciation shall then be sum of cost and revenue shortfall due to depreciation. As per above stated statutory requirements and industry norms equal rates may be stipulated as cost with straight line or WDV method for balance useful life of the generating station and for working out revenue shortfall, cost may be compared with repayment requirement during loan tenure and differential between the two, if any, may be considered as revenue shortfall. In cases, where the cost, i.e. equal depreciation is sufficient to meet loan repayment requirement (for useful life <= loan tenure x 90/70), there is no shortfall in revenue and therefore nothing needs to be added to equal depreciation or cost each year. In cases, where equal depreciation is less than repayment requirement, compensation for depreciation may be allowed equal to repayment requirement for repayment period and balance depreciation may be spread over balance useful life after loan tenure. • In view of the above justifications, it is proposed that Hon'ble Commission may consider useful life of the thermal generating station as 25 years and may kindly allow full recovery of 90% Depreciation equally over balance remaining useful life of the generating station with straight line method after installation of ECS. Further, to avoid cash flow issues due to loan repayment and hence not meeting the principle of restitution, in case, equal Depreciation is not able to meet loan repayment obligation, Depreciation may be allowed to be equal to loan repayment for loan repayment period, which may be kept at minimum of 10 years, and balance depreciation may be spread over balance useful life of the project.
Re. Supplementary Capacity Charges (Cost of Additional Capital) [Paras 36-40]		
8.	*"36. In the staff paper, the **suggested approach of servicing of cost of capital employed was in line with***	• At the outset, it is submitted that the mechanism provided by this Hon'ble Commission for servicing the cost of capital (capital has been considered as NFA) incurred for installation of emission

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	industry practice *unlike the servicing of debt and equity separately as followed for generating stations under Section 62 of the Act.* *…* *39. We have considered the suggestions of the stakeholders.* ***The Commission notes that the approach of net fixed assets and cost of capital employed suggested in the staff paper satisfies the principle of economic restitution.*** *The Commission is aware of the concerns and financial position of the generating companies. However, any compensation for change in law cannot be a mechanism to improve their financial position. Accordingly, we hold that the suggested approach of servicing investment through cost of capital employed approach is appropriate, being consistent with the principle of economic restitution.* *40. The servicing of capital employed during each year of the contract period shall be worked out based on net fixed asset (derived by adjusting cumulative depreciation of emission control system) and interest rate of fund.* ***The interest rate will be weighted average rate of interest on loans of the generating station including ECS or at the rate of Marginal Cost of Lending Rate of State Bank of India (for one year tenor) as on 1st April of the year under consideration plus 350 basis points, whichever is lower****…."*	control system at pre-tax cost of debt does not restitute CGPL in terms of the principles stated in Para 10 to Para 14 above. • The draft order has proposed for servicing of the Capital employed during each year of the contract period based on net fixed asset and interest rate of fund. The interest rate will be weighted average rate of interest on loans of the generating station including ECS or at the rate of Marginal Cost of Lending Rate of State Bank of India (for one year tenor) as on 1st April of the year under consideration plus 350 basis points, whichever is lower. **Re. Non-Consideration of Equity Contribution** • This Hon'ble Commission has erred in treating cost of arranging equity equivalent to cost of arranging debt. It is noteworthy that, ordinarily projects of this size are funded such that approximately 70% of total capital is funded by debt and the remaining 30% is towards the equity contribution. The cost of arranging equity is much higher vis-à-vis cost for arranging debt. This is also evident from the norms specified by the Commission while determining tariff under Section 62 PPAs. In other words, the present mechanism treats unequals equally. Therefore, under 62 principles any equity contribution beyond 30% is treated as notional debt. Hence, the present mechanism suggested by this Hon'ble Commission ought to be re-considered on this ground alone. • Further, the proposed mechanism not only creates disparity, unequal playing field but the same is also arbitrary and absurd. It is stated that, the projects with better credit rating would be able to earn lower return on equity capital (due to lower interest rate payable on debt) vis-à-vis developer with poor credit rating. On the other hand, generating companies with higher rate of interest would earn higher return on the equity capital. Thus, the mechanism proposed is arbitrary and discriminatory and also fails to meet the test of restitution provided under Article 13 of the PPA. • As regards the cost of arranging equity, it is submitted that this Hon'ble Commission in the '***Statement of Reasons'*** in respect of the Tariff Regulations meant for Section 62 projects have observed that, barring few exceptions, the cost of arranging equity for regulated entities in the power sector works out to be in the range of 12%-15% (for setting up the project). For estimating the same, the Risk-Free rate has been considered by the Hon'ble Commission as average of the yield on 10-year government securities yield and for the market return, it has been estimated assuming the past returns provided by the equity market, as it mirrors the expectations of the investors. Market return on equity as considered by the Hon'ble Commission encompasses only thermal generating stations in the country and, hence, is most suitable value to be adopted for compensation on Post-tax Cost of Equity. • This Hon'ble Commission in its Tariff Regulations, 2019 has computed the cost of equity at 15.5%. This Hon'ble Commission has kept cost of equity at 15.5% slightly higher than market return

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		of 12-15% to compensate the generator for the loss of return during gestation period as tariff is recoverable only after commissioning of the project whereas investments are made during gestation period without any recovery of tariff/return on equity. Since risks associated with assets of generating station and that with ECS assets is valued collectively for generating station as a whole by market and not asset-wise, there is no reason that return on equity for ECS should be lower than that for the generating station. Further, risk that determines risk premium is dependant on many factors both during construction (like risk of statutory approvals, funding, gestation period, changes in law, force majeure events etc. that are not protected by PPA) as well as during operation (equipment failure, collection, cash shortfall due to inefficient operation, force majeure and change in law not protected by PPA) period of project. Since gestation period is only one of such factors, even with lower gestation period of ECS, its impact on the risk premium is insignificant and required return on equity may be considered as 15.5%. • Thus, the Hon'ble Commission ought to have considered cost of equity of 15.5% post-tax similar to what it has computed during notification CERC Tariff Regulations, 2019 on equity investment on existing assets. From the investor's perspective, there is no difference between equity invested in existing assets or equity invested in Additional Capitalizations or in ECS, cost of equity on investment does not change as it depends on the overall risk profile/perception in the market and not on risk profile associated with the individual assets. Since existing assets are getting market based return and, therefore, equity investors for ECS installation should get a return at least equal to market rate which will suitably compensate the investor towards equity cost. This cost of equity payable to investor is a legitimate cost to the company under the Model PPAs and, hence, must be considered for compensation. • The Hon'ble Commission may to consider that anything below the cost of equity will either lead to investments not flowing in the form of equity or if invested as equity there will be a loss to the shareholders/equity investors. In the absence of equity contribution, no lender would be ready to provide its part of investment as loan making the installation of FGD System impossible without funds. In the second case, if equity investments are made, the return to equity holders shall be much less than its cost eroding the wealth of the company and, hence, it will be contrary to the restitution principle. • The proposed CoCe is arbitrary and unreasonable which allows servicing the cost of equity at rate of weighted average rate of interest on actual loan portfolio of the generating station including ECS subject to ceiling of SBI (MCLR) +350bps rather than real cost of equity. Putting a ceiling on the cost of capital further widens the gap between the allowed return and real cost of equity. The allowed return on equity is equal to debt rate till debt rate is less than or equal to SBI (MCLR) +350bps. However, the return on equity will be capped to SBI (MCLR) +350bps if debt rate is more than SBI

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		(MCLR) +350bps, implying that the return on equity is less than debt rate. This is contrary to the financial principle that the rate of return on equity has to be higher due to risk premium attached to it. Further, Generating company would be required to pay income tax from such return as envisaged on equity capital and, therefore, overall return as provided for the equity capital would be much lower than the interest rate on loan capital which is contrary to the financial principle as well as restitutive principle. • The Hon'ble Commission has stated that the suggested approach of servicing investment through cost of capital employed approach is appropriate, being consistent with the principle of economic restitution. However, it has not considered that as per the financial principles, cost of equity cannot be equal to cost of loan as the debt capital is protected under law from risks for its repayment along with cost of loan/interest, whereas Equity Capital invested by the shareholders is not required to be repaid by the company nor company has any legal obligation to pay dividends to shareholders particularly when there are no profits. The transfer of risk to equity holders is compensated by risk premium over and above risk free cost of debt , which is captured by Capital Asset Pricing Model while computing cost of equity even by Hon'ble Commission. Since the cost of any fund, equity or debt, is directly proportional to the amount of risk it bears, the cost of equity is inherently higher than cost of debt. Therefore, giving equal treatment to cost of debt and cost of equity by the Hon'ble Commission is not justified. Also, Capping interest rate on loan to SBI (MCLR) +350bps thereby denying the actual interest cost is not correct and needs to be revisited and actual cost of loan needs to be allowed. • Considering post-tax cost of equity as 15.5%, cost of debt as 9%, balance life of 15 years and with current tax rate of 17.43% (assumed to be constant throughout), we have computed the NPV of differences between the post-tax cost equity and the proposed compensation at the cost of debt in **Annexure- 10**, which comes out to be negative. Hence, the proposal does not satisfy the test for restitution given in Clause 13.3 of the DBFOO Model PPA. Even with useful life of ECS taken as 25 years proposed in the Draft Order, the NPV would still be negative mainly due to non-consideration of income tax. In the same Annexure, we have considered the compensation as grossed up rate of return on equity of 18.13% [5.5%/(1-17.43%)] and we see that NPV of differences between cost of equity plus tax and the compensation is Zero. Thus, the proposed formulation satisfies the restitution principle. **Re. Regarding Capping of Interest Rate on Loan:** • It is submitted that based on the credit rating, some of the companies may be able to secure loan within the prescribed capping limit and it may be able to get the approval of actual interest rates whereas for the generating companies who are not able to secure within the prescribed limit, such companies would be forced to bear the excess interest cost beyond given limit for the reasons not attributable to it. Similarly, since the mechanism gives same pre-tax cost of capital for both equity and debt components of the

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		capital, compensation pre-tax return on equity equal to the stipulated limit, when real cost of debt is higher, would be lower than even the debt cost. It is, therefore, requested to carry out prudence check of the process being followed by the Generating company for procurement of debt fund from the market and, accordingly, pass the actual interest cost even in case where it has crossed the limit. This will be justified to all stakeholders. **Re. Regarding NFA Approach:** • It is submitted that for an investor equity capital once invested in the project is locked and will be available only after project is decommissioned. Also, such approach will increase the risk of the project multi fold thereby damaging the confidence of investor and lenders. It is, therefore, humbly requested to follow the Gross Fixed Asset basis for servicing of the capital employed alike Section 62 projects. • The Hon'ble Commission may kindly consider that commissioning of ECS to meet the revised emission level is an additional capital expenditure which is on account of directions given by MoEF&CC *vide* its notification dated 07.12.2015 and the same constitutes change in law event. It is a settled principle of law that in presence of a provision in the PPA with regard to restoration to the same economic position. The principle of Restitution is settled by Hon'ble Supreme Court in ***Uttar Haryana Bijli Vitran Nigam Limited v. Adani Power Limited & ors.*** (2019) 5 SCC 325. In fact, the same has been the practice to fully compensate the party for any hardships arising on account of Change in Law event such that it is resituated/reinstated to same economic position as if change in Law event has not occurred. However, this Hon'ble Commission by this draft order, has not only lowered the base rate of return on equity but also the base of equity by proportionate depreciation amount in NFA approach thereby depriving Generators of the legitimate cost of equity which it owes to the investors and is contrary to restitutive principle as has been discussed earlier. • This draft order would cause a detrimental impact on the investor sentiments, jeopardize capital investment plan for the revised emission norms and further is likely to increase the Tariff. Thus, ultimate brunt to face by Consumers/public at a large. • The compliance of new emission norms and additional capitalization to be incurred on account of the ECS would require huge investment and in order to tie -up for financial arrangements amid increasing Non-Performing Assets in the power sector, it is crucial on the part of Hon'ble Commission to have in place suitable norms which facilitate funding in the electricity sector and protect the interest of investors suitably. **Re. No restitution of cost of capital employed** • The ceiling of considering the interest equal to rate of interest on working capital allowed for section 62 projects, is contrary to the restitution principle. • Cost of Capital has been considered at one effective rate applicable to the entire capital, which is equated to cost of debt subject to a

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		ceiling. The capital expenditure for a project of such a nature would comprise of equity and debt components and each of these components have their own cost of servicing. The overall Cost of Capital for these two components taken together is Weighted Average Cost of Capital (WACC). The concept of WACC has been explained by this Hon'ble Commission in its Explanatory Memoranda and Statement of Reasons issued for current as well as earlier Terms and Conditions of Tariff Regulations as well as Regulations on Terms and Conditions for Determination of Tariff for Renewable Regulations. The Pre-tax WACC has been defined by Hon'ble Commission as: **WACC = rd x D% + re x E% = (rd x D + re x E)/(D+E) = (rd x D + re x E)/CE** **Or WACC x CE = rd x D + re x E** where, rd = rate of interest on Debt, D = Debt, E = Equity, CE = Capital Employed = D+E, D% = %age of Debt in total capital employed = D/(D+E), re = pre-tax return on equity and E% = %age of equity in total capital employed = E/(D+E) • Regarding cost of servicing equity, it is submitted that equity being riskier investment carries higher servicing cost than that of debt. In the abovesaid regulations for section 62 projects, Hon'ble Commission has derived the cost of equity based on scientific Capital Asset Pricing Model (CAPM) considering the prevalent and historical post-tax returns on equity investments in country's thermal generating stations. The latest determined return in 2019 Regulations is 15.5%. On cost of equity, apart from Hon'ble Commission's explanations, the following guidance from ICAI and ICMAI in their Study Notes may also be referred to: **ICAI Intermediate Paper 8: Financial Management – Chapter 4: Cost of Capital** *"4.7 Cost of Equity Share Capital* *Just like any other source of finance,* ***cost of equity is expectation of equity shareholders.*** *We know that value is performance divided by expectations. If we know value and performance, then we can calculate expectation as a balancing figure.* *Here performance means the amount paid by the company to investors, like interest, dividend, redemption price etc. In case of debentures and preference shares amount of interest or dividend is fixed but in case of equity shares it is uncertain.* *….* *5) All the above methods calculate cost of equity as a balancing figure. While the cost of equity or expectation of investors is dependent on risk. Higher the risk higher the expectations and vice versa. Capital Asset Pricing Model (CAPM) calculates cost of equity based on risk.* *…* ***The CAPM says that the expected return of a security or a portfolio equals the rate on a risk-free security plus a risk premium****. If this expected return*

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		does not meet or beat the required return, then the investment should not be undertaken." **ICWA Intermediate Paper 8: Cost Accounting and Financial Management – Study Note 6:** *"6.1 Cost of Capital* *…* *Definition: According to professor I.M.Pandy "Cost of Capital is the discount rate used in evaluating the desirability of the investment project. The cost of capital is the minimum rate of return required for investment project. The cost of capital is the minimum rate of return which will maintain the market value per share at its current level. If the firm earns more than the cost of capital, the market value per share is expected to increase. In other words, it is the rate that suppliers of funds expect to get. It is determined by the cost of the various sources of finance. It is also referred to as the weighted average* *cost of capital or composite / combined cost of capital."* *…* *Cost of Equity Capital* *The cost of Equity Capital is most difficult to compute. Some people argue that the equity capital is cost free as the Company is not legally bound to pay the dividends to Equity shareholders. But this is not true. Shareholders will invest their funds with the expectation of dividends. The market value of Equity Share depends in the dividends expected by shareholders. Thus the required rate of return which equates the present value of the expected dividends with the market value of Equity share is the cost of Equity Capital.* ***The cost of Equity Capital may be expressed as the minimum rate of return that must be earned on New Equity Share Capital financed investment in order to keep the earnings available to the existing Equity shareholders of the firm unchanged****."* • Thus, Cost of Equity is higher than risk free return on debt and for new equity infusion it has to be derived from market price of shares, determined as 15.5% post-tax by applying CAPM by this Hon'ble Commission in 2019 Regulations for thermal generating stations, which is the minimum rate of return required to maintain earnings of existing shareholders. In case, this rate of return on new equity infusion is less than this minimum then wealth of existing shareholders is eroded for meeting expectation of new shareholders thereby bringing overall share value down and erosion of equity. Thus, prescribing any return lower than this minimum rate would not restitute the generating company to same economic position and, hence, violative of PPA provisions. Relevant pages of these documents are enclosed as **Annexure-11**. • It is submitted here that investor and generating company are two different persons. The PPA is between the generating company

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		and the beneficiary. There is no direct relation between beneficiary and equity investors. Therefore, the above cost of equity is that of the generating company payable to investors, as are other costs payable to other suppliers of goods and services, which as per restitution principle needs to be recovered as compensation. • Allowing a post-tax cost less than this minimum is similar to allowing lesser cost than actually incurred for payment to suppliers of goods and services, which is not permissible under the PPAs. • Further, as regards the principle of reasonable return, the US Supreme Court of Appeals of the State of West Virginia has held that rate of return for a regulated utility has to be sufficient to ensure confidence in financial soundness of the utility and should be adequate to maintain credit and raise money in the case of "BLUEFIELD WATER WORKS & IMPROVEMENT COMPANY v. PUBLIC SERVICE COMMISSION OF THE STATE OF WEST VIRGINIA ET AL." - No. 256. Argued January 22, 1923.--Decided June 11, 1923 *"3. A public utility corporation, challenging as confiscatory rates imposed by a state commission, is entitled, under the due process clause of the Fourteenth Amendment, to the independent judgment of the court as to both law and facts. Id.* *4. Rates which are not sufficient to yield a reasonable return on the value of the property used, at the time it is being used to render the service of the utility to the public, are unjust, unreasonable and confiscatory; and their enforcement deprives the public utility company of its property, in violation of the Fourteenth Amendment. P. 690.* *5. A public utility is entitled to such rates as will permit it to earn a return on the value of the property it employs for the convenience of the public equal to that generally being made at the same time, and in the same region of the Country, on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to* *profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. P. 692.* *6. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management, to maintain its credit, and enable it to raise the money necessary for the proper discharge of its public duties. Id.* *7. A rate of return may be reasonable at one time, and become too high or too low by changes affecting opportunities for investment, the money market, and business conditions generally. Id."* A Copy of the Judgment dated 11.06.1921 is enclosed herewith as **Annexure-12.** • By stipulating rate of debt as Cost of Capital and not considering any income tax as a cost, i.e. Pre-tax WACC = rd, Hon'ble

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		Commission has effectively equated pre-tax rate of return on equity with rate of interest rd as shown below: Or WACC x CE = rd x CE = rd x D + re x E Or rd x (D+E) = rd x D + re x E Or rd x D + rd x E = rd x D + re x E Or rd x E = re x E Or rd = re Allowing only pre-tax rate of return equal to rate of debt implies that tax on this return has to be borne by generating company. Thus, after paying tax out of pre-tax return, the rate of post-tax return available to the generating company shall reduce to rd x (1-T), where T is the effective income tax rate. Clause 13.1, 13.2 and 13.3 clearly bring out that any reduction in post-tax returns due to CIL has to be compensated. Therefore, tax has to be considered as a legitimate cost under Model PPA so that post-tax returns equal to realistic cost of equity is allowed as a cost. Since tax on income is legitimate cost arising due equity infusion requirement for installation of ECS, it either needs to be captured as a separate cost head on actual basis alongwith post-tax return based on realistic cost of equity or the post-tax rate of return on equity based on realistic cost of equity needs to be specified in pre-tax terms by grossing it up with applicable tax rate as is done for section 62 projects.
Re.	**Supplementary Capacity Charges (Additional Operation & Maintenance Expenses) [Paras 41-44]**	
9.	*"44. Accordingly, we propose that the additional revenue expenses for operation and maintenance (O&Me) for the first two years of operation (including part financial year), shall be based on 2% of the additional capital expenditure (ACEe) for installation of ECS (excluding IDC and FERV) as admitted by the Commission, to be escalated at the rate of 3.5% per annum for the second year. The O&M expenses from the third year onward shall be as per norms and escalation rate determined separately by the Commission. The additional O&M expenses (O&Me) shall be worked out as follows:* *First Year: 2% of ACEe excluding IDC and FERV* *Second Year: 2% of ACEe escalated at the rate of 3.5%.*	• Hon'ble Commission has primarily reasoned absence of data for specifying norms at the moment and, hence, has stipulated 2% of ACEe excluding IDC and FERC as first year O&M with 3.5% escalation for the second year. In this regard, we re-iterate our submissions on Staff Paper made on 03.10.2020 and request Hon'ble Commission to kindly consider it. It may also be kindly noted that O&M expenses for CGPL for entire life have already been decided in Order dated 24.06.2020 in Petition No. 168/MP/2019, which may kindly be adopted in case comments are not considered by Hon'ble Commission.

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	Third Year onward: As per norms to be specified by the Commission."	
Re.	**Supplementary Capacity Charges (Additional interest on Working Capital) [Paras 45-48]**	
10.	*"48. Accordingly, the Additional Interest on Working Capital (IWCe) shall be worked out as under:* *IWCe(n) = WCe(n) x WCIR(n)/100.* *Where,* *WCe(n) is the Working Capital of the year for which compensation is to be determined (Refer Paragraph 47 above)* *WCIR(n) is Working Capital Interest rate (in %) which is Marginal Cost of Lending Rate of State Bank of India (for one year tenor) plus 350 basis points as on 1st April of the year for which compensation is to be determined"*	• CGPL has no comments on the proposed provision except that for the components of Working Capital, revision may be carried out based on comments given for those components in this and earlier submission.
Re.	**Supplementary Capacity Charges (Additional capacity charges due to additional auxiliary consumption) [Paras 49-57]**	
11.	*"57. …Therefore, if the additional auxiliary energy consumption of emission control system is allowed to be adjusted against any surplus capacity, it would be beneficial for the procurers as the contracted capacity remains unchanged. However, it would mean redefining the Power Station's Net Capacity agreed under the contract. Therefore, it is for the concerned parties to agree to redefine the Power Station's contracted capacity through supplementary agreement if they intend to adjust the additional auxiliary energy consumption of emission control system against any surplus capacity or in case the actual auxiliary energy consumption is less than what is agreed under the PPA."*	• Except for the quoted provision, we have no comments on the proposed mechanism. The norm of 1% Auxiliary Consumption cannot be applied to CGPL as in Order dated 24.06.2020 in Petition No. 168/MP/2019, Hon'ble Commission has already approved Auxiliary Consumption of 1.153% based on facts of CGPL. It is, therefore, requested that Auxiliary Consumption may be considered as 1% only when no figure has been approved in project specific Order else values approved in the Order may be considered. Out of the total installed capacity, the entire quantum of electricity is contracted with the procurers.

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Re. Supplementary Operational Charges (Expenses towards consumption of regents) [Paras 58-61]		
12.	*"60. The suggestion to arrive at normative value based on five years data would be appropriate and same can be considered once sufficient data is available.* ***The suggestion to devise a mechanism based on escalation index is a welcome one as it would obviate need for determination and verification of reagent bills and at the same time would capture variations in reagent cost****….* *…* *61. The reagent expenses for a month shall be calculated on month to month basis based on actual landed price.* ***The landed price of reagent shall be worked out based on actual payment made by the generating company backed by the documentary proof****."*	• CGPL submits that the additional expenditure on this count be allowed on actuals, after providing the back-up documents for proper restitution. In case, norms are still followed our earlier comments on staff paper may kindly be considered.
Re. Supplementary Operational Charges (additional energy charges due to additional auxiliary consumption) [Paras 61-64]		
13.	*"64. In case of standard bidding documents issued by the Central Government on 21st September, 2013 and 9th November, 2014 (DBFOT & DBFOO model), the capacity charges and fuel charges for a year are to be calculated from the base capacity and fuel charge are to be worked out as per the procedure mentioned in the PSA. The Additional Capacity Charges and Additional Energy Charges would be paid as per the formulation in paragraphs above. This will restore the generating company to the same economic position with respect to additional auxiliary energy consumption after installation of ECS."*	• As stated above, Auxiliary Consumption needs to be considered as 1.153% for CGPL and in general it should be as approved in project specific Order in absence whereof it can be considered as 1%.
Re. Recovery of Compensation (Supplementary Capacity Charges) [Paras 68-70]		

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14.	*"70. Accordingly, per unit supplementary capacity charges shall be worked out as under:* *SFC(m) = AFEe + ACCe (in Rupees per KWh)* *By applying the above value of the Supplementary Capacity Charge rate (Rs/KWh), the generating company shall recover the supplementary capacity charges on monthly basis under each PPA depending upon the cumulative availability achieved till the end of each month.* ***No supplementary incentive shall be allowed to the generating company for declaring the availability beyond the normative availability.*** *The availability and payment of supplementary capacity charges shall be reconciled on annual basis. Irrespective of the availability declaration by the generating station, if the generating company has operated the generating station without operation of the ECS for any period of time,* ***the supplementary capacity charges shall be payable corresponding to the availability achieved by ECS only. If the contract period as per PPA is less than the useful life of the emission control system, the obligation of the procurer shall be limited to its contract period and contracted capacity***"	• CGPL does not have any comments except Para 70. This Hon'ble Commission has already held that as per PPA, the structure of Change in Law compensation has to be same as that of tariff structure under the PPA. Tarif structure under the PPA is based on bid capacity charges with incentive or disincentive for over/under-achievement of Availability. Therefore, once the supplementary capacity charges get determined for ECS, similar incentive or disincentive mechanism as specified in the PPA has to be followed. The terms of PPA need to be applied in toto and no additional term or bar like disallowance of incentive can be introduced in the same. Therefore, if recovery of supplementary capacity charges is subjected to achievement of Availability, corresponding provisions for incentives in supplementary capacity charges for overachievement of Availability should also be applicable. In case, it is considered that additional incentive is beyond principle of restitution, then linking recovery of supplementary capacity charges to availability is also against this principle as it would not allow full restitution in terms of the PPA. It is, therefore, suggested that bar on supplementary incentive may be removed and it may be clarified that it shall also be available. • With regard to recovery limited to contract period, it is submitted that for the reasons given in the comments above on Depreciation, full recovery of Depreciation may be permitted in contract period particularly if Contract Period is 25 years i.e. useful life of the Project. Proportional recovery of capacity charges based on contracted capacity may be kept for those projects where there is capacity available for sale after reducing contracted capacity with procurers. However, in case of CGPL, the proportional reduction suggested by this Hon'ble Commission is pending consideration in Review Petition No. 30/RP/2020.
Re. Shutdown Period [Paras 73-75]		
15.	*"75. … The Commission is of the view that if the period of shut down exceeds beyond annual shutdown period factored in the normative availability under PPA, either on account of delay in timely completion of activities for interconnecting emission control system or lack of coordination, the consequential cost for the same cannot not be passed on to the consumers."*	• This Hon'ble Commission's decision under this head is contrary to its Order in Petition No. 168/MP/2019.

17. CGPL requests this Hon’ble Commission to consider the aforesaid submissions and give CGPL an opportunity for hearing before passing the final order.

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ANNEXURE - 1

The Gazette of India

EXTRAORDINARY
PART I - Section 1
PUBLISHED BY AUTHORITY
Ministry of Power

New Delhi,
Dated the 19th January, 2005

RESOLUTION

No. 23/11/2004-R&R (Vol.II)

(Contains amendments dated 30.3.2006 and 18.8.2006)

Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees

1. Preamble

Promotion of competition in the electricity industry in India is one of the key objectives of the Electricity Act, 2003 (the Act). Power purchase costs constitute the largest cost element for distribution licensees. Competitive procurement of electricity by the distribution licensees is expected to reduce the overall cost of procurement of power and facilitate development of power markets. Internationally, competition in wholesale electricity markets has led to reduction in prices of electricity and in significant benefits for consumers.

Section 61 & 62 of the Act provide for tariff regulation and determination of tariff of generation, transmission, wheeling and retail sale of electricity by the Appropriate Commission. Section 63 of the Act states that –

> "Notwithstanding anything contained in section 62, the Appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government."

These guidelines have been framed under the above provisions of section 63 of the Act. The specific objectives of these guidelines are as follows:

1. Promote competitive procurement of electricity by distribution licensees;
2. Facilitate transparency and fairness in procurement processes;
3. Facilitate reduction of information asymmetries for various bidders;

4. Protect consumer interests by facilitating competitive conditions in procurement of electricity;
5. Enhance standardization and reduce ambiguity and hence time for materialization of projects;
6. Provide flexibility to suppliers on internal operations while ensuring certainty on availability of power and tariffs for buyers.

2. Scope of the Guidelines

2.1. These guidelines are being issued under the provisions of Section 63 of the Electricity Act, 2003 for procurement of electricity by distribution licensees (Procurer) for:

(a) long-term procurement of electricity for a period of 7 years and above;

(b) Medium term procurement for a period of upto 7 years but exceeding 1 year.

2.2. The guidelines shall apply for procurement of base-load, peak-load and seasonal power requirements through competitive bidding, through the following mechanisms:

(i) Where the location, technology, or fuel is not specified by the procurer **(Case 1)**;

(ii) For hydro-power projects, load center projects or other location specific projects with specific fuel allocation such as captive mines available, which the procurer intends to set up under tariff based bidding process **(Case 2)**.

2.3. Unless explicitly specified in these guidelines, the provisions of these guidelines shall be binding on the procurer. The process to be adopted in event of any deviation proposed from these guidelines is specified later in these guidelines under para 5.16.

2.4. Procurement by more than one distribution licensee through a combined bid process shall be permitted and in such a case the Procurers shall have the option to conduct the bid process through an authorized representative. For such combined procurement, each procurer shall provide the necessary information required as per these guidelines. To ensure standardization in evaluation of bids, the payment security and other commercial terms offered to the bidders by the various procurers shall not vary. The price offered by the bidders shall also be the same for the distribution licensees inviting the bid.

In case of combined procurement where the distribution licensees are located in more than one State, the Appropriate Commission for the purpose of these bidding guidelines, except for the purpose of para 3.1(iii)(a), shall be the Central Electricity Regulatory Commission. For the purpose of para 3.1(iii)(a),

the State Electricity Regulatory Commission shall be the Appropriate Commission.

2.5. All obligations on part of the procurers for the bid process shall be considered to be met only when each and every procurer meets such obligations set out in the Request for Proposal (RFP). This shall, however, not preclude the bidder from waiving such stipulation if the bidder finds it reasonable to do so, and the same shall not be construed to be violation of these guidelines.

3. Preparation for inviting bids

3.1. To expedite the bid process, the following conditions shall be met by the procurer:

(i) The bid documentation shall be prepared in accordance with these guidelines and the approval of the appropriate Regulatory Commission shall be obtained unless the bid documents are as per the standard bid documents issued by the Central Government. In such cases, an intimation shall be sent by the procurer to the appropriate Regulatory Commission about initiation of the bidding process.

(ii) Approval of the Appropriate Commission shall be sought in event of the deviations from the bidding conditions contained in these guidelines, following the process described in para 5.16 of these guidelines.

(iii) Approval of the Appropriate Commission shall be sought prior to initiating the bidding process in respect of the following aspects:

(a) For the quantum of capacity / energy to be procured, in case the same is exceeding the projected additional demand forecast for next three years (Both for **Case 1** and **Case 2**).

(b) For the transfer price of fuel, in case of fuel specific procurement enquiry, if such price has not been determined by government, government approved mechanism or a fuel regulator (under Case 2).

3.2. For long-term procurement from hydro electric projects or for projects for which pre-identified sites are to be utilized (Case 2), the following activities should be completed by the procurer, or authorized representative of the procurer, before commencing the bid process:

- Site identification and land acquisition required for the project
- Environmental clearance
- Fuel linkage, if required (may also be asked from bidder)
- Water linkage
- Requisite Hydrological, geological, meteorological and seismological data necessary for preparation of Detailed Project Report (DPR), where applicable.

The bidder shall be free to verify geological data through his own sources, as the geological risk would lie with the project developer.

The project site shall be transferred to the successful bidder at a declared price.

Provided that for the projects from which more than one distribution licensees located in different States intend to procure power and if the preparations for such projects are being facilitated by the Central Government, the activities referred to above shall be initiated before the bidding process and should be completed before signing the power purchase agreement with the selected bidder.

3.3. It is recommended that the procurer should obtain the transmission clearances necessary for receiving power at the delivery points prior to inviting bids. However this shall not be a binding condition for the bid process. Unless otherwise specified in the bid documents, it shall be the responsibility of the selected bidder to obtain transmission linkage for evacuation and inter-State transmission of power (where applicable).

4. Tariff Structure

4.1. For procurement of electricity under these guidelines, tariff shall be paid and settled for each payment period (not exceeding one month). A multi-part tariff structure featuring separate capacity and energy components of tariff shall ordinarily form the basis for bidding. However, for medium term procurement the procurer may, at his option, permit bids on a single part basis, and the same shall be clearly specified in the Request for Qualification (RFQ) / Request for Proposal (RFP).

Procurement under case-2 where procurer offers a captive fuel source (such as captive coal mine) for concurrent development and use for power production covered under the procurement query would also have a multi-part tariff structure featuring separate capacity and energy components of tariff.

4.2. In case of long term procurement with specific fuel allocation (Case 2), the procurer shall invite bids on the basis of capacity charge and net quoted heat rate. The net heat rate shall be ex-bus taking into account internal power consumption of the power station. The energy charges shall be payable as per the following formula :

Energy Charges = Net quoted heat rate X Scheduled Generation X Monthly Weighted Average Price of Fuel / Monthly Average Gross Calorific Value of Fuel.

If the price of the fuel has not been determined by the Government of India, government approved mechanism or the Fuel Regulator, the same shall have to be approved by the appropriate Regulatory Commission.

In case of coal / lignite fuel, the cost of secondary fuel oil shall be factored in the capacity charges.

4.3. Tariffs shall be designated in Indian Rupees only. Foreign exchange risks, if any, shall be borne by the supplier. Transmission charges in all cases shall be borne by the procurer.

Provided that the foreign exchange rate variation would be permitted in the payment of energy charges [in the manner stipulated in para 4.11(iii)] if the procurer mandates use of imported fuel for coastal power station in case-2.

Capacity charges

4.4 Capacity charge shall be paid based on actual availability in kwh, as per charges quoted in Rs/kwh and shall be limited to the normative availability (or normative capacity index for hydro electric stations). The normative availability shall be higher by a maximum of 5% of the level specified in the tariff regulations of the Central Electricity Regulatory Commission (CERC) prevailing at the time of the bid process, and shall be computed on annual basis. The capacity component of tariffs may feature separate non-escalable (fixed) and escalable (indexed) components. The indices to be adopted for escalation of the escalable component shall only be Wholesale Price Index (WPI), Consumer Price Index (CPI) or a combination of both WPI and CPI and the Base year shall be specified in the bid document.

4.5 Capacity charges for availability beyond the normative availability shall be a pre-specified percentage of the non-escalable component of the capacity charges. The percentage applicable shall be specified in the RFP, and shall be limited to a 40% of the non-escalable component of the capacity charges. For procurement of Case-2 type (in reference to para 2.2.), the procurer shall have first right of refusal on energy generated beyond normative availability. In case actual availability is less than the normative availability, capacity charges shall not be payable for the shortfall compared to the normative availability. In case availability is lower than a predetermined level (which is identified in the RFP and may be about 5% below normative availability), penalty at the rate of 20% of the capacity charge shall also be applicable to the extent of the shortfall in availability below such predetermined level.

4.6 The seller (successful bidder) shall declare availability on a daily basis in accordance with the scheduling procedure as stipulated in the Indian Electricity Grid Code (IEGC) from time to time. Further the seller and procurer shall comply with all relevant provisions of the IEGC. If the procurer does not avail generation up to declared availability, the same can be sold in market by the seller, and sale realization in excess of variable charges shall be equally shared with the procurer.

4.7 Any change in law impacting cost or revenue from the business of selling electricity to the procurer with respect to the law applicable on the date which is 7 days before the last date for RFP bid submission shall be adjusted separately. In case of any dispute regarding the impact of any change in law, the decision of the Appropriate Commission shall apply.

4.8 At the bid evaluation stage, ratio of minimum and maximum capacity charge (including both the non-escalable component and the escalable component incorporating escalation as per index being used for the purpose of evaluation) over the term of the Power Purchase Agreement (PPA) shall not be less than 0.7 to avoid excessive front loading or back loading during the period of contract.

4.9 In case peakload or seasonal requirements are distinct from baseload requirements, the bidders shall indicate distinct prices for such peakload or seasonal supply which shall be evaluated separately. Differential rates quoted for the same source of power for base and peak/seasonal load shall not constitute violation of guideline or unfair practice.

4.10 Adequate payment security shall be made available to the bidders. The payment security may constitute:

(i) Letter of Credit (LC)

(ii) Letter of Credit (LC) backed by credible escrow mechanism.

In the case the seller does not realize full payment from the procurer by the due date as per payment cycle, the seller may after 7 days, take recourse to payment security mechanism by encashing the LC to the extent of short fall or take recourse to escrow mechanism. The procurer shall restore the payment security mechanism prior to the next date of payment. Failure to realize payment even through payment security mechanism shall constitute an event of payment default. In the event of payment default the seller, after giving 7 days notice, can sell up to 25% of the contracted power to other parties without loosing claim on the capacity charges due from the procurer. If the payment security mechanism is not fully restored within 30 days of the event of the payment default, the seller can sell full contracted power to other parties without loosing claim on the capacity charges due from the procurer. The surplus over energy charges recovered from

sale to such other parties shall be adjusted against the capacity charge liability of the procurer. In case the surplus over energy charges is higher than the capacity charge liability of the procurer, such excess over the capacity charge liability shall be retained by the seller.

Energy Charges

4.11 Where applicable, the energy charges payable during the operation of the contract shall be related on the base energy charges specified in the bid with suitable provision for escalation. In case the bidder provides firm energy charge rates for each of the years of the contract term, the same shall be permitted in the tariffs.

(i) In cases other than the cases where captive fuel source is offered or cases where the procurer mandates use of imported fuels in case 2 queries, the energy charges shall be payable in accordance with fuel escalation index used for evaluation of the bid. In case of bids based on net heat rate, the price of fuel shall be taken as stipulated under para 4.2. However, the fuel escalation will be subject to any administered price mechanism of Government or independent regulatory price fixation in case of fuel produced within the country. The applicable indices for relevant fuels shall be identified in the RFP documents.

(ii) The energy charges may feature separate non-escalable (fixed) and escalable (indexed) components in case of a procurement query where the procurer offers a captive fuel source (such as a captive coal mine) for concurrent development and production of power. The ratio of minimum and maximum energy charges (including both the non-escalable component and escalable component incorporating escalation as per index being used for evaluation) over the term of PPA shall not be less than 0.5 to avoid excessive frontloading or backloading. The index for escalable component of energy charge in such a case would be as notified by the CERC under para 5.6(vi).

(iii) In cases where the procurer mandates use of imported fuel for use in a coastal power station in case-2 procurement query, the bids may be invited for base energy charge for the first year to be escalated as per the indices identified in the RFP. Such energy charge would have following three components:

a) Imported fuel component in US Dollars/unit.

b) Transportation of fuel component in US Dollars/unit.

c) Inland fuel handling component in Indian Rupees/unit

Each of these components may have separate non-escalable (fixed) and escalable (indexed) sub-components. The escalation indices for escalable sub-components of these three components would be as notified by the CERC under para 5.6(vi).

It is clarified that the bidders would have option to quote firm energy charge rates for each of the years of the contract.

4.12 No adjustment shall be provided for heat rate degradation of the generating stations. Even in case of bids based on net heat rate, the bidder shall factor in site conditions, loading conditions, frequency variations etc and no adjustment shall be allowed on the quoted net heat rate for the duration of the contract.

4.13 In case a bidder offers hydro power, under **Case 1** or the procurer invites bids of hydro power under **Case 2**, the hydrological risk shall be borne by the Procurer, provided the hydrological data of such a project is based on authentic sources and is known to the parties in advance. Any hydrological advantages resulting in energy availability beyond the design energy shall be passed on to the Procurer without any charge. The geological risk for the hydro project shall be borne by the developer.

4.14 Energy charges shall be payable by the procurer to the seller for the scheduled energy. Deviations beyond agreed energy schedules shall be settled under the ABT/UI mechanism.

Combined capacity and energy charges

4.15 In cases where the procurement process permits bidders to submit combined capacity and energy charges, the charges proposed shall be firm for each of the years of the term of the Power Purchase Agreement (PPA), and no escalation of tariffs shall be permitted over and above the rates proposed by the seller in the price bid.

4.16 The bidder shall specify the normative availability from the project on an annual basis. The model PPA made available to the bidders at the RFQ/RFP stage shall feature appropriate provisions for penalties in event of the normative availability not being met by the seller. The RFQ/RFP shall also specify minimum offtake conditions for procurement from such stations.

4.17 The per kwh rates payable to the seller for offtake by the procurer over and above the normative levels shall be the same as the rates applicable till normative availability. In case the procurer does not schedule the energy made available by the seller as per the contract, the seller shall be free to sell to other parties. The seller shall not be required to make any payments to the procurer for such sales to third parties.

5 Bidding Process

Two-stage process

5.1 For long-term procurement under these guidelines, a two-stage process featuring separate Request for Qualification (RFQ) and Request for Proposal (RFP) stages

shall be adopted for the bid process under these guidelines. The procurer may, at his option, adopt a single stage tender process for medium term procurement, combining the RFP and RFQ processes. Procurer or authorized representative shall prepare bid documents including the RFQ and RFP in line with these guidelines and standard bid documents.

5.2 The procurer shall publish a RFQ notice in at least two national newspapers, company website and preferably in trade magazines also to accord it wide publicity. The bidding shall necessarily be by way of International Competitive Bidding (ICB). For the purpose of issue of RFQ minimum conditions to be met by the bidder shall be specified by the procurer in the RFQ notice.

5.3 Procurer shall provide only written interpretation of the tender document to any bidder / participant and the same shall be made available to all other bidders. All parties shall rely solely on the written communication and acceptances from the bidders.

5.4 Standard documentation to be provided by the procurer in the RFQ shall include,

(i) Definition of Procurer's requirements, including:

- Quantum of electricity proposed to be bought in MW. To provide flexibility to the bidders, this may be specified as a range, within which bids would be accepted. Further, the procurer may also provide the bidders the flexibility to bid for a part of the tendered quantity, subject to a given minimum quantity.
- The procurer may separately specify distinct baseload requirements and peakload requirements through the same bid process. Seasonal power requirements, if any, shall also be specified;
- Term of contract proposed; (as far as possible, it is advisable to go for contract coinciding with life of the project in case of long term procurement). The bidder shall be required to quote tariff structure for expected life of the project depending upon fuel proposed by him. The expected life project is estimated to be 15 years for gas/liquid fuel based projects, 25 years for coal based projects and 35 years for hydro projects.
- Normative availability requirement to be met by seller (separately for peak and off-peak hours, if necessary);
- Definition of peak and off-peak hours, if relevant for the procurement query;
- Expected date of commencement of supply;
- Point(s) where electricity is to be delivered;
- Wherever applicable, the procurer may require construction milestones to be specified by the bidders;

- Financial requirements to be met by bidders including, minimum net-worth, revenues, etc with necessary proof of the same, as outlined in the bid documents;

(ii) Model PPA proposed to be entered into with the seller of electricity. The PPA shall include necessary details on:

- Risk allocation between parties;
- Technical requirements on minimum load conditions;
- Assured offtake levels;
- Force majeure clauses as per industry standards;
- Lead times for scheduling of power;
- Default conditions and cure thereof, and penalties;
- Payment security proposed to be offered by the procurer.

(iii) Period of validity of offer of bidder;

(iv) Requirement of transfer of assets by the selected bidder (if any) to the procurer at the end of the term of the PPA.

(v) Other technical, operational and safety criteria to be met by bidder, including the provisions of the IEGC/State Grid Code, relevant orders of the Appropriate Commission (e.g – the ABT Order of the CERC), emission norms, etc., as applicable.

(vi) The procurer may, at his option, require demonstration of financial commitments from lenders at the time of submission of the bids. This would accelerate the process of financial closure and delivery of electricity;

(vii) The procurer or the supplier may exercise exit option subject to the condition that the new party satisfies all RFQ and RFP conditions and also undertakes to accept all the obligations and responsibilities of the PPA.

5.5 RFP shall be issued to all bidders who have qualified at the RFQ stage. In case the bidders seek any deviations and procurer finds that deviations are reasonable, the procurer shall obtain approval of the Appropriate Commission before agreeing to deviation. The clarification/revised-bidding document shall be distributed to all who had bought the RFP document informing about the deviations and clarifications and an intimation shall also be sent to the Appropriate Commission. Final PPA shall also be displayed on the website of the procurer. Wherever revised bidding documents are issued, the procurer shall provide bidders at least two months after issue of such documents for submission of bids.

5.6 Standard documentation to be provided by the procurer in the RFP shall include,

(i) Structure of tariff to be detailed by bidders;

(ii) PPA proposed to be entered with the selected bidder.

The model PPA proposed in the RFQ stage may be amended based on the inputs received from the interested parties, and shall be provided to all parties responding to the RFP. No further amendments shall be carried out beyond the RFP stage;

(iii) Payment security to be made available by the procurer.

The payment security indicated in the RFQ stage could be modified based on feedback received in the RFQ stage. However no further amendment to payment security would be permissible beyond the RFP stage.

(iv) Bid evaluation methodology to be adopted by the procurer including the discount rates for evaluating the bids.

The bids shall be evaluated for the composite levellised tariffs combining the capacity and energy components of the tariff quoted by the bidder. In case of assorted enquiry for procurement of base load, peak load and seasonal power, the bid evaluation for each type of requirement shall be carried out separately. The capacity component of tariffs may feature separate non-escalable (fixed) and escalable (indexed) components. The index to be adopted for escalation of the escalable component shall be specified in the RFP.

For the purpose of bid evaluation in cases other than where a captive fuel source is offered, median escalation rate of the relevant fuel index (as identified in the RFP) in the international market or domestic market for the last 30 years for coal and 15 years for gas / LNG (as per CERC's notification in (vi) below) shall be used for escalating the energy charge (or the derived energy charge in cases referred to in para 4.2) quoted by the bidder. If data of 30/15 years are not available, the same shall be taken for maximum number of available years. The provisions of para 4.11(iii) would also apply to evaluation of bids in cases where procurer mandates use of imported fuel for coastal power stations. However, in cases where the bidder quotes firm energy charges for each of the years of proposed supply, the energy charges proposed by the bidder shall be adopted for bid evaluation.

Where the procurer offers a captive fuel source (such as a captive coal mine) for concurrent development and production of power, the provisions of para 4.11(ii) would apply.

The rate for discounting the combination of fixed and variable charges for computing the levellised tariff shall be as notified by CERC keeping in view prevailing rate for 10 year Government of India securities. This rate is to be specified in the RFP.

(v) The RFP shall provide the maximum period within which the selected bidder must commence supplies after the PPA is entered into by the procurer with the selected bidder, subject to the obligations of the procurer being met. This shall ordinarily not be less than four years from the date of signing of the PPA with the selected bidder in case supply is called for long term procurement. The RFP shall also specify the liquidated damages that would apply in event of delay in supplies.

(vi) Following shall be notified and updated by the CERC every six months:

1. Escalation rate for domestic coal. (Separately for evaluation and payment)
2. Escalation rate for domestic gas. (Separately for evaluation and payment)
3. Escalation rates for different escalable sub-components of energy charge for plants based on imported coal. (Separately for evaluation and payment)
4. Escalation rate for different escalable sub-components of energy charge for plants based on imported gas. (Separately for evaluation and payment)
5. Inflation rate to be applied to indexed capacity charge component.
6. Inflation rate to be applied to indexed energy charge component in cases of captive fuel source.
7. Discount rate to be used for bid evaluation.
8. Dollar-Rupee exchange variation rate. (For the purpose of evaluation)

Bid submission and evaluation

5.7 To ensure competitiveness, the minimum number of qualified bidders should be at least two other than any affiliate company or companies of the procurer. If the number of qualified bidders responding to the RFQ/RFP is less than two, and procurer still wants to continue with the bidding process, the same may be done with the consent of the Appropriate Commission.

5.8 Formation of consortium by bidders shall be permitted. In such cases the consortium shall identify a lead member and all correspondence for the bid process shall be done through the lead member. The procurer may specify technical and financial criteria, and lock in requirements for the lead member of the consortium, if required.

5.9 The procurer shall constitute a committee for evaluation of the bids with at least one member external to the procurer's organisation and affiliates. The external member shall have expertise in financial matters / bid evaluation. The procurer shall reveal past associations with the external member - directly or through its affiliates - that could create potential conflict of interest.

5.10. Eligible bidders shall be required to submit separate technical and price bids. Bidders shall also be required to furnish necessary bid-guarantee along with the bids. Adequate and reasonable bid-guarantee shall be called for to eliminate non-

serious bids. The bids shall be opened in public and representatives of bidders desiring to participate shall be allowed to remain present.

5.11 The technical bids shall be scored to ensure that the bids submitted meet minimum eligibility criteria set out in the RFP documents on all technical evaluation parameters. Only the bids that meet all elements of the minimum technical criteria set out in the RFP shall be considered for further evaluation on the price bids.

5.12 The price bid shall be rejected if it contains any deviation from the tender conditions for submission of price bids.

5.13 Wherever applicable, the price bid shall also specify the terminal value payable by the Procurer for the transfer of assets by the selected bidder in accordance with the terms of the RFP.

5.14 In case of procurement query under Case 1, the bidder may quote the price of electricity at the generating station bus-bar (net of auxiliaries), or at the interface point with the State transmission network. For purposes of standardization in bid evaluation, the tariffs shall be compared at the interface point of the generator/supplier with the State transmission network. In case the bidder quotes his rate at the generating station bus-bar, normative transmission charges for the regional/inter-regional network, if applicable, based on the prevailing CERC orders shall be added to the price bid submitted. The charges for the State transmission network shall be payable by the procurer, and shall not be a part of the evaluation criteria.

5.15 The bidder who has quoted lowest levellised tariff as per evaluation procedure, shall be considered for the award. The evaluation committee shall have the right to reject all price bids if the rates quoted are not aligned to the prevailing market prices.

Deviation from process defined in the guidelines

5.16 In case there is any deviation from these guidelines, the same shall be subject to approval by the Appropriate Commission. The Appropriate Commission shall approve or require modification to the bid documents within a reasonable time not exceeding 90 days.

Arbitration

5.17 Where any dispute arises claiming any change in or regarding determination of the tariff or any tariff related matters, or which partly or wholly could result in change in tariff, such dispute shall be adjudicated by the Appropriate Commission.

All other disputes shall be resolved by arbitration under the Indian Arbitration and Conciliation Act, 1996.

Time Table for Bid Process

5.18 A suggested time-table for the bid process is indicated below. The procurer may give extended time-frame indicated herein based on the prevailing circumstances and such alterations shall not be construed to be deviation from these guidelines.

Event	Elapsed Time from Zero date
Publication of RFQ	Zero date
Submission of Responses of RFQ	60 days
Shortlisting based on responses and issuance of RFP	90 days
Bid clarification, conferences etc	150 days
Final clarification and revision of RFP	180 days
Technical and price bid submission	360 days
Shortlisting of bidder and issue of LOI	390 days
Signing of Agreements	425 days

Provided that for the projects from which more than one distribution licensees located in different States intend to procure power and if the preparations for such projects are being facilitated by the Central Government, the following time – table for the bid process may be adopted:

Publication of RFQ	**Zero Date**
Submission of response to RFQ	45 days
Shortlisting based on responses and issuance of RFP	90 days
Technical and Price Bid submission.	180 days
Signing of Agreements	270 days

5.19 A suggested time-table for the Single stage bid process is indicated below. The procurer may give extended time-frame indicated herein based on the prevailing circumstances and such alterations shall not be construed to be deviation from these guidelines.

Event	Elapsed Time from Zero date
Publication of RFP	Zero date
Bid clarification, conferences etc. & revision of RFP	90 days
Technical and price bid submission	180 days
Short-listing of bidder and issue of LOI	210 days
Signing of Agreements	240 days

6 Contract award and conclusion

6.11 The PPA shall be signed with the selected bidder consequent to the selection process in accordance with the terms and conditions as finalized in the bid document before the RFP stage.

6.12 Consequent to the signing of the PPA between the parties, the evaluation committee shall provide appropriate certification on adherence to these guidelines and to the bid process established by the procurer.

6.13 The procurer shall make evaluation of bid public by indicating terms of winning bid and anonymous comparison of all other bids. The procurer shall also make public all contracts signed with the successful bidders.

6.14 The final PPA along with the certification by the evaluation committee shall be forwarded to the Appropriate Commission for adoption of tariffs in terms of Section 63 of the Act.

Sd/-

(Ajay Shankar)

Additional Secretary to the Government of India

ANNEXURE - 2

Coastal Gujarat Power Limited

POWER PURCHASE AGREEMENT

FOR

4000 MW MUNDRA ULTRA MEGA POWER PROJECT

COASTAL GUJARAT POWER LIMITED

Power Purchase Agreement

for

Tariff Based Bidding Process for Procurement of Power on Long Term Basis from Power Station to be setup at Mundra, District Kutch, Gujarat based on imported Coal

between

Gujarat Urja Vikas Nigam Limited
("Procurer 1")
and

Maharashtra State Electricity Distribution Company Limited
("Procurer 2")
and

Ajmer Vidyut Vitran Nigam Limited
("Procurer 3")
And

Jaipur Vidyut Vitran Nigam Limited
("Procurer 4")
And

Jodhpur Vidyut Vitran Nigam Limited
("Procurer 5")
And

Punjab State Electricity Board
("Procurer 6")
And

Haryana Power Generation Corporation Limited
("Procurer 7")
And

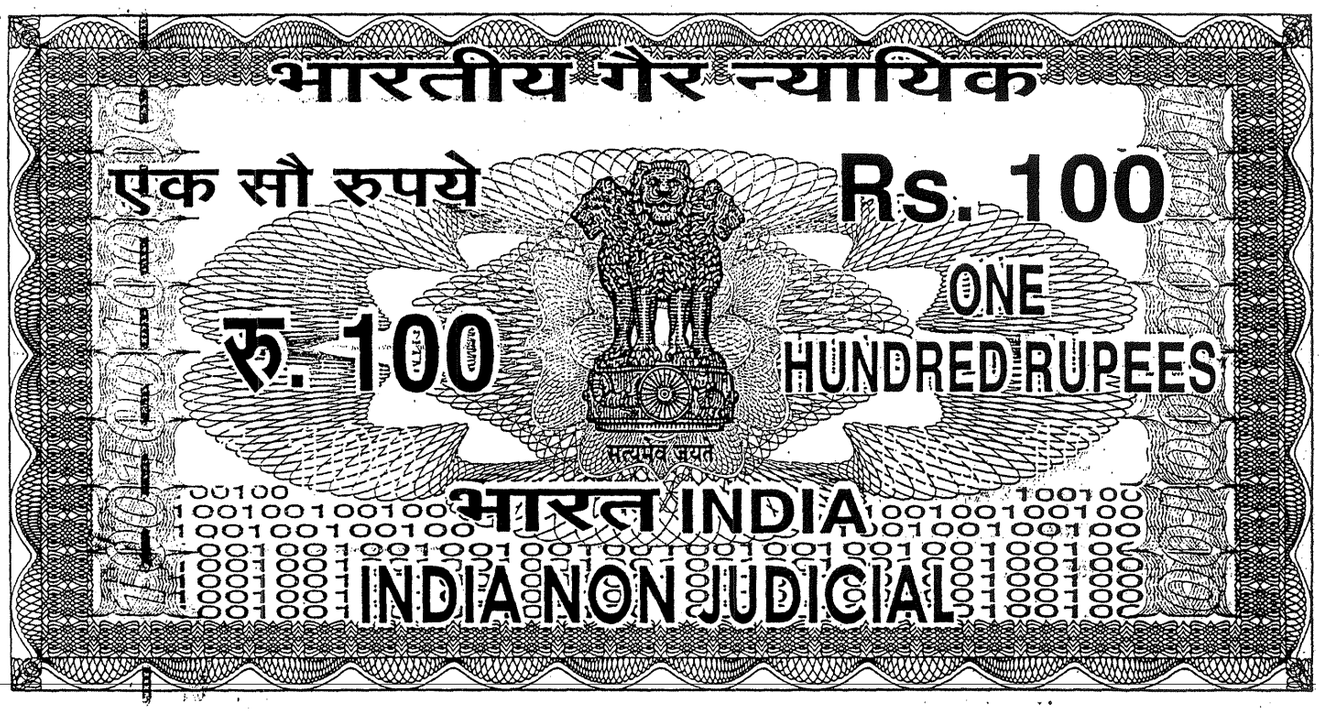
Coastal Gujarat Power Limited ("Seller")

CGPL GUVNL MSEDCL RPPC PSEB HPGCL

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This Agreement is made the 22nd day of April 2007

Between

The Persons whose names and details are provided in Schedule 1
(hereinafter collectively referred to as the "Procurers" and individually as a "Procurer")

and

Coastal Gujarat Power Limited, (the "Seller")
(each of the "Procurer" or "Procurers" and "Seller" are individually referred to as "Party" and collectively to as the "Parties")

Whereas:

A. The Procurers have identified the Project to be located at Mundra, District Kutch, Gujarat based on imported coal on the land provided by Government of Gujarat, details of which are as set out in the Schedule 1A.

B. The Procurers, through their Authorised Representative, have completed the initial studies as contained in Project Report; and obtained Initial Consents required for the Project which are set out in Part 1 of Schedule 2 and have been made available to the Seller on date of execution of this Agreement, except Forest Clearance for the Power Station and Coastal Regulation Zone Clearance. These clearances are being expedited and are expected shortly.

CGPL GUVNL MSEDCL RPPC PSEB HPGCL

COLLECTOR OF STAMPS

2913 IN 8 APR 2008

Coastal Gujarat Power Limited
36, Chandivalli,
Jangade, New Delhi-110001

Certificate u/s. 53(1) (b) of the Bombay Stamp Act, 1958.

3784

Office of the
Collector of Stamps
Case No. Adj. AL4112/2008
Date 10.10.2008

Received from Shri. Coastal Gujrat Power ltd.
residing at .....
stamp duty of Rs. (10000000/- Ten lakh only.
.....
vide challan No. 196....., Dated 10.10.2008
Certified under Section 32(1) (b) of the Bombay Stamp Act, 1958 that the full duty Rs. 10,00,000/- Ten lakh only.
with which this instrument is chargeable has been paid vide article No. 5(h)(a)(iv) of schedule.

This certificate is subject to the provisions of section 53-A of Bombay Stamp Act, 1958

Place Andheri
Date 10.10.08

Collector of Stamps
Andheri

COLLECTOR OF STAMPS ANDHERI

Subject to the Provision of
Section-53-A of the
Bombay Stamp Act-1958.

Position of clearances which are not available and consequences will be reviewed on July 31, 2007*.

C. The application for adopting the tariff under Section 63 of the Electricity Act, 2003, has been submitted to the Central Electricity Regulatory Commission (CERC) followed by submission of additional information / clarification as requested by CERC. The Order on the application shall be made available to the Seller by the Lead Procurer upon its issue by CERC*.

D In accordance with the Competitive Bidding Guidelines (as defined hereunder), the Procurers, through its Authorised Representative, had initiated a competitive bidding process through issue of RFQ and RFP for selecting a Successful Bidder to build, own, operate and maintain the Project.

E Pursuant to the said bidding process, **The Tata Power Company Limited** has been identified by the Procurers, through its Authorised Representative, as the Selected Bidder to construct the Project for a Contracted Capacity (as defined hereunder) of **3800 MW** and sale and supply of electricity in bulk therefrom to the Procurers in accordance with the terms of this Agreement.

F The Selected Bidder has acquired hundred percent (100%) equity shareholding of the Seller on or before the date of this Agreement;

G As envisaged in the RFP, the Parties have agreed to sign this Power Purchase Agreement setting out the terms and conditions for the construction, operation and maintenance of the Project, sale of Contracted Capacity and supply of electricity by the Seller to the Procurers.

H All the other RFP Project Documents have been executed by the Procurers and the Seller simultaneously with the signing of this Agreement.

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:

---

* Recital B and C were phrased in the following manner in the initialed PPA given to the Bidders:-

"Recital B – The Procurers, through their Authorized Representative, have completed the initial studies as contained in Project Report; and obtained Initial Consents required for the Project which are set out in Part 1 of Schedule 2 and have been made available to the Seller on date of execution of this Agreement."

"Recital C - The Procurers have obtained order of the Appropriate Commission adopting the Tariff (as defined hereinafter) under Section 63 of the Electricity Act, 2003, copy of which has been made available to the Seller, the receipt of which is hereby acknowledged by the Seller, on the date of execution of this Agreement."

The changes now reflect the factual position as on date of signing of this Agreement. This does not, in any way, alter the rights and obligations of the Parties to this Agreement. Further, it neither imposes any additional obligation on the Procurers nor discharges the Seller from any of his obligation.

CGPL GUVNL MSEDCL RPPC PSEB HPGCL

1 ARTICLE 1: DEFINITIONS AND INTERPRETATION

1.1 *Definitions*

The terms used in this Agreement, unless as defined below or repugnant to the context, shall have the same meaning as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under, including those issued/framed by Appropriate Commission (as defined hereunder), as amended or re-enacted from time to time.

The following terms when used in this Agreement shall have the respective meanings, as specified below:

"Act" or "Electricity Act 2003"	means the Electricity Act 2003 or any amendments made to the same or any succeeding enactment thereof;
"Agreed Form"	means, in relation to any document, the form of the said document most recently agreed to by the Parties and initialed by them for identification;
"Agreement" or "Power Purchase Agreement" or "PPA"	means this document including its recitals and Schedules;
"Appropriate Commission"	means the Central Electricity Regulatory Commission constituted under the Electricity Act, 2003 or such other succeeding authority or commission as may be notified by Government of India from time to time;
"Allocated Contracted Capacity"	means portion of the Contracted Capacity allocated to each of the Procurers as provided in Schedule 13 hereof, subject to adjustment as per the terms of this Agreement;
"Authorised Representative"	shall mean Coastal Gujarat Power Limited (till acquisition of its one hundred percent (100%) equity shareholding by the Selected Bidder), the body corporate authorised by the Procurers to carry out the Bid Process for the selection of the Successful Bidder on their behalf.
"Availability Based Tariff" or "ABT"	shall mean all the regulations contained in the Central Electricity Regulatory Commission (terms and conditions of Tariff) Regulations, 2004, as amended or revised from time to time, to the extent applied as per the terms of this Agreement;
"Availability Factor" or "Availability"	shall have the meaning ascribed thereto in ABT (provided that in place of Installed capacity and Normative auxiliary consumption it shall be Contracted Capacity) ;
"Available Capacity"	shall have the meaning ascribed thereto in ABT;

"Bid"	shall mean Non-Financial Bid and Financial Bid submitted by the Bidders, in response to the RFP, in accordance with the terms and conditions of the RFP;
"Bid Documents" or "Bidding Documents"	means the RFQ and RFP along with all their attachments and any amendments thereto or clarifications thereof.
"Bid Deadline"	shall mean the last date for submission of the Bid in response to the RFP, specified in Clause 2.8 of the RFP;
"Bidding Guidelines" or "Competitive Bidding Guidelines"	shall mean Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees, issued by Ministry of Power, Government of India under The Electricity Act, 2003 on January 19, 2005 and as amended from time to time till Bid Deadline;
"Bill Dispute Notice"	means the notice issued by a Party raising a Dispute regarding a Monthly Bill or a Supplementary Bill issued by the other Party;
"Business Day"	means with respect to Seller and each Procurer, a day other than Sunday or a statutory holiday, on which the banks remain open for business in the State in which the concerned Procurer's registered office is located;
"Capacity Charge" or "Capacity Charges"	shall have meaning ascribed thereto in Schedule 7;
"Capacity Notice"	shall have the meaning ascribed thereto under ABT or the Grid Code;
'Capital Cost'	means the lower of the following: (a) actual capital cost of the Project on a relevant date which shall not be later than the Commercial Operation Date of the Power Station, as certified by the auditors appointed jointly by the Seller and Procurers (jointly); or (b) total project cost of the Project as set forth in the Financing Agreements, provided that Capital Cost shall always exclude cost overruns arising due to a Seller Event of Default, or costs due to events for which compensation has been received by Seller from the Procurers or Insurers or Third Parties; Provided further that the Capital Cost in relation to a Unit shall be the total Project Cost allocated in proportion to the Contracted Capacity of the said Unit.
'Capital Structure Schedule'	shall mean sources of finance used to finance the Capital Cost as provided in the Financing Agreements;
"Central Transmission	shall have the meaning ascribed thereto in the Electricity Act,

Utility" or "CTU"	2003;
"CERC"	means the Central Electricity Regulatory Commission, as defined in the Electricity Act, 2003, or its successors;
"Change in Law"	shall have the meaning ascribed thereto in Article 13.1.1;
"Commercial Operation Date" or "COD"	means, in relation to a Unit, the date one day after the date when each of the Procurers receives a Final Test Certificate of the Independent Engineer as per the provisions of Article 6.3.1 and in relation to the Power Station shall mean the date by which such Final Test Certificates as per Article 6.3.1 are received by the Procurers for all the Units;
"Commissioning" or "Commissioned" with its grammatical variations	means, in relation to a Unit, that the Unit or in relation to the Power Station, all the Units of the Power Station have passed the Commissioning Tests successfully;
"Commissioning Tests" or "Commissioning Tests"	means the Tests provided in Schedule 5 herein;
"Commissioned Unit"	means the Unit in respect of which COD has occurred;
"Construction Contractor/s"	means one or more main contractors, appointed by the Seller to design, engineer, supply, construct and commission the Project;
"Construction Period"	means the period from (and including) the date upon which the Construction Contractor is instructed or required to commence work under the Construction Contract up to (but not including) the Commercial Operation Date of the Unit in relation to a Unit and of all the Units in relation to the Power Station;
"Consultation Period"	means the period, commencing from the date of issue of a Seller Preliminary Default Notice or a Procurer Preliminary Default Notice as provided in Article 14 of this Agreement, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances;
"Contract Year"	means the period beginning on the date of this Agreement and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that: (i) in the financial year in which Scheduled COD of the first Unit would have occurred, a Contract Year shall end on the date immediately before the Scheduled COD of the first Unit and a new Contract Year shall begin once again from the Scheduled Commercial Operation Date of the first Unit and end on immediately succeeding March 31 and provided further that (ii) the last Contract Year of this Agreement shall end on

the last day of the term of this Agreement;

Provided that for the purpose of payment, the tariff will be the Quoted Tariff for the applicable Contract Year as per Schedule 11;

"Contracted Capacity" means (i) for the first Unit, **760 MW**; (ii) for the second Unit, **760 MW**; (iii) for the third Unit, **760 MW**; (iii) for the third Unit, **760 MW**; (iv) for the fourth Unit, **760 MW**; (v) for the fifth Unit, **760 MW**, rated net capacity at the Interconnection Point, and in relation to the Power Station as a whole means **3800 MW** rated net capacity at the Interconnection Point, or such rated capacities as may be determined in accordance with Article 6.3.4 or Article 8.2 of this Agreement;

"Control Centre" or "Nodal Agency" means the RLDC or SLDC or such other load control centre designated by the Procurers from time to time through which the Procurers shall issue Dispatch Instructions to the Seller for the Power Station;

"Declared Capacity" in relation to a Unit or the Power Station at any time means the net capacity of the Unit or the Power Station at the relevant time (expressed in MW at the Interconnection Point) as declared by the Seller in accordance with the Grid Code and dispatching procedures as per the Availability Based Tariff;

"Declared Price of Land" means the amount as mentioned in the RFP by the Procurers, at which the identified land for the Site will be transferred to the Seller;

" Delivery Point " or "Interconnection Point" means the points of delivery specified in Schedule 8 for fulfilling the obligation of the Seller to deliver the Contracted Capacity to the Procurers;

"Direct Non-Natural Force Majeure Event" shall have the meaning ascribed thereto in Article 12.3(ii)(1).

"Dispute" means any dispute or difference of any kind between a Procurer and the Seller or between the Procurers (jointly) and the Seller, in connection with or arising out of this Agreement including any issue on the interpretation and scope of the terms of this Agreement as provided in Article 17;

"Dispatch Instruction" means any instruction issued by the Procurers through the respective SLDC and RLDC to the Seller, in accordance with applicable Grid Code and this Agreement;

"Due Date" means the thirtieth (30th) day after a Monthly Bill or a Supplementary Bill is received and duly acknowledged by any Procurer (or, if such day is not a Business Day, the immediately succeeding Business Day) by which date such bill is payable by the said Procurer;

"Effective Date"	means the date of signing of this Agreement by last of all the Parties;
"Electricity Laws"	means the Electricity Act, 2003 and the rules and regulations made thereunder from time to time along with amendments thereto and replacements thereof and any other Law pertaining to electricity including regulations framed by the Appropriate Commission;
"Electrical Output"	means the net electrical output of the Power Station at the Delivery Point, as expressed in kWh;
"Emergency"	means a condition or situation that, in the opinion of the Procurers or RLDC or SLDC or the agency responsible for operating and maintaining the Interconnection and Transmission Facilities or the transmission company, as the case may be, poses a significant threat to the Procurer's or the said agency's or transmission company's ability to maintain safe, adequate and continuous electrical service to its customers, or seriously endangers the security of persons, plant or equipment;
Energy Charges	Shall have the meaning ascribed to this term under Schedule 7;
"Expiry Date"	means the 25th anniversary of the Commercial Operation Date of the Power Station. For the avoidance of doubt, in case the COD of the Power Station occurs on June 1, 2013, then the 25th anniversary of the Scheduled COD of the Power Station shall occur on June 1, 2038, i.e. in the Contract Year 2038-39.
"Final Test Certificate"	Means a) a certificate of the Independent Engineer certifying and accepting the results of a Commissioning Test/s in accordance with Article 6.3.1 of this Agreement; or b) a certificate of the Independent Engineer certifying the result of a Repeat Performance Tests in accordance with Article 8.2.1 of this Agreement;
"Financial Closure" or "Financial Close"	Means the execution and delivery of all the Financing Agreements for the Total Debt Amount required for the Project and fulfilment of conditions precedents and waiver, if any, of any of the conditions precedent for the initial draw down of funds there under;
"Financing Agreements"	means all the loan agreements, notes, indentures, security agreements, letters of credit and other documents relating to the financing of the Project on or before the COD of the Power Station, as may be amended, modified, refinanced or replaced from time to time, but without in anyway increasing the liabilities of the Procurers therein;
"Force Majeure"	shall have the meaning ascribed thereto in Article 12.3;

"Forced Outage"	shall have the meaning ascribed thereto in Grid Code;
"Fuel"	means primary fuel used to generate electricity namely, imported coal;
"Fuel Supply Agreements"	means the agreement(s) entered into between the Seller and the Fuel Supplier for the purchase, transportation and handling of the Fuel, required for the operation of the Power Station. In case the transportation of the Fuel is not the responsibility of the Fuel Supplier, the term shall also include the separate agreement between the Seller and the Fuel Transporter for the transportation of Fuel in addition to the agreement between the Seller and the Fuel Supplier for the supply of the Fuel;
"Functional Specifications"	means the technical requirements and parameters described in **Schedule 4** of this Agreement and as provided in Grid Code relating to the operation, maintenance and dispatch of any Unit and the Power Station.;
"Grid Code" or "IEGC"	means any set of regulations or codes issued by CERC as amended and revised from time to time and legally binding on the Sellers' and Procurers' governing the operation of the Grid System or any succeeding set of regulations or code;
"Grid System"	means the Interconnection and Transmission Facilities and any other transmission or distribution facilities through which the Procurers supply electricity to their customers or the transmission company transmits electricity to the Procurers;
"Independent Engineer"	means an independent consulting engineering firm or group appointed jointly by all the Procurers (jointly) and the Seller, to carry out the functions in accordance with Article 4.7.1 and Article 6, Article 12 and Article 8 herein. provided that separate Independent Engineer may be appointed for the purposes of Article 4.7.1, Article 6, Article 12 and Article 8; provided further that the separate Independent Engineer may be appointed for each financial year for the purposes of Article 8, and in such case, such Independent engineer shall be appointed at least ninety (90) days prior to the beginning of the financial year.
"Indirect Non-Natural Force Majeure Event"	shall have the meaning ascribed thereto in Article 12.3(ii)(2).
"Indian Governmental Instrumentality"	means the GOI, Government of States where the Procurers and Project are located and any ministry or department of or board, agency or other regulatory or quasi-judicial authority controlled by GOI or Government of States where the

	Procurers and Project are located and includes the Appropriate Commission;
"Initial Consents"	shall mean the consents listed in Schedule 2;
"Initial Performance Retest Period"	shall have the meaning ascribed thereto in Article 6.3.3 of this Agreement;
"Interconnection Facilities" or "Interconnection and Transmission Facilities"	Means the facilities on the Procurers' side of the Interconnection Point for receiving and metering Electrical Output in accordance with this Agreement and which shall include, without limitation, all other transmission lines and associated equipment, transformers and associated equipment, relay and switching equipment and protective devices, safety equipment and, subject to Article 9, the Metering System required for the Project. The Interconnection Facilities also include the facilities for receiving power at the Delivery Point where the transmission line from the Power Station Switchyard end is injecting power into the transmission network (including the dedicated transmission line connecting the Power Station with the transmission/CTU network);
"Invoice" or "Bill"	means either a Monthly Tariff Invoice, a Supplementary Invoice or a Procurer Invoice;
"Late Payment Surcharge"	shall have the meaning ascribed thereto in Article 11.3.4;
"Law"	means, in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include all rules, regulations, decisions and orders of the Appropriate Commission;
"Lead Procurer"	shall have the meaning ascribed thereto in Article 2.5;
"Lenders"	means the banks, other financial institutions, multilateral agencies, RBI registered non banking financial companies, mutual funds and agents or trustees of debenture / bond holders, including their successors and assignees, who have agreed on or before COD of the Power Station to provide the Seller with the senior debt financing described in the Capital Structure Schedule, and any successor banks or financial institutions to whom their interests under the Financing

	Agreements may be transferred or assigned: Provided that, such assignment or transfer shall not relieve the Seller of its obligations to the Procurers under this Agreement in any manner and shall also does not lead to an increase in the liability of any of the Procurers;
"Letter of Credit" or "L/C"	shall have the meaning ascribed thereto in Article 11.4.1;
"Meters" or "Metering System"	means meters used for accounting and billing of electricity in accordance with Central Electricity Authority (Installation and Operations of Meters) Regulations, 2006, Grid Code and ABT, as amended from time to time;
"Maintenance Outage"	shall have the meaning as ascribed to this term as per the provisions of the Grid Code.
"-MCR"	means gross Power Station or Unit Maximum Continuous Rating as defined in the Grid Code;
"Minimum Offtake Guarantee"	means guaranteed offtake of sixty five per cent (65%) of the total Contracted Capacity for all Procurers taken together during a Contract Year.
"Month"	means a period of 30 days from (and excluding) the date of the event where applicable, else a calendar month;
"Monthly Bill" or "Monthly Invoice"	means a monthly invoice comprising Capacity Charges (applicable after COD of the first unit) and Energy Charges, including incentive and penalty, as per Schedule 7 hereof;
"Notice to Proceed" or "NTP"	means the date on which the Seller shall fulfill the condition as contained in Article 3.1.2 (i) of this Agreement in accordance with the provisions of this Agreement.
"Natural Force Majeure Event"	shall have the meaning ascribed thereto in Article 12.3(i).
"Non-Natural Force Majeure Event"	shall have the meaning ascribed thereto in Article 12.3(ii).
"Normative Availability"	means equal to eighty per cent (80%) Availability at the Delivery Point on Contract Year basis;
"Operating Period"	in relation to the Unit means the period from its COD and in relation to the Power Station the date by which all the Units achieve COD, until the expiry or earlier termination of this Agreement in accordance with Article 2 of this Agreement;
"O&M Contract" or "O&M Contracts"	means the contract/s entered into by the Seller with the Operator or Operators, if any;

"Operating Procedures "	Shall have the meaning ascribed thereto in Grid Code;
"Operator" or "Operators"	means one or more contractors appointed as operator of power generation facilities of the Power Station pursuant to an O&M contract, if any;
"Party" and "Parties"	Shall have the meaning ascribed thereto in the recital to this Agreement;
"Performance Guarantee"	means the irrevocable unconditional bank guarantee, submitted and to be submitted by the Seller or by the Selected Bidder on behalf of the Seller to the Procurers from a bank mentioned in Annexure 12 of the RFP, in the form attached hereto as Schedule 15, in accordance with Article 3 of this Agreement and which shall include the additional bank guarantee furnished by the Seller under this Agreement;
"Performance Test "	means the test carried out in accordance with Article 1.1 of Schedule 5 of this Agreement;
"Preliminary Default Notice"	Shall have the meaning ascribed thereto in Article 14 of this Agreement;
"Power Station"	Means the: (a) coal fired power generation facility comprising of any or all the Units; (b) any associated fuel handling, treatment or storage facilities of the power generation facility referred to above; (c) any water supply, treatment or storage facilities required for the operation of the power generation facility referred to above; (d) the ash disposal system including ash dyke; (e) township area for the staff colony; and (f) bay/s for transmission system in the switchyard of the power station, (g) all the other assets, buildings/structures, equipments, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility; whether completed or at any stage of development and construction or intended to be developed and constructed as per the provisions of this Agreement.
"Project"	means the Power Station undertaken for design, financing,

	engineering, procurement, construction, operation, maintenance, repair, refurbishment, development and insurance by the Seller in accordance with the terms and conditions of this Agreement;
"Project Documents"	Mean a) Construction Contracts; b) Fuel Supply Agreements, including the Fuel Transportation Agreement, if any; c) O&M contracts; d) RFP and RFP Project Documents; and e) any other agreements designated in writing as such, from time to time, jointly by the Procurers and the Seller;
"Prudent Utility Practices"	means the practices, methods and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation and maintenance of power generation equipment of the type specified in this Agreement and which practices, methods and standards shall be adjusted as necessary, to take account of: a) operation and maintenance guidelines recommended by the manufacturers of the plant and equipment to be incorporated in the Project; b) the requirements of Indian Law; and c) the physical conditions at the Site;
Quoted Capacity Charge	shall mean the sum total of Quoted Non Escalable Capacity Charge and Quoted Escalable Capacity Charge;
Quoted Energy Charge	shall mean the sum total of Quoted Non Escalable Energy Charge and Quoted Escalable Energy Charge;
Quoted Non Escalable Capacity Charge	shall have the meaning as ascribed thereto in Schedule 11;
Quoted Escalable Capacity Charge	shall have the meaning as ascribed thereto in Schedule 11;
Quoted Non Escalable Energy Charge	shall mean the sum total of Quoted Non Escalable Fuel Energy Charge, Quoted Non Escalable Transportation Energy Charge and Quoted Non Escalable Fuel Handling Energy Charge each of which shall have the meaning as ascribed thereto in Schedule 11;
Quoted Escalable Energy Charge	shall mean the sum total of Quoted Escalable Fuel Energy Charge, Quoted Escalable Transportation Energy Charge and Quoted Escalable Fuel Handling Energy Charge each of which shall have the meaning as ascribed thereto in Schedule 11;
Quoted Tariff	Shall mean the sum total of Quoted Energy Charges and Quoted Capacity Charge;

"Repeat Performance Test "	Shall have the meaning ascribed thereto in Article 8.1 of this Agreement;
"RPC"	means the relevant Regional Power Committee established by the Government of India for a specific Region in accordance with the Electricity Act, 2003 for facilitating integrated operation of the power system in that Region;
"RBI"	means Reserve Bank of India;
"Regional Energy Accounts" or "REA"	means as defined in the Grid Code and issued by the relevant RPC secretariat or other appropriate agency for each Week and for each Month (as per their prescribed methodology), including the revisions and amendments thereof;
"Revised Scheduled COD"	shall have the meaning as ascribed thereto in Article 3.1.2 (iv);
"RLDC"	means the relevant Regional Load Dispatch Centre as defined in the Electricity Act, 2003, in the region in which the Project is located;
"RFP"	shall mean Request For Proposal dated **August 21, 2006** along with all schedules, Annexures and RFP Project Documents attached thereto, issued by the Authorised Representative and shall include any modifications, amendments or alterations thereto.
RFP Project Documents	shall mean the following documents to be entered into in respect of the Project, by the parties to the respective agreements: a) PPA; b) Share Purchase Agreement; c) Default Escrow Agreement; d) Agreement to Hypothecate cum Deed of Hypothecation; Port Services Agreement; and e) any other agreement(s) designated as such, from time to time by the Procurers and the Authorised Representative;
"RFQ"	shall mean the Request for Qualification document issued by Coastal Gujarat Power Limited on **March 31, 2006** for Tariff Based Bidding Process for Procurement of Power on Long-Term Basis from Power Station to be setup at Mundra, District Kutch, Gujarat based on Imported Coal and shall include any modifications, amendments or alterations thereto and clarifications issued regarding the same;
"Rupees" or "Rs."	means the lawful currency of India;

"SBAR"	means the prime lending rate per annum applicable for loans with one (1) year maturity as fixed from time to time by the State Bank of India. In the absence of such rate, any other arrangement that substitutes such prime lending rate as mutually agreed to by the Parties;
"Selectee"	means a new company (i) proposed by the Lenders pursuant to Schedule 17 hereof and approved by the Procurers (ii) or proposed by the Procurer in accordance with Schedule 17 hereof and approved by the Lenders, for substituting the Seller for the residual period of the PPA by amendment of the PPA or by execution of a fresh PPA in accordance with the terms and conditions contained in the said Schedule.
"Selected Bid"	means the Bid of the Selected Bidder as accepted by Procurers or their Authorised Representative, copy of which is attached herewith and marked as Schedule 16;
"Seleoted Bidder" or "Successful Bidder"	shall mean the Bidder selected pursuant to the RFP to acquire one hundred percent (100%) of the equity shares of Coastal Gujarat Power Limited and to set up the Project and supply electrical output therefrom to the Procurers through the Seller as per the terms of PPA and other RFP Project Documents;
"SERC"	means the State Electricity Regulatory Commission, as defined in the Electricity Act, 2003, or its successors;
"Scheduled COD" or "Scheduled Commercial Operation Date"	means (i) for the first Unit, **August 22, 2012**; (ii) for the second Unit, **February 22, 2013**; (iii) for the third Unit, **August 22, 2013**; (iv) for the fourth Unit, **February 22, 2014**; (v) for the fifth Unit, **August 22, 2014**; or such other dates from time to time, specified in accordance with the provisions of this Agreement;
"Scheduled Connection Date"	Shall mean the date falling 210 days before the Scheduled COD of first Unit;
"Scheduled Energy" or "Scheduled Generation"	means scheduled generation as defined in the ABT;
"Scheduled Outage"	shall have the meaning ascribed to this term as per the provisions of the Grid Code;
"Scheduled Synchronisation Date"	means in relation to a Unit, the date, which shall be maximum of one hundred and eighty (180) days prior to the Scheduled COD of the respective Unit;
"Settlement Period"	means the time block for issue of daily generation and drawal schedules as provided in ABT;

Site	means the land over which the Project will be developed as provided in Annexure 1A;
"SLDC"	means the relevant State Load Dispatch Centre as defined in the Electricity Laws, in the State where the Procurer's registered office is located;
"State Transmission Utility" or "STU"	shall have the meaning ascribed thereto in the Electricity Act 2003;
Supercritical Technology	means technology with minimum steam parameters at steam turbine inlet as mentioned below: main steam pressure : 247 kg/cm^2 (abs) main steam temperature : 535 deg C reheat steam temperature : 565 deg C.
"Supplementary Bill"	Means a bill other than a Monthly Bill raised by any of the Parties in accordance with Article 11;
"Tariff Payment"	Means the payments under Monthly Bills as referred to in Schedule 7 and the relevant Supplementary Bills;
"Tariff"	Means the tariff as computed in accordance with Schedule 7;
"Tested Capacity"	in relation to a Unit, or the Power Station as a whole (if all the Units of the Power Station have been Commissioned) means the results of the most recent Performance Test or Repeat Performance Test carried out in relation to the Power Station in accordance with Article 6, Article 8 and Schedule 5 of this Agreement;
"Termination Notice"	shall have the meaning ascribed thereto in Article 14 of this Agreement;
"Term of Agreement"	shall have the meaning ascribed thereto in Article 2.1;
"Total Debt Amount"	Means the sum of the following amounts, expressed in Rupees (with all amounts denominated in currencies other than Rupees being converted to Rupees at the Reference Exchange Rate, the selling rate in Rupees for the Foreign Currency on the relevant day, as notified by the State Bank of India as its TT Rate at 12:00 noon on the NTP: (a) the principal amount of the senior debt incurred by the Seller (as per the terms of the Financing Agreements) to finance the Project according to the Capital Structure Schedule which remains outstanding on the date of issuance of Substitution Notice by the Lender after taking account of any senior debt repayments which could have been made out of the Monthly Tariff Payments received by the Seller on or before the date of issuance of Substitution Notice by the Lender as per the terms provided in the Financing Agreements ; and

	(b) all accrued interest and financing fees payable under the Financing Agreements on the amounts referred to in (a) above from the date of the Capacity Charge payment (as specified in paragraph 1.2 of Schedule 7 hereof) immediately preceding the date of issuance of Substitution Notice by the Lender or, if the Capacity Charges have not yet fallen due to be paid, from the most recent date when interest and financing fees were capitalised, and (c) if this Agreement is terminated during the Construction Period, any amounts owed to the Construction Contractor for work performed but not paid for under the Construction Contract (other than amounts falling due by reason of the Seller's default);
"US $ " or "USD" or "Dollar"	means the lawful currency of United States of America
"Unit"	Means one steam generator, steam turbine, generator and associated auxiliaries of the Power Station based on Supercritical Technology;
"Unscheduled Interchange" or "UI"	shall have the meaning ascribed thereto in Rule 24 of the CERC (Terms and Conditions of tariff) Regulations 2004 as amended or revised from time to time;
"Energy Charge" or "Fuel Charge"	shall have the meaning ascribed thereto in specified in Schedule 7;
"Week"	means a calendar week commencing from 00:00 hours of Monday, and ending at 24:00 hours of the following Sunday;
"Wheeling Charges" or "Transmission Charges"	Are the charges paid by the Procurers to the CTU or STU or any other agency for the transfer of power from the Power Station switchyard end to the Procurers' network.

1.2 *Interpretation*

Save where the contrary is indicated, any reference in this Agreement to:

1.2.1 A "Recital", an "Article", a "Schedule" and a "paragraph/Clause" shall be construed as a reference to a Recital, an Article, a Schedule and a paragraph/clause respectively of this Agreement.

1.2.2 An "affiliate" of any party shall mean a company that either directly or indirectly controls or is controlled by or is under common control of the same person which controls the concerned party; and control means ownership by one company of at least twenty six percent (26%) of the voting rights of the other company.

1.2.3 A "crore" means a reference to ten million (10,000,000) and a "lakh" means a reference to one tenth of a million (1,00,000);

1.2.4 An "encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect.

1.2.5 "indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;

1.2.6 A "person" shall be construed as a reference to any person, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests.

1.2.7 The "winding-up", "dissolution", "insolvency", or "reorganization" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the Law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganization, dissolution, arrangement, protection or relief of debtors.

1.2.8 Words importing the singular shall include the plural and vice versa.

1.2.9 This Agreement itself or any other agreement or document shall be construed as a reference to this or to such other agreement or document as it may have been, or may from time to time be, amended, varied, novated, replaced or supplemented.

1.2.10 A Law shall be construed as a reference to such Law including its amendments or re-enactments from time to time.

1.2.11 A time of day shall, save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.

1.2.12 Different parts of this Agreement are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this Agreement, they shall be interpreted in a harmonious manner so as to give effect to each part.

1.2.13 The tables of contents and any headings or sub-headings in this Agreement have been inserted for ease of reference only and shall not affect the interpretation of this Agreement.

1.2.14 All interest payable under this Agreement shall accrue from day to day and be calculated on the basis of a year of three hundred and sixty five (365) days.

1.2.17 The words "hereof" or "herein", if and when used in this Agreement shall mean a reference to this Agreement.

1.2.18 The contents of Schedule 16 shall be referred to for ascertaining accuracy and correctness of the representation made by the Seller in Article 2 (f) of Schedule 10 hereof.

2 ARTICLE 2: TERM OF AGREEMENT

2.1 *Effective Date and Term of Agreement*

This Agreement is effective from the date of its signing of this Agreement by all the Parties. This Agreement shall be valid for a term commencing from the Effective Date until the Expiry Date ("Term of Agreement") unless terminated earlier pursuant to Article 2.2. Upon the occurrence of the Expiry Date, this Agreement shall, subject to Article 18.9, automatically terminate, unless mutually, extended by all the Parties on mutually agreed terms and conditions, atleast one hundred and eighty (180) days prior to the Expiry Date, subject to approval of the Appropriate Commission, as necessary.

2.2 *Early Termination*

This Agreement shall terminate before the Expiry Date:

i. if either all the Procurers (jointly) or Seller exercises a right to terminate, pursuant to Article 3.3.2, Article 3.3.3, Article 3.3.3A, Article 4.5.3, Article 4.6.2, Article 14.4.5 or Schedule 10 of this Agreement or any other provision of this Agreement; or

ii. in such other circumstances as the Seller and all the Procurers (jointly) may agree, in writing.

2.3 *Survival*

2.3.1 The expiry or termination of this Agreement shall not affect accrued rights and obligations of the Parties under this Agreement, including the right to receive Liquidated Damages as per the terms of this Agreement, nor shall it affect any continuing obligations for which this Agreement provides, either expressly or by necessary implication, the survival of, post its expiry or termination.

2.4 [Omitted]

2.5 Lead Procurer

2.5.1 The Procurers hereby appoint and authorise **Gujarat Urja Vikas Nigam Limited** [hereinafter referred to as the "Lead Procurer"] to represent all the Procurers for discharging the rights and obligations of the Procurers, which are required to be undertaken by the Procurers jointly as mentioned in Schedule 12 of this Agreement. Accordingly, all the Procurers shall follow and be bound by the decisions of the Lead Procurer on all such matters. Each Procurer agrees that any decision, communication, notice, action or inaction of the Lead Procurer on such matters shall be deemed to have been on its/his behalf and shall be binding on each of the Procurers. The Seller shall be

entitled to rely upon any such action, decision or communication from the Lead Procurer. It is clarified that this Article 2.5 is not intended to and shall not render the Lead Procurer liable to discharge individual Tariff payments of the other Procurers.

The Procurers hereby also appoint and authorise **Maharashtra State Electricity Distribution Company Limited** (hereinafter referred to as the "Alternate Lead Procurer"), to act as Lead Procurer as per the provisions of this Article 2.5.1, on the occurrence of any Event of Default specified in Article 14.2 by the Lead Procurer. In such an event, the Seller may, at its option, within a period of fifteen (15) days from the date of issue of the Preliminary Default Notice referred to in Article 14.4.2 and if the said default by the Lead Procurer subsists, specify in writing to all the Procurers that the Alternate Lead Procurer shall thereafter act as the Lead Procurer. In such case, if the Seller so notifies, the Alternate Lead Procurer shall, thereafter, act as Lead Procurer for the purposes of this Agreement, and the Lead Procurer earlier appointed under this Article 2.5.1 shall automatically cease to be the Lead Procurer. It is clarified that all decisions taken by **Gujarat Urja Vikas Nigam Limited** in its capacity as Lead Procurer before such change, shall continue to be valid, in accordance with this Agreement.

In the event of **Maharashtra State Electricity Distribution Company Limited** becoming the Lead Procurer as per this Article, all the Procurers shall also appoint any of Procurers, other than **Gujarat Urja Vikas Nigam Limited**, as an Alternate Lead Procurer and thereafter the provisions of this Article 2.5.1 shall be applicable.

2.5.2 Notwithstanding anything contained above, any decision which is required to be taken by the Procurers jointly under the provisions of Article 14 shall be taken by all the Procurers and in case of difference amongst the Procurers, the said decision shall be taken by the Majority Procurers as defined in Article 2.5.3 below.

2.5.3 Any decision taken by Procurers who taken together constitute minimum sixty five per cent (65%) of the Contracted Capacity of the Power Station and constitute in number atleast fifty per cent (50%) of the total number of Procurers ("Majority Procurers"), shall be binding on the Lead Procurer and all other Procurers. The Majority Procurers shall also have the right to replace the Lead Procurer by any other Procurer of their choice.

3. ARTICLE 3: CONDITIONS SUBSEQUENT TO BE SATISFIED BY THE SELLER AND THE PROCURERS

3.1 Satisfaction of conditions subsequent by the Seller and the Procurers

3.1.1 Simultaneously with the execution of this Agreement, the Seller or the Selected Bidder, on behalf of the Seller, have provided to the Procurers, the Performance Guarantee from any of the banks in the list of banks provided in the RFP, of an aggregate amount of Rupees Three Hundred Crores only (Rs 300,00,00,000) which has been provided separately to each of the Procurers for the amount calculated pro-rata (and rounded off to the nearest Rupees one lakh (100,000) with the principle that amounts below Rupees Fifty Thousand (Rs. 50,000) shall be rounded down and amounts of Rupees Fifty Thousand (Rs. 50,000) and above shall be rounded up) in the ratio of Allocated Contracted Capacities. Subject to Article 3.4, the Performance Guarantee shall be initially valid till three (3) Months after the Scheduled COD of the Power Station and which shall be extended from time to time to be valid up to three (3) Months after the actual COD of the Power Station. In case the validity of Performance Guarantee is expiring before the validity period specified in this Article, the Seller shall at least thirty (30) days before the expiry of the Performance Guarantee replace the Performance Guarantee with another Performance Guarantee or extend validity of existing Performance Guarantee which is valid and in force till the validity period specified in this Article.

3.1.2 The Seller agrees and undertakes to duly perform and complete the following activities within (i) twelve (12) Months from the Effective Date or (ii) Fourteen (14) Months from the date of issue of Letter of Intent, whichever is later, unless such completion is affected due to the Procurers' failure to comply with their obligations under Article 3.1.2A of this Agreement or by any Force Majeure event or if any of the activities is specifically waived in writing by the Procurers jointly:

i. the Seller shall have
   a) awarded the Engineering, Procurement and Construction contract ("EPC contract) or main plant contract for boiler, turbine and generator ("BTG"), for the Project and shall have given to such contractor an irrevocable Notice To Proceed; and
   b) 1) in case the Project is proposed to be developed on the books of the Bidder, he shall have completed the execution and delivery of the Financing Agreements for at least twenty five percent (25%) of the debt required for the Project as certified by the Lender/Lead Lender; ; or
   2) in case the Seller develops the Project on a non recourse basis, Seller shall have achieved Financial Closure;

ii. the Seller shall have taken the possession of the land for the Power Station and have paid the remaining Declared Price of the Land, if any to the State Government authority acquiring the land,

iii. The Seller shall have provided an irrevocable letter to the Lenders duly accepting and acknowledging the rights provided to the Lenders under the terms of this Agreement and all other RFP Project Documents.

iv. The Seller shall have sent a written notice to all the Procurer(s) indicating that a) the Scheduled COD shall be as per the original Scheduled COD i.e (i) for the first Unit, **August 22, 2012**; (ii) for the second Unit, **February 22, 2013**; (iii) for the third Unit, **August 22, 2013**; (iv) for the fourth Unit, **February 22, 2014**; (v) for the fifth Unit, **August 22, 2014**; or such other dates from time to time specified in accordance with the provisions of this Agreement; or b) that it intends to prepone the Scheduled COD to be (i) for the first Unit, [Insert Date]; (ii) for the second Unit, [Insert Date]; (iii) for the third Unit, [Insert Date] and so on till last Unit (hereinafter referred to as "**Revised Scheduled COD**"). Provided that, the Revised Scheduled COD of any Unit shall not be earlier than 42 months from the NTP.

v. The Seller shall have executed Fuel Supply Agreement and provided copies of the same to the Procurers.

3.1.2A The Procurers shall ensure that the following activities are completed within the time period mentioned below

Activity	Time for Completion
1.Ensure the completion of the following tasks: i. Handing over the possession of the land for the Power Station, water intake pipeline and, if applicable, for fuel transportation system.	within six (6) months from the Effective Date or eight (8) months from the date of issue of Letter of Intent, whichever is later.
2. Providing an irrevocable letter to the Lenders duly accepting and acknowledging the rights provided to the Lenders under the terms of this Agreement and all other RFP Project Documents.	On or prior to the date of NTP

3.1.3 Joint responsibilities of the Procurers and the Seller

i) The Procurers (jointly) and Seller shall jointly appoint the Independent Engineer for the purposes of carrying out the functions as specified in Article 4.7.1, Article 6, Article 8 and Article 12, herein within a period of eight (8) months from the Effective Date.

3.2 Progress Reports

The Seller and the Procurers shall notify one another in writing at least once a Month on the progress made in satisfying the conditions in Articles 3.1.2, 3.1.2A and 3.1.3.

3.3 Consequences of non-fulfillment of conditions under Article 3.1

3.3.1 If any of the conditions specified in Article 3.1.2 is not duly fulfilled by the Seller even within three (3) Months after the time specified under Article 3.1.2, then on and from the expiry of such period and until the Seller has satisfied all the conditions specified in Article 3.1.2, the Seller shall be liable to furnish to the Procurers additional weekly Performance Guarantee of Rs. fifteen (15) crores within two (2) business days of expiry of every such week. Such additional Performance Guarantee shall be provided to each Procurer in the manner provided in Article 3.1.1 and shall become part of the Performance Guarantee and all the provisions of this Agreement shall be construed accordingly. The Procurers shall be entitled to hold and/or invoke the Performance Guarantee, including such increased Performance Guarantee, in accordance with the provisions of this Agreement.

3.3.2 Subject to Article 3.3.3 and 3.3.3A, if:

(i). fulfilment of any of the conditions specified in Article 3.1.2 is delayed beyond the period of three (3) Months and the Seller fails to furnish any additional Performance Guarantee to the Procurers in accordance with Article 3.3.1 hereof; or

(ii). the Seller furnishes additional Performance Guarantee to the Procurers in accordance with Article 3.3.1 hereof but fails to fulfil the conditions specified in Article 3.1.2 for a period of eight (8) months beyond the period specified therein,

all the Procurers (jointly) or Seller shall have the right to terminate this Agreement by giving a notice to the Seller/Procurer in writing of at least seven (7) days.

If the Procurers or the Seller elect to terminate this Agreement in the event specified in the preceding paragraph of this Article 3.3.2, the Seller shall be liable to pay to the Procurers an amount of Rupees four hundred crores (Rs 400,00,00,000) only as liquidated damages. The Procurers shall be entitled to recover this amount of damages by invoking the Performance Guarantee to the extent of Rupees four hundred crores (Rs 400, 00, 00, 000) and shall then return the balance Performance Guarantee, if any, to the Seller. If the Procurers are unable to recover said the amount of Rupees four hundred

crores (Rs. 400, 00, 00,000) or any part thereof from the Performance Guarantee the amount not recovered from the Performance Guarantee, if any, shall be payable by the Seller to the Procurers within ten (10) days from the end of eight (8) Months period from the due date of completion of conditions subsequent.

It is clarified for removal of doubt that this Article shall survive the termination of this Agreement.

3.3.3 In case of inability of the Seller to fulfil the conditions specified in Article 3.1.2 due to any Force Majeure event, the time period for fulfilment of the Condition Subsequent as mentioned in Article 3.1.2 and Article 3.1.2A, shall be extended for the period of such Force Majeure event, subject to a maximum extension period of ten (10) Months, continuous or non-continuous in aggregate. Thereafter, this Agreement may be terminated by either the Procurers (jointly) or the Seller by giving a notice of at least seven (7) days, in writing to the other Party.

Similarly, in case of inability of the Procurers to fulfil the conditions specified in Article 3.1.2A due to any Force Majeure event, the time period for fulfilment of the Condition Subsequent as mentioned in Article 3.1.2 and Article 3.1.2A, shall be extended for the period of such Force Majeure event, subject to a maximum extension period of ten (10) Months, continuous or non-continuous in aggregate. Thereafter, this Agreement may be terminated by either the Procurers (jointly) or the Seller by giving a notice of at least seven (7) days, in writing to the other Party.

3.3.3AIn case of inability of the Procurers to perform the activities specified in Article 3.1.2A within the time period specified therein, otherwise than for the reasons directly attributable to the Seller or Force Majeure event, the Condition Subsequent as mentioned in Article 3.1.2 would be extended on a 'day for day' basis, equal to the additional time which may be required by the Procurers to complete the activities mentioned in Article 3.1.2A, subject to a maximum additional time of six (6) Months. Thereafter, this Agreement may be terminated by the Seller at its option, by giving a notice of at least seven (7) days, in writing to the Procurers. If the Seller elects to terminate this Agreement, the Procurers shall, within a period of thirty days, purchase the entire shareholding in the Seller for the following amount . Provided such purchase of shares shall be undertaken by the Procurers in the ratio of their then existing Allocated Contracted Capacity:

a) total amount of purchase price paid by the Successful Bidder to the shareholders of the Seller to acquire the equity shares of the Seller as per the RFP; plus

b) total amount of the Declared Price of Land to the extent already paid by the Seller after the acquisition of its 100% shareholding by the Selected Bidder; plus

c) an additional sum equal to ten percent (10%) of the sum total of the amounts mentioned in sub-clauses (a) and (b) above.

In addition, the Performance Guarantee of the Seller shall also be released forthwith.

3.3.4 No Tariff adjustment shall be allowed on account of any extension of time arising under any of the sub-articles of Article 3.3. Provided that due to the provisions of Article 3.3.3 and 3.3.3A, any increase in the time period for completion of Conditions Subsequent mentioned under Article 3.1.2 and 3.1.2 A, shall also lead to an equal increase in the time period for Scheduled COD and Scheduled Connection Date.

3.4 Reduction in the amount of Performance Guarantee

3.4.1 On the due fulfilment by the Seller of all the conditions specified under Article 3.1.2 and investment by the Seller of at least twenty five percent (25%) of the total equity required for the Project as certified by the lead lender of the Seller, the Performance Guarantee then existing shall be reduced by an aggregate amount of Rupees One Hundred Crores (Rs. 100,00,00,000) and such reduced Performance Guarantee/s shall be provided separately to each of the Procurers in the ratio of their then respective Allocated Contracted Capacities [and rounded off to the nearest Rupees One Lakh (Rs. 1,00,000) with the principle that amounts below Rupees Fifty Thousand (Rs. 50,000) shall be rounded down and amounts of Rupees Fifty Thousand (Rs. 50,000) and above shall be rounded up] and for the period specified in Article 3.4.2.

3.4.2 The Performance Guarantee specified in Article 3.4.1 hereof shall be in substitution of the earlier Performance Guarantee furnished under Article 3.1.1 The Performance Guarantee furnished under this Article shall be initially valid till three (3) Months after the Scheduled COD of the Power Station and which shall be extended from time to time to be valid upto three (3) Months after the actual COD of the Power Station.

3.4.3 The Performance Guarantee furnished under Article 3.1, 3.3 and 3.4 shall be for guaranteeing the due and timely completion of the Project and achievement of Scheduled Commercial Operation Date of each Unit within the time specified in this Agreement.

3.4.4 The failure on the part of the Seller to furnish and maintain the Performance Guarantee as mentioned above shall be a material breach of the term of this Agreement on the part of the Seller.

3.4.5 If the Seller fails to achieve COD of each of the Units on their respective Scheduled Commercial Operation Date specified in this Agreement, subject to conditions mentioned in Article 4.5.1, the Procurers jointly shall have the right to encash the Performance Guarantee and appropriate in their favour as liquidated damages an amount specified in Article 4.6.1, without prejudice to the other rights of the Procurers under this Agreement.

3.5 Return of Performance Guarantee

3.5.1 The Performance Guarantee as submitted by Seller in accordance with Article 3.4 shall be released by the Procurers within three (3) Months from the actual Commercial Operation Date of the Power Station. In the event of delay in achieving Scheduled COD of any of the Units by the Seller (otherwise than due to the Procurers' inability to complete the activities mentioned in Article 3.1.2A, or Force Majeure event) and consequent part invocation of the Performance Guarantee by the Procurers, the Procurers shall release the Performance Guarantee if any, remaining unadjusted under Article 3.4, after the satisfactory completion by the Seller of all the requirements regarding achieving the Scheduled Commercial Operation Date of the remaining Units of the Power Station. It is clarified that the Procurers shall also return/release the Performance Guarantee in the event of (i) applicability of Article 3.3.2 to the extent the Performance Guarantee is valid for an amount in excess of Rupees four hundred (400) crores, or (ii) termination of this Agreement by any Party under Article 3.3.3 or Article 3.3.3A of this Agreement.

3.5.2 The release of the Performance Guarantee shall be without prejudice to other rights of the Procurers under this Agreement.

4 ARTCLE 4: DEVELOPMENT OF THE PROJECT

4.1 The Seller's obligation to build, own and operate the Project

4.1.1 Subject to the terms and conditions of this Agreement, the Seller undertakes to be responsible, at Seller's own cost and risk, for:

a) obtaining (other than Initial Consents) and maintaining in full force and effect all Consents required by it pursuant to this Agreement and Indian Law;

b) executing the Project in a timely manner so as to enable each of the Units and the Power Station as a whole to be Commissioned no later than its Scheduled Commercial Operations Date and such that as much of the Contracted Capacity as can be made available through the use of Prudent Utility Practices will be made available reliably to meet the Procurers' scheduling and dispatch requirements throughout the term of this Agreement but under no event earlier than 42 months from NTP;

c) owning the Project throughout the term of this Agreement free and clear of encumbrances, except those expressly permitted by Article 16;

d) procure the requirements of electricity at the Project (including construction, commissioning and start-up power) and to meet in a timely manner all formalities for getting such a supply of electricity;

e) provide on a timely basis relevant information on Power Station specifications which may be required for interconnecting system with the transmission system;

f) fulfilling all other obligations undertaken by him under this Agreement.

4.2 Procurers' obligation

Subject to the terms and conditions of this Agreement, the Procurers:

a) shall be responsible for procuring the Interconnection and Transmission Facilities to enable the Power Station to be connected to the Grid System not later than the Scheduled Connection Date;

b) shall ensure that the Seller is provided an electrical connection for reasonable construction, commissioning and start up power at the Project as reasonably requisitioned by the Seller by written intimation to the Procurers, on the then prevalent terms and conditions as applicable to such consumers.;

c) shall be responsible for payment of the Transmission Charges and RLDC and SLDC charges;

d) shall make all reasonable arrangements for the evacuation of the Infirm Power from the Power Station; subject to the availability of transmission lines and

e) fulfilling obligations undertaken by them under this Agreement.

4.3 Purchase and sale of Available Capacity and Scheduled Energy

4.3.1 Subject to the terms and conditions of this Agreement, the Seller undertakes to sell to the Procurers, and the Procurers undertake to pay the Tariff for all of the Available Capacity up to the Contracted Capacity and Scheduled Energy of the Power Station, according to their then existing Allocated Contract Capacity, throughout the term of this Agreement.

4.3.2 Unless otherwise instructed by all the Procurers (jointly), the Seller shall sell all the Available Capacity up to the Contracted Capacity of the Power Station to each Procurer in proportion of each Procurer's then existing Allocated Contracted Capacity pursuant to Dispatch Instructions.

4.4 Right to Available Capacity and Scheduled Energy

4.4.1 Subject to other provisions of this Agreement, the entire Contracted Capacity of the Power Station and all the Units of the Power Station shall at all times be for the exclusive benefit of the Procurers and the Procurers shall have the exclusive right to purchase the entire Contracted Capacity from the Seller. The Seller shall not grant to any third party or allow any third party to obtain any entitlement to the Available Capacity and/or Scheduled Energy.

4.4.2 Notwithstanding Article 4.4.1, the Seller shall be permitted to sell power, being a part of the Available Capacity of the Power Station to third parties if:

(a) there is a part of Available Capacity which has not been Dispatched by the Procurer, ordinarily entitled to receive such part ('Concerned Procurer'); and

(b) such part has first been offered, at the same Tariff, to the other Procurers (by the RLDC and/or the Seller), who were not ordinarily entitled to receive such part and they have chosen to waive or not to exercise their first right to receive such part of the Available Capacity within two (2) hours of being so offered the opportunity to receive such part.

4.4.3 If a Procurer does not avail of power upto the Available Capacity by the Seller corresponding to such Procurer's Allocated Capacity, and the provisions of Article 4.4.2 have been complied with, the Seller shall be entitled to sell such Available Capacity not procured, to any person without losing the right to receive the Capacity Charges from the Concerned Procurer for such un-availed Available Capacity. In such a case, the sale realization in excess of Energy Charges shall be equally shared by the Seller with the Concerned Procurer. In the event, the Seller sells such Available Capacity to the shareholders of the Seller or any direct or indirect affiliate of the Seller/shareholders of the Seller without obtaining the prior written consent of the Procurer, the Seller shall be liable to sell such Available Capacity to such entity at tariffs being not less than the Tariff payable by the relevant Procurer whose capacity is being sold pursuant to this Article. If more than one Procurers do not avail fully of their Allocated Contracted Capacity, provisions of this Article shall be applicable to them mutatis mutandis and in such case,

fifty percent (50%) of the excess over Energy Charges recovered by the Seller from sale to third party shall be retained by the Seller and the balance fifty percent (50%) shall be provided by the Seller to the Concerned Procurer/s in the ratio of their Available Capacity not dispatched by such Concerned Procurer/s and sold by the Seller to third parties. During this period, the Seller will also continue to receive the Capacity Charges from such Procurers. Upon the Procurers or any Procurer who has not availed of the Available Capacity, as envisaged under this Article, intimating to the Seller of its intention and willingness to avail of the part of the Available Capacity not availed of and therefore sold to the third party, the Seller shall, notwithstanding anything contained in the arrangement between the Seller and said third party, commence supply of such capacity to the Concerned Procurer/s from the later of two (2) hours from receipt of notice in this regard from the Concerned Procurer/s or the time for commencement of supply specified in such notice.

4.4 The Seller shall not itself use any of the electricity generated by the Power Station during the term of this Agreement, except for the purpose of meeting the Power Station's auxiliary load requirements, as per the norms laid down by the CERC and housing colony for the staff.

4.4.5 The sale under Unscheduled Interchange shall not be considered as sale to third party for the purposes of this Agreement.

4.5 Extensions of time

4.5.1 In the event that:

(a) the Seller is prevented from performing its obligations under Article 4.1.1(b) by the stipulated date, due to any Procurer Event of Default; or

(b) a Unit cannot be Commissioned by its Scheduled Commercial Operations Date because of Force Majeure Events.

the Scheduled Commercial Operations Date, the Scheduled Connection Date and the Expiry Date shall be deferred, subject to the limit prescribed in Article 4.5.3, for a reasonable period but not less than 'day for day' basis, to permit the Seller through the use of due diligence to overcome the effects of the Force Majeure Events affecting the Seller or in the case of the Procurer's or Procurers' Event of Default, till such time such default is rectified by the Procurer(s).

4.5.2 If the Parties have not agreed, within thirty (30) days after the affected Party's performance has ceased to be affected by the relevant circumstance, on how long the Scheduled Commercial Operations Date, the Scheduled Connection Date or the Expiry Date should be deferred by, any Party may raise the Dispute to be resolved in accordance with Article 17.

4.5.3 In case of extension occurring due to reasons specified in Article 4.5.1(a), the original Scheduled Commercial Operations Date of any Unit or the original Scheduled Commercial Operations Date of the Power Station as a whole, would not be extended by more than two (2) years or the date on which the Seller elects to terminate this Agreement, whichever is earlier.

As a result of such extension, the date newly determined shall be deemed to be the Scheduled Commercial Operations Date for the purposes of this Agreement.

4.6 Liquidated damages for delay in providing Contracted Capacity

4.6.1 If any Unit is not Commissioned by its Scheduled Commercial Operation Date other than for the reasons specified in Article 4.5.1, the Seller shall pay to each Procurer liquidated damages, proportionate to their then existing Allocated Contracted Capacity, for the delay in such Commissioning or making the Unit's Contracted Capacity available for dispatch by such date. The sum total of the liquidated damages payable by the Seller to the Procurers for such delayed Unit shall be calculated as follows:

SLDb = [CCun x dn x DR1] , if dn <= 60

SLDb = [CCun x 60 x DR1] + [CCun x (dn - 60) x DR2] , if dn > 60

Where:

a) "SLDb" are the liquidated damages payable by the Seller during the period beginning with the day from the Scheduled Commercial Operation Date of a Unit up to and including the day on which Unit is actually Commissioned;

b) "CCun" is the Contracted Capacity of Unit "n";

c) "d" is the number of days in the period beginning with the day after the Scheduled Commercial Operation Date of Unit "n" up to and including the day on which such Unit is actually Commissioned;

d) "DR1" is Rs. Ten Thousand (10,000) of damages per MW per day of delay in case "d" is less than 60 days and "DR2" is Rs. Fifteen Thousand (15,000) of damages per MW per day of delay in case "d" is equal to or more than 60 days

4.6.2 The Seller's maximum liability under this Article 4.6 shall be limited to the amount of liquidated damages calculated in accordance with Article 4.6.1 for and upto twelve (12) Months of delay for the Unit. Provided that in case of failure of the Seller to Commission the Unit even after expiry of twelve (12) Months from its Scheduled Commercial Date, the provisions of Article 14 shall apply.

4.6.3 The Seller shall pay the amount calculated pursuant to Article 4.6.1 to the Procurers within ten (10) days of the earlier of:

(a) the date on which the Unit is actually Commissioned; or

(b) the date of termination of this Agreement.

If the Seller fails to pay the amount of damages within the said period of ten (10) days, the Procurers shall be entitled to recover the said amount of the liquidated damages by invoking the Performance Guarantee. If the then existing Performance Guarantee is for an amount which is less than the amount of the liquidated damages payable by the Seller to the Procurers under this Article 4.6, then the Seller shall be liable to forthwith pay the balance amount.

4.6.4 The Parties agree that the formula specified in Article 4.6.1 for calculation of liquidated damages payable by the Seller under this Article 4.6, read with Article 14 is a genuine and accurate pre-estimation of the actual loss that will be suffered by the Procurers in the event of Seller's delay in achieving Commissioning of a Unit by its Scheduled COD.

4.6.5 If any Unit is not Commissioned by its Revised Scheduled COD other than for the reasons specified in Article 4.5.1, the Seller shall pay to each Procurer liquidated damages, proportionate to their then existing Allocated Contracted Capacity, for the delay in such Commissioning or making the Unit's Contracted Capacity available for dispatch by such date. The sum total of the liquidated damages payable by the Seller to the Procurers for such delayed Unit shall be equivalent to the damages payable by the Procurers to the CTU/STU (as the case may be) for the period of delay, as per the terms of agreement proposed to be entered into by the Procurers with CTU/STU for establishment of transmission system. Provided however, the liquidated damages payable by the Seller to the Procurers in case of delay under this Article 4.6.5 shall not be more than twenty percent of liquidated damages computed in the manner mentioned in Article 4.6.1. Provided further, in case of delay beyond Scheduled Commercial Operation Date, the provisions of Article 4.6.1 to 4.6.4 will apply for such delay beyond Scheduled Commercial Operation Date.

4.7 Liquidated damages for delay due to Procurer Event of Default and Non Natural Force Majeure Events and Natural Force Majeure Event (affecting the Procurer)

4.7.1 If

a) a Unit cannot be commissioned by its Scheduled Commercial Operations Date, due to a Procurer Event of Default or due to Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer/s) provided such Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer/s) has continued for a period of more than three (3) continuous or non-continuous Months; or

b) a Unit is available for conducting Commissioning Tests and is anticipated to be capable of duly completing the Commissioning Tests as certified by the Independent Engineer, but the said Commissioning Tests are not undertaken or completed due to such Procurer Event of Default or due to Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer/s) provided such Non Natural Force Majeure Event (or Natural Force Majeure affecting the

Procurer/s) has continued for a period of more than three (3) continuous or non-continuous Months:

such Unit shall,

until the effects of the Procurer Event of Default or of Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer/s) no longer prevent the Seller from undertaking a Commissioning Test/s, be deemed to have a Tested Capacity equal to the Contracted Capacity and to this extent, be deemed to have been Commissioned with effect from the Scheduled COD without taking into account delay due to such Procurer Event of Default or Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer/s) and shall be treated as follows.

a) In case of delay on account of the Procurer Event of Default, the Procurers shall make payment to the Seller of Capacity Charges calculated on Normative Availability of Contracted Capacity of such Unit for and during the period of such delay. Provided however, if any Unit is not Commissioned by its Revised Scheduled COD due to unavailability of transmission system, the Procurer(s) shall make payment to the Seller of an amount equivalent to the amounts paid by the CTU/STU (as the case may be) to the Procurers as per the terms of agreement proposed to be entered into by the Procurers with CTU/STU for establishment of transmission system for the period of delay up to Scheduled Commercial Operation Date.

b) In case of delay on account of Direct Non Natural Force Majeure Event, the Procurers shall make payment to the Seller of Capacity Charges calculated on Normative Availability of Contracted Capacity of such Unit for the period of such events in excess of three (3) continuous or non-continuous Months in the manner provided in (d) below.

c) In case of an Indirect Non Natural Force Majeure Event (or Natural Force Majeure affecting the Procurer/s), the Procurers shall make payments for amounts ("Debt Service") relatable to such Unit, which are due under the Financing Agreements, subject to a maximum of Capacity Charges based on Normative Availability, for the period of such events in excess of three (3) continuous or non-continuous Months in the manner provided in (d) below.

d) In case of delay due to Direct and Indirect Non Natural Force Majeure Events (or Natural Force Majeure affecting the Procurer/s), the Procurer shall be liable to make payments mentioned in (b) and (c) above, after Commissioning of the Unit, in the form of an increase in Capacity Charges. Provided such increase in Capacity Charges shall be determined by CERC on the basis of putting the Seller in the same economic position as the Seller would have been in case the Seller had been paid amounts mentioned in (b) and (c) above in a situation where the Direct Non Natural Force Majeure or Indirect Non Natural Force Majeure Event, as the case may be, had not occurred.

For the avoidance of doubt, it is specified that the charges payable under this Article 4.7.1 shall be paid by the Procurers in proportion to their then Allocated Contracted Capacity.

4.7.2 In every case referred to in Article 4.7.1 hereinabove, the Seller shall undertake a Commissioning Test/s as soon as reasonably practicable [and in no event later than two (2) weeks or such longer period as mutually agreed between the Seller and the Procurers (jointly)] after the point at which it is no longer prevented from doing so by the effects of Force Majeure Events or Procurer Event of Default (as appropriate) and if such Commissioning Test/s is not duly completed and / or demonstrate/s a Tested Capacity of a Unit which is less than ninety five (95) percent of its Contracted Capacity, then:

a) The Unit which fails the Commissioning Tests, shall be deemed to have not been Commissioned from the deemed COD referred to in Article 4.7.1;

b) The Seller shall repay to the Procurers, all sums received by way of Capacity Charge for such Unit along with interest at the same rate as Late Payment Surcharge; and

c) If the Seller fails to achieve Commissioning by the Scheduled Commercial Operation Date, it shall also pay liquidated damages to the Procurer for such Unit calculated in accordance with Article 4.6.

4.8 Limit on amounts payable due to default

4.8.1 The Parties expressly agree that the Procurers' only liability for any loss of profits or any other loss of any other kind or description whatsoever (except claims for indemnity under Article 15), suffered by the Seller by reason of the Procurers' failure to meet its obligations under Article 4.2(a) to Article 4.2(d) shall be to pay the Seller the amounts specified in Article 4.7 and Article 14.

4.8.2 Similarly, Seller's only liability for any loss suffered by the Procurers of any kind or description whatsoever (except claims for indemnity under Article 15), by reason of the Seller's failure to meet its obligations of Commissioning the various Units on their Scheduled COD, shall be as per Article 4.6 and Article 14.

5 ARTICLE 5: CONSTRUCTION

5.1 Seller's Construction Responsibilities

The Seller shall be responsible for designing, constructing, erecting, commissioning, completing and testing the Power Station in accordance with the following, it being clearly understood that in the event of inconsistency between two or more of the following, the order of priority as between them shall be the order in which they are placed, with 'applicable law' being the first:

a) applicable Law;
b) the Grid Code;
c) the terms and conditions of this Agreement;
d) the Functional Specifications; and

e) Prudent Utility Practices.

Notwithstanding anything to the contrary contained in this PPA, the Seller shall ensure that the technical parameters or equipment limits of the Project shall always be subject to the requirements as specified in points (a) to (e) above and under no event shall over-ride or contradict the provisions of this Agreement and shall not excuse the Seller from the performance of his obligations under this Agreement.

5.2 The Site

The Seller acknowledges that, before entering into this Agreement, it has had sufficient opportunity to investigate the Site and accepts full responsibility for its condition (including but not limited to its geological condition, on the Site, the adequacy of the road and rail links to the Site and the availability of adequate supplies of water) and agrees that it shall not be relieved from any of its obligations under this Agreement or be entitled to any extension of time or financial compensation by reason of the unsuitability of the Site for whatever reason.

The State Government authorities would be implementing the resettlement and rehabilitation package ("R&R") in respect of the Site for the Project, for which the costs is to be borne by the Seller. The Procurers shall endeavour to ensure that the State Government implements such R&R ensuring that land for different construction activities becomes available in time so as to ensure that the Power Station and each Unit is commissioned in a timely manner. Assistance of the Seller may be sought, which he will provide on best endeavour basis, in execution of those activities of the R&R package and as per estimated costs, if execution of such activities is in the interest of expeditious implementation of the package and is beneficial to the Project affected persons.

5.3 Information Regarding Interconnection Facilities

The Procurers (jointly) shall provide the Seller, on a timely basis, all information with regard to the Interconnection and Transmission Facilities as is reasonably necessary to enable the Seller to design, install and operate all interconnection plant and apparatus on the Seller's side of the Interconnection Point.

5.4 Quality of Workmanship

The Seller shall ensure that the Power Station is designed, built and completed in a good workmanlike manner using sound engineering construction practices and using only materials and equipment that are new and of international –utility grade quality such that, the useful life of the Power Station will be till the Expiry Date.

The Seller shall ensure that design, construction and testing of all equipment, facilities, components and systems of the Project shall be in accordance with Indian Standards and Codes issued by Bureau of Indian Standards and/or internationally recognised Standards and Codes, such as:

i. American National Standards Institute (ANS)
ii. American Society of Testing and Materials (ASTM)
iii. American Society of Mechanical Engineers (ASME)
iv. American Petroleum Institute (API)
v. Standards of the Hydraulic Institute, USA
vi. International Organization for Standardization (ISO)
vii. Japanese Industrial Standards (JIS)
viii. Tubular Exchanger Manufacturer's Association (TEMA)
ix. American Welding Society (AWS)
x. National Electrical Manufacturers Association (NEMA)
xi. National Fire Protection Association (NFPA)
xii. International Electro-Technical Commission (IEC)
xiii. Expansion Joint Manufacturers Association (EJMA)
xiv. Heat Exchange Institute (HEI)
xv. American Water Works Association (AWWA)
xvi. Deutsches Institut fur Normung (DIN)

Other international standards, established to be equivalent or superior to the above standards shall also be acceptable. However, in the event of any conflict between the requirements of the international codes and standards and the requirements of the Indian standards/regulations, the latter shall prevail.

5.5 Consents

The Seller shall be responsible for obtaining all Consents (other than those required for the Interconnection and Transmission Facilities and the Initial Consents) required for developing, financing, constructing, operating and maintenance of the Project and maintaining/ renewing all such Consents in order to carry out its obligations under this Agreement in general and this Article 5 in particular and shall supply to the Lead Procurer promptly with copies of each application that it submits, and copy/ies of each consent/approval/license which it obtains. For the avoidance of doubt, it is clarified that the Seller shall also be responsible for maintaining/renewing the Initial Consents and for fulfilling all conditions specified therein.

5.6 Construction Documents

5.6.1 The Seller shall retain at the Site and make available for inspection to the Procurers at all reasonable times copies of the results of all tests specified in Schedule 5 hereof.

5.7 Co-ordination of Construction Activities

5.7.1 Before the tenth (10th) day of each Month, during the Construction Period:

(a) the Seller shall prepare and submit to the Lead Procurer a monthly progress report, in the Agreed Form; and

(b) The Procurers shall jointly prepare and submit to the Seller a monthly progress report, in the Agreed Form, regarding the Interconnection and Transmission Facilities.

The Seller individually and all the Procurers (jointly) shall designate from time to time, by giving a written notice to the other party up to five (5) of its/their employees who shall be responsible for coordinating all construction activities relating to the Project and who shall have access at all reasonable times to the other party's land for the purpose of apprising the progress of the work being carried on, subject to such designated persons or the party appointing them giving reasonable notice to the other party of such visit and subject to their complying with all reasonable safety procedures.

For the avoidance of doubt, it is clarified that the total number of the representatives of all the Procurers shall not exceed five (5).

6 ARTICLE 6: SYNCHRONISATION, COMMISSIONING AND COMMERCIAL OPERATION

6.1 Synchronization

6.1.1 The Seller shall give the Procurers and RLDC at least sixty (60) days advance preliminary written notice and at least thirty (30) days advance final written notice, of the date on which it intends to synchronise a Unit to the Grid System. Provided that no Unit shall be synchronized prior to 36 months from NTP.

6.1.2 Subject to Article 6.1.1, a Unit may be synchronised by the Seller to the Grid System when it meets all connection conditions prescribed in any Grid Code then in effect and otherwise meets all other Indian legal requirements for synchronisation to the Grid System.

6.2 Commissioning

6.2.1 The Seller shall be responsible for ensuring that each Unit is Commissioned in accordance with Schedule 5 at its own cost, risk and expense.

6.2.2 The Seller shall give all the Procurers and the Independent Engineer not less than ten (10) days prior written notice of Commissioning Test of each Unit.

6.2.3 The Seller (individually), the Procurers (jointly) and the Independent Engineer (individually) shall each designate qualified and authorised representatives to witness and monitor Commissioning Test of each Unit.

6.2.4 Testing and measuring procedures applied during each Commissioning Test shall be in accordance with the codes, practices and procedures mentioned in Schedule 5 of this Agreement.

6.2.5 Within five (5) days of a Commissioning Test, the Seller shall provide the Procurers (jointly) and the Independent Engineer with copies of the detailed Commissioning Test results. Within five (5) days of receipt of the Commissioning Test results, the Independent Engineer shall provide to the Procurers and the Seller in writing, his findings from the evaluation of Commissioning Test results, either in the form of Final Test Certificate certifying the matters specified in Article 6.3.1 or the reasons for non-issuance of Final Test Certificate.

6.3 Commercial Operation

6.3.1 A Unit shall be Commissioned on the day after the date when all the Procurers receive a Final Test Certificate of the Independent Engineer stating that:

a) the Commissioning Tests have been carried out in accordance with Schedule 5 and are acceptable to him; and

b) the results of the Performance Test show that the Unit's Tested Capacity, is not less than ninety five (95) percent of its Contracted Capacity as existing on the Effective Date

6.3.2 If a Unit fails a Commissioning Test, the Seller may retake the relevant test, within a reasonable period after the end of the previous test, with three (3) day's prior written notice to the Procurers and the Independent Engineer. Provided however, the Procurers shall have a right to require deferment of any such re-tests for a period not exceeding fifteen (15) days, without incurring any liability for such deferment, if the Procurers are unable to provide evacuation of power to be generated, due to reasons outside the reasonable control of the Procurers or due to inadequate demand in the Grid.

6.3.3 The Seller may retake the Performance Test by giving at least fifteen (15) days advance notice in writing to the Procurers, up to eight (8) times, during a period of one hundred and eighty (180) days ("Initial Performance Retest Period") from a Unit's COD in order to demonstrate an increased Tested Capacity over and above as provided in Article 6.3.1 (b). Provided however, the Procurers shall have a right to require deferment of any such re-tests for a period not exceeding fifteen (15) days, without incurring any liability for such deferment, if the Procurers are unable to provide evacuation of power to be generated, due to reasons outside the reasonable control of the Procurers or due to inadequate demand in the Grid.

6.3.4 (i) If a Unit's Tested Capacity after the most recent Performance Test mentioned in Article 6.3.3 has been conducted, is less than its Contracted Capacity as existing on the Effective Date, the Unit shall be de-rated with the following consequences in each case with effect from the date of completion of such most recent test:

a) the Unit's Contracted Capacity shall be reduced to its Tested Capacity, as existing at the most recent Performance Test referred to in Article 6.3.3 and Quoted Capacity Charges shall be paid with respect to such reduced Contracted Capacity;

b) the Quoted Non Escalable Capacity Charge (in Rs./kwh) shall be reduced by the following, in the event Tested Capacity is less than ninety five (95%) per cent of its Contracted Capacity as existing on the Effective Date:

Rs. **0.25**/kwh x [1 – {(Tested Capacity of all Commissioned Units + Contracted Capacity of all Units not Commissioned at the Effective Date)/Contracted Capacity of all Units at the Effective Date}]

c) the Seller shall not be permitted to declare the Available Capacity of the Unit at a level greater than its Tested Capacity;

d) the Availability Factor of the derated Unit shall be calculated by reference to the reduced Contracted Capacity; and

e) the Capital Cost and each element of the Capital Structure Schedule shall be reduced in proportion to the reduction in the Contracted Capacity of the Power Station as a result of that derating (taking into account the Contracted Capacity of any Unit which has yet to be Commissioned).

(ii) If at the end of Initial Performance Retest Period or the date of the eighth Performance Test mentioned in Article 6.3.3, whichever is earlier, the Tested Capacity is less than the Contracted Capacity (as existing on the date of this Agreement), the consequences mentioned in Article 8.2.2 shall apply for a period of one year. Provided that such consequences shall apply with respect to the Tested Capacity existing at the end of Initial Performance Retest Period or the date of the eighth Performance Test mentioned in Article 6.3.3, whichever is earlier.

6.3.5 If a Unit's Tested Capacity as at the end of the Initial Performance Retest Period or the date of the eighth Performance Test mentioned in Article 6.3.3, whichever is earlier, is found to be more than it's Contracted Capacity as existing on the Effective Date, the Tested Capacity shall be deemed to be the Unit's Contracted Capacity if any Procurer/s agrees and intimates the same to the Seller within thirty (30) days of receipt of the results of the last Performance Test to purchase such excess Tested Capacity and also provide to the Seller additional Letter of Credit and Collateral Arrangement (if applicable) for payments in respect of such excess Tested Capacity agreed to be purchased by such Procurer/s. In case the Procurer/s decide not to purchase such excess Tested Capacity, the Seller shall be free to sell such excess Tested Capacity to any third party and the Unit's Contracted Capacity shall remain unchanged, notwithstanding that the Tested Capacity exceeded the Contracted Capacity.

Provided that in all the above events, the Seller shall be liable to obtain/maintain all the necessary consents (including Initial Consents), permits and approvals including those required under the environmental laws for generation of such excess Tested Capacity.

6.4 *Costs Incurred*

The Seller expressly agrees that all costs incurred by him in synchronising, connecting, Commissioning and / or Testing or Retesting a Unit shall be solely and completely to his account and the Procurer's or Procurers' liability shall not exceed the amount of the Energy Charges payable for such power output, as set out in Schedule 7.

7 ARTICLE 7: OPERATION AND MAINTENANCE

The Parties shall comply with the provisions of the applicable Law including, in particular, Grid Code as amended form time to time regarding operation and maintenance of the Power Station and all matters incidental thereto.



8 ARTICLE 8: CAPACITY, AVAILABILITY AND DISPATCH

8.1 Repeat Performance Tests

8.1.1 The Procurers (jointly) may from time to time during the Operating Period, but only if the Available Capacity has not been one hundred percent (100%) of the Contracted Capacity of the Commissioned Units (excluding the Unit(s) under planned outage for capital maintenance in consultation with the Regional Power Committee, if any) even for one continuous period of at least three (3) hours during any last three (3) continuous months, require the Seller to demonstrate a Unit's or (if all the Units have been Commissioned, the Power Station's) Tested Capacity by carrying out a further Performance Test (a **"Repeat Performance Test"**) in accordance with this Article 8.1. A Repeat Performance Test shall be carried out in accordance with Schedule 5, save that the test shall last twenty-four (24) hours instead of seventy two (72) hours. Provided that if the Tested Capacity after such test is less than one hundred percent (100%) of the Contracted Capacity (as existing on the Effective Date) of the Commissioned Units, the Seller shall also have a right to conduct not more than two Repeat Performance Test within a period six months, by giving a notice of not less than fifteen (15) days to the Procurers for each such test. Provided that the Procurers shall have a right to require deferment of each such re-tests for a period not exceeding five (5) days, without incurring any liability for such deferment, if the Procurers are unable to provide evacuation of power to be generated, due to reasons outside the reasonable control of the Procurers or due to inadequate demand in the Grid.

8.1.2 The Procurers (jointly) shall give the Seller not less than seven (7) days' advance written notice of the time when a Repeat Performance Test of a Unit (or if all the Units have been Commissioned, of the Power Station's) is to begin. A Repeat Performance Test may not be scheduled for any period when the Unit to be tested is due to undergo a Scheduled Outage.

8.1.3 The Procurers (jointly) and Seller shall jointly appoint the Independent Engineer to monitor the Repeat Performance Test and to certify the results in accordance with Article 8.2.

8.1.4 If the Seller wishes to take any Unit, out of service for repair before a Repeat Performance Test, it shall inform all the Procurers in writing before its scheduled start of the repairs and the estimated time required to complete the repairs. The Parties shall then schedule a Maintenance Outage in accordance with the Grid Code to enable the Seller to carry out those repairs and in such a case, the Procurers (jointly), requiring the Repeat Performance Test, shall defer the Repeat Performance Test until such Unit is returned to service following that Maintenance Outage.

8.1.5 The Procurers requiring the Repeat Performance Test, may jointly, for reasonable cause, defer any Repeat Performance Test for up to fifteen (15) days from the date originally notified to the Seller in accordance with Article 8.1.2 if such Procurers jointly notify the

Seller in writing at least one (1) day before the Repeat Performance Test starts of the reason for the deferral and when the test is to be rescheduled. .

Provided that, such deferment at the joint request of the Procurers shall be permitted only once in respect of each of the Repeat Performance Tests.

8.1.6 The Seller (individually), the Procurers (jointly) and the Independent Engineer (individually) shall each have the right to designate qualified and authorised representatives (but not more than three each) to monitor the Repeat Performance Test.

8.1.7 Testing and measurement procedures applied during the Repeat Performance Test shall be in accordance with the codes, practices of procedures as generally/normally applied for the Performance Tests.

8.1.8 Within five (5) days of a Repeat Performance Test, the Seller shall provide each of the Procurers and the Independent Engineer with copies of the detailed test results.

8.1.9 Within one (1) Month of the date by which all the Units have been Commissioned, the Seller shall conduct a Performance Test of the Power Station (hereinafter referred to as **"Power Station Performance Test"**) whereafter the provisions of Article 8.2 shall apply. A Power Station Performance Test shall be carried out in accordance with Article 1.1 of Schedule 5, save that the test shall last twenty-four (24) hours instead of seventy two (72) hours.

8.2 Derating

8.2.1 A Repeat Performance Test shall be concluded when all the Procurers receive the Final Test Certificate of the Independent Engineer stating that the Repeat Performance Test has been carried out satisfactorily in accordance with Schedule 5 and certifying the Unit's (or if all the Units have been commissioned, the Power Station's) then current Tested Capacity as demonstrated by the results of the Repeat Performance Test.

8.2.2 (i) If a Unit's (or if all the Units have been Commissioned, of the Power Station's) then current Tested Capacity as established by the Repeat Performance Test and the Final Test Certificate issued by the Independent Engineer, is less than its Contracted Capacity as existing on the Effective Date, the Seller shall not be permitted to declare the Available Capacity of the Unit (or if all the Units have been Commissioned, of the Power Station's) at a level greater than its Tested Capacity, in which case:

a) the Unit's (or if all the Units have been Commissioned, of the Power Station's) Contracted Capacity shall be reduced to its most recent Tested Capacity and Quoted Capacity Charges shall be paid with respect to such reduced Contracted Capacity.

b) Further, the Quoted Non -Escalable Capacity Charge shall be reduced by the following:

Rs. 0.25/kwh x [1 – {(Tested Capacity of all Commissioned Units + Contracted Capacity at the Effective Date of all Units not Commissioned)/Contracted Capacity at the Effective Date of all Units}];

c) the Availability Factor of the derated Unit (or if all the Units have been Commissioned, of the Power Station's) shall be calculated by reference to the reduced Contracted Capacity, in each case with effect from date on which all the Procurers jointly first notified the Seller of their intention to carry out a Repeat Performance Test of the Unit (or if all the Units have been Commissioned, of the Power Station's); and

d) the Capital Cost and each element of the Capital Structure Schedule shall be reduced in proportion to the reduction in the Contracted Capacity of the Power Station as a result of that derating (taking into account the Contracted Capacity of any Unit which has yet to be Commissioned);

(ii) The consequences mentioned in sub-Article (i) above shall apply from the completion date of each Repeat Performance Test.. If at the end of second Repeat Performance Test conducted by the Seller or the last date of the end of the six month period referred to in Article 8.1.1, whichever is earlier, the Tested Capacity is less than the Contracted Capacity (as existing on the date of this Agreement), the consequences mentioned in Article 8.2.2 shall apply for a period of at least one year after which the Seller shall have the right to undertake a Repeat Performance Test. Provided that such consequences shall apply with respect to the Tested Capacity existing at the end of second Repeat Performance Test conducted by the Seller or the last date of the end of the six month period referred to in Article 8.1.1, whichever is earlier

8.2.3 If the Independent Engineer certifies that it is unable to give a Final Test Certificate because events or circumstances beyond the Seller's reasonable control have prevented the Repeat Performance Test from being carried out in accordance with Schedule 5, the Procurers shall reschedule a Repeat Performance Test as soon as reasonably practicable.

8.2.4 If a Unit's or if all the Units have been Commissioned, of the Power Station's, Tested Capacity is found to be more than it's Contracted Capacity, the provisions of Article 6.3.5 shall apply mutatis mutandis.

8.3 Availability

The Seller shall comply with the provisions of the applicable Law regarding Availability including, in particular, to the provisions of the ABT and Grid Code relating to intimation of Availability and the matters incidental thereto.

8.4 Dispatch

The Seller shall comply with the provisions of the applicable Law regarding Dispatch instructions, in particular, to the provisions of the ABT and Grid Code relating to Dispatch and the matters incidental thereto.

9 ARTICLE 9: METERING AND ENERGY ACCOUNTING

9.1 Meters

For installation of Meters, Meter testing, Meter calibration and Meter reading and all matters incidental thereto, the Seller and the Procurers shall follow and be bound by the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, the Grid Code and ABT as amended and revised from time to time.

9.2 RLDC / SLDC Charges

All scheduling and RLDC / SLDC charges applicable shall be borne by the Procurers.

10. ARTICLE 10: INSURANCES

10.1 Insurance

The Seller shall effect and maintain or cause to be effected and maintained during the Construction Period and Operating Period, Insurances against such risks, with such deductibles and with such endorsements and co-insured(s), which the Prudent Utility Practices would ordinarily merit maintenance of and as required under the Financing Agreements.

10.2 Application of Insurance Proceeds

Save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Project or any part of the Project shall be first applied to reinstatement, replacement or renewal of such loss or damage.

If a Natural Force Majeure Event renders the Project no longer economically and technically viable and the insurers under the Insurances make payment on a "total loss" or equivalent basis, the Procurer(s) shall have no claim on such proceeds of such Insurance.

10.3 Effect on liability of the Procurers

Notwithstanding any liability or obligation that may arise under this Agreement, any loss, damage, liability, payment, obligation or expense which is insured or for which the Seller can claim compensation, under any Insurance shall not be charged to or payable by the Procurers.

11 ARTICLE 11: BILLING AND PAYMENT

11.1 General

From the COD of the first Unit, Procurers shall pay the Seller the Monthly Tariff Payment, on or before the Due date, comprising of Tariff for every Contract Year, determined in accordance with this Article 11 and Schedule 7. All Tariff payments by Procurers shall be in Indian Rupees.

Provided however, if any of the Procurers avails of any Electrical output from the Seller prior to the Commercial Operation Date ("**Infirm Power**") of the Unit, then such Procurer shall be liable to pay only Energy Charges (as applicable for the Contract Year in which the Infirm Power is supplied or next Contract Year in case no Energy Charges are mentioned in such Contract Year), for Infirm Power generated by such Unit. The quantum of Infirm Power generated by Units synchronized but not have been put on COD shall be computed from the energy accounting and audit meters installed at the Power Station as per Central Electricity Authority (installation and operation of meters) Regulations 2006 as amended from time to time.

11.2 Delivery and content of Monthly Bills

11.2.1 The Seller shall issue to Procurer a signed Monthly Bill for the immediately preceding Month.

Provided that:

i. if the COD of the first Unit falls during the period between the first (1st) day and up to and including the fifteenth (15th) day of a Month, the first Monthly Bill shall be issued for the period until the last day of such Month, or

ii. if the COD of the first Unit falls after the fifteenth (15th) day of a Month, the first Monthly Bill shall be issued for the period commencing from the COD of the first Unit until the last day of the immediately following Month.

Provided further that if a Monthly Bill is received on or before the second (2nd) day of a Month, it shall be deemed to have been received on the second (2nd) Business Day of such Month.

11.2.2 Each Monthly Bill and Provisional Bill shall include:

i. Availability and energy account for the relevant Month as per REA for Monthly Bill and RLDC's daily energy account for Provisional Bill;

ii. the Seller's computation of various components of the Monthly Tariff Payment in accordance with Schedule 7; and

iii. supporting data, documents and calculations in accordance with this Agreement.

11.3 Payment of Monthly Bills

11.3.1 Procurers shall pay the amount payable under Monthly Bill on the Due Date to such account of the Seller, as shall have been previously notified by the Seller to Procurers in accordance with Article 11.3.3 below.

All payments made by the Procurers shall be appropriated by the Seller in the following order of priority:

1. towards Late Payment Surcharge, payable by the Procurers, if any;
2. towards earlier unpaid Monthly Bill, if any; and
3. towards the then current Monthly Bill.

11.3.2 All payments required to be made under this Agreement shall only include any deduction or set off for:

i. deductions required by the Law; and
ii. amounts claimed by the Procurers from the Seller, through an invoice duly acknowledged by the Seller, to be payable by the Seller, and not disputed by the Seller within thirty (30) days of receipt of the said invoice and such deduction or set-off shall be made to the extent of the amounts not disputed. It is clarified that the Procurers shall be entitled to claim any set off or deduction under this Article, after expiry of the said 30 day period.

Provided further, the maximum amounts that can be deducted or set-off by all the Procurers taken together (proportionate to their Allocated contracted capacity in case of each Procurer) under this Article in a Contract Year shall not exceed Rupees One Hundred (100) crores only, except on account of payments under sub Article (i) above.

11.3.3 The Seller shall open a bank account at [Identified Place or Account designated by Lenders] (the "Designated Account") for all Tariff Payments to be made by Procurers to the Seller, and notify Procurers of the details of such account at least ninety (90) days before the dispatch of the first Monthly Bill to Procurers. Procurers shall instruct their respective bankers to make all payments under this Agreement to the Designated Account and shall notify the Seller of such instructions on the same day. Procurers shall also designate a bank account at [Identified Place] for payments to be made by the Seller (including Supplementary Bills) to Procurers and notify the Seller of the details of such account ninety (90) days before the COD of the first Unit.

11.3.4 In the event of delay in payment of a Monthly Bill by any Procurer beyond its Due Date, a Late Payment Surcharge shall be payable by such Procurer to the Seller at the rate of two (2) percent in excess of the applicable SBAR per annum, on the amount of

outstanding payment, calculated on a day to day basis (and compounded with Monthly rest), for each day of the delay.

11.3.5 For payment of any Bill before Due Date, the following rebate shall be paid by the Seller to the Procurer in the following manner.

a) Provisional Bill will be raised by the Seller on the last working day of the Month where the Capacity Charges shall be based on the Declared Capacity for the full Month and the Energy Charges shall be based on the final implemented Scheduled Energy upto 25th day of the Month. Rebate shall be payable at the rate of two point two five percent (2.25%) of the amount (which shall be the full amount due under the Provisional Bill) credited to Seller's account on first day of the Month and rebate amount shall reduce at the rate of zero point zero five percent (0.05%) for each day, upto fifth (5th) day of the Month.

b) Applicable rate of rebate at (a) above shall be based on the date on which payment has been actually credited to the Seller's account. Any delay in transfer of money to the Seller's account, on account of public holiday, bank holiday or any other reasons shall be to the account of the Procurers.

c) Two percent (2%) rebate for credit to Sellers account made within one (1) Business Day of the presentation of Monthly Bill for the Month for which the Provisional Bill was raised earlier.

d) For credit to Seller's account made on other days, the rebate shall be as under:

Number of days before Due Date of Monthly Bill	Rates of Rebate applicable
29	Two point two five percent (2.25%)
28	Two point two zero percent (2.20%)
27	Two point one five percent (2.15%)
26	Two point one zero percent (2.10%)
25	Two point zero five percent (2.05%)
24	Two percent (2.00%)
23 and each day thereafter upto the Due Date	2% less [0.033% x {24 less number of days before Due Date when the payment is made by the Procurers}]

In case of presentation of Monthly Bill beyond the sixth (6th) day of the Month, two percent (2%) rebate will be applicable only on the day of presentation of Monthly Bill and beyond that rebate will be applicable as per the table above.

e) Rebate of two point two five percent (2.25%) to two point zero five percent (2.05%) will be available only to those Procurers who credit one hundred percent (100%) of

the Provisional Bill within first five (5) days of the Month to Seller's account/designated account and balance amount, if any, based on Monthly Bill (as per REA) within the Month.

f) In the event only part amount of Provisional Bill is credited to Seller's account, within first five (5) days and the balance amount is credited to Sellers account during other days of the Month, rebate will be paid on such part amount at the rate of two percent (2%) plus zero point zero three three percent (0.033%) per day for the number of days earlier than the 6th day when such part amount is credited to Sellers' account;

g) The above rebate will be allowed only to those Procurers who credit to Seller's account the full Monthly Bill.

h) No rebate shall be payable on the bills raised on account of Change in Law relating to taxes, duties and cess;

i) If the Provisional Bill has not been paid by the date of receipt of he Monthly Bill then such Provisional Bill shall not be payable, provided in case the Provisional Bill has already been paid, then only the difference between the Monthly Bill and Provisional Bill shall be payable.

11.4 Payment Mechanism

11.4.1 *Letter of Credit:*

Each Procurer shall provide to the Seller, in respect of payment of its Monthly Bills, a monthly unconditional, revolving and irrevocable letter of credit (**"Letter of Credit"**), opened and maintained by each Procurer, which may be drawn upon by the Seller in accordance with Articles 11.4.1.1 through 11.4.1.5. The Procurers shall provide the Seller draft of the Letter of Credit proposed to be provided to the Seller before the NTP. Further, the Letter of Credit shall be provided from the bank which is appointed as Default Escrow Agent under the Default Escrow Agreement.

11.4.1.1 Not later than one (1) Month prior to the COD of the first Unit, each Procurer shall through a scheduled bank at [*Identified Place*] open a Letter of Credit in favour of the Seller, to be made operative from a date prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be renewed annually, for an amount equal to:

i. for the first Contract Year, equal to one point one (1.1) times the estimated average monthly billing based on Normative Availability;
ii. for each subsequent Contract Year, equal to the one point one (1.1) times the average of the Monthly Tariff Payments of the previous Contract Year plus the estimated

Monthly Billing during the current year from any additional Unit(s) expected to be put on COD during the current Contract Year based on Normative Availability.

Provided that the Seller shall not draw upon such Letter of Credit prior to the Due Date of the relevant Monthly Bill, and shall not make more than one drawal in a Month.

Provided further that if at any time, such Letter of Credit amount falls short of the amount specified in Article 11.4.1.1 or 11.4.1.8 otherwise than by reason of drawal of such Letter of Credit by the Seller, the relevant Procurer shall restore such shortfall within seven (7) days.

11.4.1.2 Procurers shall cause the scheduled bank issuing the Letter of Credit to intimate the Seller, in writing regarding establishing of such irrevocable Letter of Credit.

11.4.1.3 In case of drawal of the Letter of Credit by the Seller in accordance with the terms of this Article 11.4.1, the amount of the Letter of credit shall be reinstated in the manner stated in Article 11.4.2.3 of this Agreement.

11.4.1.4 If any Procurer fails to pay a Monthly Bill or part thereof within and including the Due Date, then, subject to Article 11.6.7, the Seller may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from the Procurer, an amount equal to such Monthly Bill or part thereof plus Late Payment Surcharge, if applicable, in accordance with Article 11.3.4 above, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:

i. a copy of the Monthly Bill which has remained unpaid by such Procurer;
ii. a certificate from the Seller to the effect that the bill at item (i) above, or specified part thereof, is in accordance with the Agreement and has remained unpaid beyond the Due Date; and
iii. calculations of applicable Late Payment Surcharge, if any.

Further, on the occurrence of such an event as envisaged herein, the Seller shall immediately inform all the Procurers of the said failure of the Procurer to pay the Monthly Bill or part thereof and shall send regular updates to all the Procurers, which shall not be less than one (1) in every two (2) days, containing details of the amount claimed by the Seller as per the provisions of this Article and payments made by the Procurer pursuant to such claim.

For the avoidance of doubt it is clarified that the Seller shall not be entitled to drawdown on the Letter of Credit for any failure of any Procurer to pay a Supplementary Bill.

11.4.1.5 Procurers shall ensure that the Letter of Credit shall be renewed not later than forty five (45) days prior to its expiry.

11.4.1.6 All costs relating to opening and maintenance of the Letter of Credit shall be borne by the Procurers, however, Letter of Credit negotiation charges shall be borne and paid by the Seller.

11.4.1.7 Where necessary, the Letter of Credit may also be substituted by an unconditional and irrevocable bank guarantee or an equivalent instrument as mutually agreed by the Procurers and the Seller.

11.4.1.8 Upon fulfilment of the conditions mentioned under Article 11.4.2.2 the Letter of Credit amount as mentioned in Article 11.4.1.1 shall be changed to one (1) time the average of the Monthly Tariff Payments of the previous Contract Year instead of one point one (1.1) times the average of the Monthly Tariff Payments of the previous Contract Year.

11.4.2 Collateral Arrangement

11.4.2.1 As further support for each Procurer's obligations, on or prior to the Effective Date, each Procurer and the Seller shall execute separate Default Escrow Agreement (referred as "Default Escrow Agreement") for the establishment and operation of the Default Escrow Account in favour of the Seller, through which the revenues of the relevant Procurer shall be routed and used as per the terms of the Default Escrow Agreement. Each of the Procurers and the Seller shall contemporaneously with the execution of the Default Escrow Agreement enter into a separate Agreement to Hypothecate Cum Deed of Hypothecation, whereby each Procurer shall agree to hypothecate, to the Seller, effective from forty five (45) days prior to the Scheduled COD or Revised Scheduled COD of the first Unit (as applicable), the amounts to the extent as required for the Letter of Credit as per Article 11.4.1.1 routed through the Default Escrow Account and the Receivables in accordance with the terms of the Agreement to Hypothecate Cum Deed of Hypothecation. The Default Escrow Agreements and the Agreement to Hypothecate Cum Deed of Hypothecation are collectively referred to as the "Collateral Arrangement". The minimum revenue flow in any Month in the Default Escrow Account shall be at least equal to the amount required for the Letter of Credit as per Article 11.4.1.1.

Provided that the Procurers shall ensure that the Seller has first ranking charge on the revenues routed through the Default Escrow Account and the 'Receivables' in accordance with the terms of the Agreement to Hypothecate Cum Deed of Hypothecation. However, such first ranking charge shall be on the amounts, in excess of amounts, which have already been charged or agreed to be charged prior to the date of the execution of the Default Escrow Agreement,

11.4.2.2 On the occurrence of all of the following events in respect of any Procurer:

(i) A period of not less than two (2) years from COD of Power Station, has elapsed; and

(ii) Such Procurer has achieved, for its ability to honour its Tariff Payment obligations to the Seller under this Agreement, a credit rating of 'A' or better, from a SEBI registered Indian credit rating agency mutually agreed between Seller and the Lender/s, consistently for a period of at least three (3) years; and

(iii) Immediately prior to the three (3) year period mentioned in sub-clause (ii) above,, for a period of at least two (2) years there has been no Procurer Event of Default under Article 14 of the PPA, by such Procurer,

such Procurer shall intimate the Seller in writing of the occurrence of the same and its intention to discontinue the Collateral Arrangement. If the Seller desires to continue with the Collateral Arrangement, it shall intimate the same to the concerned Procurer in writing within thirty (30) days of receipt of intimation from the concerned Procurer and in such case the Seller shall be liable to bear the costs of continuation of the Collateral Arrangement with effect from such date. In case the Seller fails to respond or agrees to discontinue, the Collateral Arrangement shall forthwith cease and the Default Escrow Agreement and the routed through the Default Escrow Account and the 'Receivables' in accordance with the terms of the Agreement to Hypothecate Cum Deed of Hypothecation shall stand terminated as per terms thereof.

Provided that in case of any of conditions mentioned under (i), (ii) or (iii) in Article 11.4.2.2 ceases to be true, then within 90 days of the occurrence of such event, the Procurer shall reinstate the Collateral Arrangement, at its own cost.

11.4.2.3 If the Letter of Credit is insufficient to pay for the due payments to the Seller or is not replenished for the drawals made then within a period of seven (7) days from the date such shortfall in the Letter of Credit occurs, the Letter of Credit shall be reinstated in the manner specified in the Default Escrow Agreement.

11.5 Third Party Sales on default

11.5.1 Notwithstanding anything to the contrary contained in this Agreement, upon the occurrence of an event where the Procurer has not made payment by the Due Date of an Invoice through the payment mechanism provided in this Agreement, the Seller shall follow the steps as enumerated in Articles 11.5.2 and 11.5.3.

11.5.2 On the occurrence of the event mentioned in Article 11.5.1 and after giving a notice of at least seven (7) days to the defaulting Procurer(s), the Seller shall have the obligation to offer twenty five (25) per cent of the Contracted Capacity pertaining to such defaulting Procurer ("Default Electricity") to the other non - defaulting Procurers. The non defaulting Procurers have the right to receive the whole or any part of such Default Electricity by giving a notice within a further two (2) Business Days, in the following manner:

a) In ratios equal to their then existing Allocated Contracted Capacities at the same Tariff as would have been applicable to the defaulting Procurer. Provided that, if any of the non-defaulting Procurer(s) does not elect to receive the Default Electricity so offered, the Seller shall offer the balance of the Default Electricity to other non-defaulting Procurer(s) at the same Tariff in proportion to their additional requirement as intimated.

b) At a lower tariff as may be specified by non-defaulting Procurer(s) to the extent of their capacity requirements, in descending order of the tariff. Provided that, the Seller has the right to obtain tariff quotes from third party(s) for sale of Default Electricity not requisitioned under (a) above. The tariff quotes received from non-defaulting Procurer(s) and such third party(s) shall be ranked in descending order of the tariff and the Seller shall sell Default Electricity in such descending order and in compliance with Article 11.5.3, to the extent applicable.

In case of both (a) and (b) above if non- defaulting Procurer(s) receive Default Electricity, then, subject to applicability of Article 11.4.2.2 of this Agreement, such non defaulting Procurer(s) shall within seven (7) days of exercising the right of election, either open an additional Letter of Credit/enhance the existing Letter of Credit in accordance with the principles set forth in Article 11.4 or increase the value of escrow cover under the Default Escrow Agreement and related security under Agreement to Hypothecate secure payment for that part of the Default Electricity as such non-defaulting Procurer elects to receive.

Provided further within two (2) Months of such election by the non-defaulting Procurer(s), unless the event outlined in Article 11.5.7 has occurred, such Procurer(s) shall open a Letter of Credit/enhance the existing Letter of Credit in accordance with the principles set forth in Article 11.4 and shall increase the value of escrow cover under the Default Escrow Agreement and related Agreement to Hypothecation cum Deed of Hypothecation. Provided that in case the events mentioned in Article 11.4.2.2 (i), (ii) and (iii) are true, then the requirement with respect to Default Escrow Agreement and Agreement to Hypothecate cum Deed of Hypothecation in this Article 11.5.2 shall be applicable as per Article 11.4.2.2.

11.5.3 If all the non-defaulting Procurers do not make the election to receive the Default Electricity or a part thereof, within two (2) Business Days of it being so offered under and as per Article 11.5.2, or all such Procurers expressly waive their first right to receive the same, the Seller shall have the right (but not the obligation) to make available and sell the Default Electricity or a part thereof to a third party, namely:

(a) any consumer, subject to applicable Law; or

(b) any licensee under the Electricity Act, 2003;

11.5.4 If the Collateral Arrangement is not fully restored by the Defaulting Procurer within thirty (30) days of the non-payment by a Procurer of a Invoice by its Due Date, the provisions of Article 11.5.2 and Article 11.5.3 shall apply with respect to one hundred (100) per cent of the Contracted Capacity. Provided that in case the events mentioned in Article 11.4.2.2 (i), (ii) and (iii) are true, then this Article 11.5.4 shall be applicable as per Article 11.4.2.2.

11.5.5 Provided that, in the case of Article 11.5.3 or 11.5.4, the Seller shall ensure that sale of power to the shareholders of the Seller or any direct or indirect affiliate of the Seller/shareholders of the Seller, is not at a price less than the Energy Charges.

11.5.6 In case of third party sales or sales to any other non defaulting Procurers as permitted by this Article 11.5, the adjustment of the surplus revenue over Energy Charge (applicable to the defaulting Procurer) attributable to such electricity sold, shall be adjusted as under :

(a) the surplus upto the Tariff shall be used towards the extinguishment of the subsisting payment liability of the defaulting Procurer towards the Seller; and
(b), the surplus if any above the Tariff shall be retained by the Seller.

The liability of the defaulting Procurer towards making Capacity Charge payments to the Seller even for electricity sold to third parties or other non defaulting Procurers during such periods will remain unaffected. Provided such Capacity Charge payment liability shall cease on the date which occurs on the Expiry of a period of 3 years and hundred days from the date of occurrence of a Procurer Event of Default under Article 14.1.1(a), provided if prior to such date, such Procurer Event of Default has not ceased and regular supply of electricity for a period of at least 90 continuous days has not occurred.

11.5.7 Sales to any person or Party, other than the defaulting Procurer under Article 11.5.1 shall cease and regular supply of electricity to the defaulting Procurer in accordance with all the provisions of this Agreement shall commence and be restored on the later of the two following dates or any date before this date at the option of Seller:

(a) the day on which the defaulting Procurer pays the amount due to the Seller and renews the Letter of Credit and restores Default Escrow Account (if applicable) as mentioned in Article 11.4.2.1 ; or

(b) the date being "x" days from the date on which the defaulting Procurer pays the amount due to the Seller, where "x" days shall be calculated in accordance with **Schedule 3.**

11.6 ***Disputed Bill***

11.6.1 If a Party does not dispute a Monthly Bill, Provisional Bill or a Supplementary Bill raised by the other Party within thirty (30) days of receiving it, such bill shall be taken as conclusive.

11.6.2 If a Party disputes the amount payable under a Monthly Bill, Provisional Bill or a Supplementary Bill, as the case may be, that Party shall, within thirty (30) days of receiving such bill, issue a notice (the "Bill Dispute Notice") to the invoicing Party setting out:

i. the details of the disputed amount;
ii. its estimate of what the correct amount should be; and
iii. all written material in support of its claim.

11.6.3 If the invoicing Party agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 11.6.2, the invoicing Party shall revise such bill within seven (7) days of receiving such notice and if the disputing Party has already made the excess payment refund to the disputing Party such excess amount within fifteen (15) days of receiving such notice. In such a case excess amount shall be refunded along with interest at the same rate as Late Payment Surcharge which shall be applied from the date on which such excess payment was made to the invoicing Party and upto and including the date on which such payment has been received.

11.6.4 If the invoicing Party does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 11.6.2, it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice to the disputing Party providing:

i. reasons for its disagreement;
ii. its estimate of what the correct amount should be; and
iii. all written material in support of its counter-claim.

11.6.5 Upon receipt of notice of disagreement to the Bill Dispute Notice under Article 11.6.4, authorised representative(s) or a director of the board of directors/member of board of each Party shall meet and make best endeavours to amicably resolve such dispute within fifteen (15) days of receiving such notice of disagreement to the Bill Dispute Notice.

11.6.6 If the Parties do not amicably resolve the dispute within fifteen (15) days of receipt of notice of disagreement to the Bill Dispute Notice pursuant to Article 11.6.4, the matter shall be referred to Dispute Resolution in accordance with Article 17.

11.6.7 In case of Disputed Bills, it shall be open to the aggrieved party to approach the Appropriate Commission for Dispute Resolution in accordance with Article 17 and also for interim orders protecting its interest including for orders for interim payment pending Dispute Resolution and the Parties shall be bound by the decision of the Appropriate Commission, including in regard to interest or Late Payment Surcharge, if any directed to be paid by the Appropriate Commission.

11.6.8 If a Dispute regarding a Monthly Bill, Provisional Bill or a Supplementary Bill is settled pursuant to Article 11.6 or by Dispute resolution mechanism provided in this Agreement in favour of the Party that issues a Bill Dispute Notice, the other Party shall refund the amount, if any incorrectly charged and collected from the disputing Party or pay as required, within five (5) days of the Dispute either being amicably resolved by the Parties pursuant to Article 11.6.5 or settled by Dispute Resolution Mechanism along with interest at the same rate as Late Payment Surcharge from the date on which such payment had been made to the invoicing Party or the date on which such payment was originally due, as may be applicable.

11.6.9 For the avoidance of doubt, it is clarified that despite a Dispute regarding an Invoice, the concerned Procurer shall, without prejudice to its right to Dispute, be under an obligation to make payment, of the lower of (a) an amount equal to simple average of last three (3) Months invoices (being the undisputed portion of such three Months invoices) and (b) Monthly Invoice which is being disputed, provided such Monthly Bill has been raised based on the REA and in accordance with this Agreement.

11.7 Quarterly and Annual Reconciliation

Parties acknowledge that all payments made against Monthly Bills, Provisional Bill and Supplementary Bills shall be subject to quarterly reconciliation at the beginning of the following quarter of each Contract Year and annual reconciliation at the end of each Contract Year to take into account REA, Tariff Adjustment Payments, Tariff Rebate, Payments, Late Payment Surcharge, or any other reasonable circumstance provided under this Agreement. The Parties, therefore, agree that as soon as all such data in respect of any quarter of a Contract Year or a full Contract Year as the case may be has been finally verified and adjusted, the Seller and each Procurer shall jointly sign such reconciliation statement. Within fifteen (15) days of signing of a reconciliation statement, the Seller or Procurer, as the case may be, shall raise a Supplementary Bill for the Tariff Adjustment Payments for the relevant quarter/ Contract Year and shall make payment of such Supplementary Bill for the Tariff Adjustment Payments for the relevant quarter/Contract Year. Late Payment Surcharge shall be payable in such a case from the date on which such payment had been made to the invoicing Party or the date on which any payment was originally due, as may be applicable. Any dispute with regard to the above reconciliation shall be dealt with in accordance with the provisions of Article 17.

11.8 Payment of Supplementary Bill

11.8.1 Either Party may raise a bill on the other Party ("Supplementary Bill") for payment on account of:

i. Adjustments required by the Regional Energy Account (if applicable);
ii. Tariff Payment for change in parameters, pursuant to provisions in Schedule 7; or
iii. Change in Law as provided in Article 13,

and such Bill shall be paid by the other Party.

11.8.2 Procurers shall remit all amounts due under a Supplementary Bill raised by the Seller to the Seller's Designated Account by the Due Date and notify the Seller of such remittance on the same day. Similarly, the Seller shall pay all amounts due under a Supplementary Bill raised by Procurers by the Due Date to concerned Procurer's designated bank account and notify such Procurer/s of such payment on the same day. For such payments by a Procurer, rebates as applicable to Monthly Bills pursuant to Article 11.3.5 shall equally apply.

11.8.3 In the event of delay in payment of a Supplementary Bill by either Party beyond its Due Date, a Late Payment Surcharge shall be payable at the same terms applicable to the Monthly Bill in Article 11.3.4.

11.9 Payment for Start up Power

The Seller shall be liable to pay, for the power and energy consumed for start-up of the Project and commissioning, to the distribution Licensee(s) in whose area the Project is located or such other entity from whom such power/energy is sourced, at the then prevalent rates payable by such industrial consumers.

11.10 The copies of all notices/offers which are required to be sent as per the provisions of this Article 11, shall be sent by either Party, simultaneously to all Parties.

12 ARTICLE 12: FORCE MAJEURE

12.1 Definitions

In this Article 12, the following terms shall have the following meanings:

12.2 Affected Party

An affected Party means any of the Procurers or the Seller whose performance has been affected by an event of Force Majeure.

An event of Force Majeure affecting the CTU/STU or any other agent of Procurer, which has affected the Interconnection Facilities, shall be deemed to be an event of Force Majeure affecting Procurer/s.

Any event of Force Majeure affecting the performance of the Seller's contractors, shall be deemed to be an event of Force Majeure affecting Seller only if the Force Majeure event is affecting and resulting in:

a) late delivery of plant, machinery, equipment, materials, spare parts, Fuel, water or consumables for the Project; or
b) a delay in the performance of any of the Seller's contractors.

Similarly, any event of Force Majeure affecting the performance of the Procurers' contractor for the setting up or operating Interconnection Facilities shall be deemed to be an event of Force Majeure affecting Procurer/s only if the Force Majeure event is resulting in a delay in the Performance of Procurer's contractors.

12.3 Force Majeure

A 'Force Majeure' means any event or circumstance or combination of events and circumstances including those stated below that wholly or partly prevents or unavoidably delays an Affected Party in the performance of its obligations under this Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices:

i. Natural Force Majeure Events:

act of God, including, but not limited to lightning, drought, fire and explosion (to the extent originating from a source external to the Site), earthquake, volcanic eruption,

landslide, flood, cyclone, typhoon, tornado, or exceptionally adverse weather conditions which are in excess of the statistical measures for the last hundred (100) years,

ii. Non-Natural Force Majeure Events:

1. Direct Non - Natural Force Majeure Events

a) Nationalization or compulsory acquisition by any Indian Governmental Instrumentality of any material assets or rights of the Seller or the Seller's contractors; or

b) the unlawful, unreasonable or discriminatory revocation of, or refusal to renew, any Consent required by the Seller or any of the Seller's contractors to perform their obligations under the Project Documents or any unlawful, unreasonable or discriminatory refusal to grant any other consent required for the development/ operation of the Project, provided that an appropriate court of law declares the revocation or refusal to be unlawful, unreasonable and discriminatory and strikes the same down; or

c) any other unlawful, unreasonable or discriminatory action on the part of an Indian Government Instrumentality which is directed against the Project, provided that an appropriate court of law declares the revocation or refusal to be unlawful, unreasonable and discriminatory and strikes the same down.

2. Indirect Non - Natural Force Majeure Events

a) any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action; or

b) Radio active contamination or ionising radiation originating from a source in India or resulting from another Indirect Non Natural Force Majeure Event excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the site by the affected party or those employed or engaged by the affected party; or

c) Industry wide strikes and labor disturbances having a nationwide impact in India.

12.4 Force Majeure Exclusions

Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

a. Unavailability, late delivery, or changes in cost of the plant, machinery, equipment, materials, spare parts, Fuel or consumables for the Project;

b. Delay in the performance of any contractor, sub-contractors or their agents excluding the conditions as mentioned in Article 12.2;

c. Non-performance resulting from normal wear and tear typically experienced in power generation materials and equipment;

d. Strikes or labour disturbance at the facilities of the Affected Party;

e. Insufficiency of finances or funds or the agreement becoming onerous to perform; and

f. Non-performance caused by, or connected with, the Affected Party's:

i. Negligent or intentional acts, errors or omissions;

ii. Failure to comply with an Indian Law; or

iii. Breach of, or default under this Agreement or any Project Documents.

12.5 Notification of Force Majeure Event

12.5.1 The Affected Party shall give notice to the other Party of any event of Force Majeure as soon as reasonably practicable, but not later than seven (7) days after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure. If an event of Force Majeure results in a breakdown of communications rendering it unreasonable to give notice within the applicable time limit specified herein, then the Party claiming Force Majeure shall give such notice as soon as reasonably practicable after reinstatement of communications, but not later than one (1) day after such reinstatement. Provided that such notice shall be a pre-condition to the Seller's entitlement to claim relief under this Agreement. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed. The Affected Party shall give the other Party regular (and not less than monthly) reports on the progress of those remedial measures and such other information as the other Party may reasonably request about the situation.

12.5.2 The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event of Force Majeure on the performance of its rights or obligations under this Agreement, as soon as practicable after becoming aware of each of these cessations.

12.6 Duty to perform and duty to mitigate

To the extent not prevented by a Force Majeure event pursuant to Article 12.3, the Affected Party shall continue to perform its obligations pursuant to this Agreement. The Affected Party shall use its reasonable efforts to mitigate the effect of any event of Force Majeure as soon as practicable.

12.7 Available Relief for a Force Majeure Event

Subject to this Article 12:

(a) no Party shall be in breach of its obligations pursuant to this Agreement to the extent that the performance of its obligations was prevented, hindered or delayed due to a Force Majeure Event;

(b) every Party shall be entitled to claim relief in relation to a Force Majeure Event in regard to its obligations, including but not limited to those specified under Article 4.5.

(c) For the avoidance of doubt, it is clarified that no Tariff shall be paid by the Procurers for the part of Contracted Capacity affected by a Natural Force Majeure Event affecting the Seller, for the duration of such Natural Force Majeure Event. For the balance part of the Contracted Capacity, the Procurer shall pay the Tariff to the Seller, provided during such period of Natural Force Majeure Event, the balance part of the Power Station is declared to be Available for scheduling and dispatch as per ABT for supply of power by the Seller to the Procurers.

(d) If the average Availability of the Power Station is reduced below sixty (60) percent for over two (2) consecutive months or for any non consecutive period of four (4) months both within any continuous period of sixty (60) months, as a result of an Indirect Non Natural Force Majeure, then, with effect from the end of that period and for so long as the daily average Availability of the Power Station continues to be reduced below sixty (60) percent as a result of an Indirect Non Natural Force Majeure of any kind, the Procurers shall make payments for Debt Service, relatable to such Unit, which are due under the Financing Agreements, subject to a maximum of Capacity Charges based on Normative Availability, and these amounts shall be paid from the date, being the later of a) the date of cessation of such Indirect Non Natural Force Majeure Event and b) the completion of sixty (60) days from the receipt of the Financing Agreements by the Procurer(s) from the Seller, in the form of an increase in Capacity Charge. Provided such Capacity Charge increase shall be determined by CERC on the basis of putting the Seller in the same economic position as the Seller would have been in case the Seller had been paid Debt Service in a situation where the Indirect Non Natural Force Majeure had not occurred.

Provided that the Procurers will have the above obligation to make payment for the Debt Service only (a) after the Unit(s) affected by such Indirect Non Natural Force Majeure Event has been Commissioned, and (b) only if in the absence of such Indirect Non Natural Force Majeure Event, the Availability of such Commissioned Unit(s) would have resulted in Capacity Charges equal to Debt Service..

e) If the average Availability of the Power Station is reduced below eighty (80) percent for over two (2) consecutive months or for any non consecutive period of four (4) months both within any continuous period of sixty (60) months, as a result of a Direct Non Natural Force Majeure, then, with effect from the end of that period and for so long as the daily average Availability of the Power Station continues to be reduced below eighty (80) percent as a result of a Direct Non Natural Force Majeure of any kind, the Seller may elect in a written notice to the Procurers, to deem the Availability of the Power Station to be eighty (80) percentage from the end of such period, regardless of its actual Available Capacity. In such a case, the Procurers shall be liable to make payment to the Seller of Capacity Charges calculated on such deemed Normative Availability, after the cessation of the effects of Non Natural Direct Force Majeure in the form of an increase in Capacity Charge. Provided such Capacity Charge increase shall be determined by CERC on the basis of putting the Seller in the same economic position as the Seller would have been in case the Seller had been paid Capacity Charges in a situation where the Direct Non Natural Force Majeure had not occurred.

(f) For so long as the Seller is claiming relief due to any Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer/s) under this Agreement, the Procurers may from time to time on one (1) days notice inspect the Project and the Seller shall provide Procurer's personnel with access of the Project to carry out such inspections, subject to the Procurer's personnel complying with all reasonable safety precautions and standards. Provided further the Procurers shall be entitled at all times to request Repeat Performance Test, as per Article 8.1, of the Unit(s) Commissioned earlier and now affected by Direct or Indirect Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer/s), where such Testing is possible to be undertaken in spite of the Direct or Indirect Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer/s), and the Independent Engineer accepts and issues a Final Test Certificate certifying such Unit(s) being capable of delivering the Contracted Capacity and being Available, had there been no such Direct or Indirect Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer/s). In case, the Available Capacity as established by the said Repeat Performance Test (provided that for such Repeat Performance Test, the limitation imposed by Article 8.1.1 shall not apply) and Final Test Certificate issued by the Independent Engineer is less than the Available Capacity corresponding to which the Seller would have been paid Capacity Charges equal

to Debt Service in case of Indirect Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer/s), then the Procurers shall make pro-rata payment of Debt Service but only with respect to such reduced Availability. For the avoidance of doubt, if Debt Service would have been payable at an Availability of 60% and pursuant to a Repeat Performance Test it is established that the Availability would have been 40%, then Procurers shall make payment equal to Debt Service multiplied by 40% and divided by 60%. Similarly, the payments in case of Direct Non Natural Force Majeure Event (and Natural Force Majeure Event affecting the Procurer/s) shall also be adjusted pro-rata for reduction in Available Capacity.

g) In case of a Natural Force Majeure Event affecting the Procurer/s which adversely affects the performance obligations of the Seller under this Agreement, the provisions of sub-proviso (d) and (f) shall apply.

(h) For the avoidance of doubt, it is specified that the charges payable under this Article 12 shall be paid by the Procurers in proportion to their then existing Allocated Contracted Capacity.

12.8 Additional Compensation and Procurers' Subrogation

If the Seller is entitled, whether actually or contingently, to be compensated by any person other than the Procurers as a result of the occurrence of a Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer/s) for which it has received compensation from the Procurers pursuant to this Article 12, including without limitation, payments made which payments would not have been made in the absence of Article 4.7.1, the Procurers shall be fully subrogated to the Seller's rights against that person to the extent of the compensation paid by the Procurers to the Seller. Provided that in case the Seller has actually received compensation from the any person other than the Procurers as well as the Procurers as a result of the occurrence of a Non Natural Force Majeure Event (or Natural Force Majeure Event affecting the Procurer/s), then the Seller shall forthwith refund the compensation received by it from the Procurers but only to the extent of the compensation received by the Seller from any person other than the Procurers.

13 ARTICLE 13: CHANGE IN LAW

13.1 Definitions

In this Article 13, the following terms shall have the following meanings:

13.1.1 "Change in Law" means the occurrence of any of the following events after the date, which is seven (7) days prior to the Bid Deadline:

(i) the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal, of any Law or (ii) a change in interpretation of any Law by a Competent Court of law, tribunal or Indian Governmental Instrumentality provided such Court of law, tribunal or Indian Governmental Instrumentality is final authority under law for such interpretation or (iii) change in any consents, approvals or licenses available or obtained for the Project, otherwise than for default of the Seller, which results in any change in any cost of or revenue from the business of selling electricity by the Seller to the Procurers under the terms of this Agreement, or (iv) any change in the (a) Declared Price of Land for the Project or (b) the cost of implementation of the resettlement and rehabilitation package of the land for the Project mentioned in the RFP or (c) the cost of implementing Environmental Management Plan for the Power Station mentioned in the RFP, indicated under the RFP and the PPA;

but shall not include (i) any change in any withholding tax on income or dividends distributed to the shareholders of the Seller, or (ii) change in respect of UI Charges or frequency intervals by an Appropriate Commission..

Provided that if Government of India does not extend the income tax holiday for power generation projects under Section 80 IA of the Income Tax Act, upto the Scheduled Commercial Operation Date of the Power Station, such non-extension shall be deemed to be a Change in Law.

13.1.2 "Competent Court" means:

The Supreme Court or any High Court, or any tribunal or any similar judicial or quasi-judicial body in India that has jurisdiction to adjudicate upon issues relating to the Project.

13.2 Application and Principles for computing impact of Change in Law

While determining the consequence of Change in Law under this Article 13, the Parties shall have due regard to the principle that the purpose of compensating the Party affected by such Change in Law, is to restore through Monthly Tariff Payments, to the extent

contemplated in this Article 13, the affected Party to the same economic position as if such Change in Law has not occurred.

a) **Construction Period**

As a result of any Change in Law, the impact of increase/decrease of Capital Cost of the Project in the Tariff shall be governed by the formula given below:

For every cumulative increase/decrease of each Rupees Fifty crores (Rs. 50 crores) in the Capital Cost over the term of this Agreement, the increase/decrease in Non Escalable Capacity Charges shall be an amount equal to zero point two six seven (0.267%) of the Non Escalable Capacity Charges. Provided that the Seller provides to the Procurers documentary proof of such increase/ decrease in Capital Cost for establishing the impact of such Change in Law. In case of Dispute, Article 17 shall apply.

It is clarified that the above mentioned compensation shall be payable to either Party, only with effect from the date on which the total increase/decrease exceeds amount of Rs. fifty (50) crores.

b) **Operation Period**

As a result of Change in Law, the compensation for any increase/decrease in revenues or cost to the Seller shall be determined and effective from such date, as decided by the Central Electricity Regulatory Commission whose decision shall be final and binding on both the Parties, subject to rights of appeal provided under applicable Law.

Provided that the above mentioned compensation shall be payable only if and for increase/ decrease in revenues or cost to the Seller is in excess of an amount equivalent to 1% of Letter of Credit in aggregate for a Contract Year.

13.3 Notification of Change in Law

13.3.1 If the Seller is affected by a Change in Law in accordance with Article 13.2 and wishes to claim a Change in Law under this Article, it shall give notice to the Procurers of such Change in Law as soon as reasonably practicable after becoming aware of the same or should reasonably have known of the Change in Law.

13.3.2 Notwithstanding Article 13.3.1, the Seller shall be obliged to serve a notice to all the Procurers under this Article 13.3.2 if it is beneficially affected by a Change in Law. Without prejudice to the factor of materiality or other provisions contained in this Agreement, the obligation to inform the Procurers contained herein shall be material. Provided that in case the Seller has not provided such notice, the Procurers shall jointly have the right to issue such notice to the Seller.

13.3.3 Any notice served pursuant to this Article 13.3.2 shall provide, amongst other things, precise details of:

(a) the Change in Law; and

(b) the effects on the Seller of the matters referred to in Article 13.2.

13.4 Tariff Adjustment Payment on account of Change in Law

13.4.1 Subject to Article 13.2, the adjustment in Monthly Tariff Payment shall be effective from:

(i) the date of adoption, promulgation, amendment, re-enactment or repeal of the Law or Change in Law; or

(ii) the date of order/judgment of the Competent Court or tribunal or Indian Governmental Instrumentality, if the Change in Law is on account of a change in interpretation of Law.

13.4.2 The payment for Changes in Law shall be through Supplementary Bill as mentioned in Article 11.8. However, in case of any change in Tariff by reason of Change in Law, as determined in accordance with this Agreement, the Monthly Invoice to be raised by the Seller after such change in Tariff shall appropriately reflect the changed Tariff.

14. ARTICLE 14: EVENTS OF DEFAULT AND TERMINATION

14.1 Seller Event of Default

The occurrence and continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by Procurers of their obligations under this Agreement, shall constitute a Seller Event of Default:

(i) the failure to Commission any Unit by the date falling twelve (12) Months after its Scheduled Commercial Operation Date, or

(ii) after the commencement of construction of the Project, the abandonment by the Seller or the Seller's Construction Contractors of the construction of the Project for a continuous period of two (2) Months and such default is not rectified within thirty (30) days from the receipt of first notice from any of the Procurers or Procurers (jointly) in this regard, or

(iii) if at any time following a Unit being Commissioned and during its retest as per Article 8, such Unit's Tested Capacity is less than ninety two (92) percent of its Contracted Capacity, as existing on the Effective Date, and such Tested Capacity remains below ninety two (92) percent even for a period of three (3) Months thereafter; or

(iv) after Commercial Operation Date of all the Units of the Power Station, the Seller fails to achieve Average Availability of sixty five percent (65%), for a period of twelve (12) consecutive Months or within a non-consecutive period of twelve (12) Months within any continuous aggregate period of thirty six (36) Months, or

(v) the Seller fails to make any payment (a) of an amount exceeding Rupees One (1) Crore required to be made to Procurer/s under this Agreement, within three (3) Months after the Due Date of an undisputed invoice /demand raised by the said Procurer/s on the Seller or (b) of an amount upto Rupees One (1) Crore required to be made to Procurer/s under this Agreement within six (6) Months after the Due Date of an undisputed invoice/demand, or

(vi) any of the representations and warranties made by the Seller in Schedule 10 of this Agreement being found to be untrue or inaccurate. Further, in addition to the above, any of the undertakings submitted by the Seller at the time of submission of the Bid being found to be breached or inaccurate, including but not limited to undertakings from its parent company/ affiliates related to the minimum equity obligation; Provided however, prior to considering any event specified under this sub-article to be an Event of Default, the Procurers shall give a notice to the Seller in writing of at least thirty (30) days, or

(vii) if the Seller:

a) assigns or purports to assign any of its assets or rights in violation of this Agreement; or

b) transfers or novates any of its rights and/or obligations under this agreement, in violation of this Agreement; or

(viii) if (a) the Seller becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the Seller, or (c) the Seller goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, except where such dissolution or liquidation of the Seller is for the purpose of a merger, consolidation or reorganization and where the resulting entity has the financial standing to perform its obligations under this Agreement and creditworthiness similar to the Seller and expressly assumes all obligations of the Seller under this Agreement and is in a position to perform them; or

(ix) the Seller repudiates this Agreement and does not rectify such breach even within a period of thirty (30) days from a notice from the Procurers (jointly) in this regard; or

(x) except where due to any Procurer's failure to comply with its material obligations, the Seller is in breach of any of its material obligations pursuant to this Agreement or of any of the RFP Project Documents where the Procurer and Seller are parties, and such material breach is not rectified by the Seller within thirty (30) days of receipt of first notice in this regard given by any of the Procurers or Procurers (jointly) to the Seller or by the Lead Procurer on behalf of the Procurers.

(xi) the Seller fails to complete/fulfill the activities/conditions specified in Article 3.1.2, beyond a period of 8 Months from the specified period in Article 3.1.2 and the right of termination under Article 3.3.2 is invoked by the Procurers (jointly); or

(xii) any direct or indirect change in the shareholding of the Seller in contravention of the terms of the Bid Documents; or

(xiii) The Seller fails to provide additional bank guarantee to the Procurers in accordance with Article 3.3 of this Agreement, or

(xiv) Occurrence of any other event which is specified in this Agreement to be a material breach/default of the Seller.

14.2 Procurer Event of Default

The occurrence and the continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by the Seller of its obligations under this Agreement, shall constitute the Event of Default on the part of defaulting Procurer:

(i) a defaulting Procurer fails to pay (with respect to a Monthly Bill or Supplementary Bill) an amount exceeding 15% of the most recent undisputed Monthly Bill, for a period of ninety (90) days after the Due Date and the Seller is unable to recover the amount outstanding to the Seller through the Collateral Arrangement and Letter of Credit; or

(ii) the defaulting Procurer repudiates this Agreement and does not rectify such breach even within a period of thirty (30) days from a notice from the Seller in this regard; or

(iii) except where due to any Seller's failure to comply with its obligations, the defaulting Procurer(s) is in material breach of any of its obligations pursuant to this Agreement or of any of the RFP Project Documents where the Procurers and the Seller are Parties, and such material breach is not rectified by the defaulting Procurer within thirty (30) days of receipt of notice in this regard from the Seller to all the Procurers; or

(iv) any representation and warranties made by any of the Procurer in Schedule 10 of this Agreement being found to be untrue or inaccurate. Provided however, prior to considering any event specified under this sub-article to be an Event of Default, the Seller shall give a notice to the concerned Procurer in writing of at least thirty (30) days; or

(v) if (a) any Procurer becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or bankruptcy or insolvency order is passed against the Procurer, or (c) the Procurer goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, except where such dissolution or liquidation of such Procurer is for the purpose of a merger, consolidation or reorganization and where the resulting entity has the financial standing to perform its obligations under this Agreement and has creditworthiness similar to such Procurer and expressly assumes all obligations of such Procurer under this Agreement and is in a position to perform them; or;

(vi) Occurrence of any other event which is specified in this Agreement to be a material breach or default of the Procurers.

14.3 Procedure for cases of Seller Event of Default

14.3.1 Upon the occurrence and continuation of any Seller Event of Default under Article 14.1, the Procurers jointly shall have the right to deliver to the Seller a Procurer Preliminary Default Notice, which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice.

14.3.2 Following the issue of Procurer Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply.

14.3.3 During the Consultation Period, the Parties shall, save as otherwise provided in this Agreement, continue to perform their respective obligations under this Agreement.

14.3.4 Within a period of seven (7) days following the expiry of the Consultation Period unless the Parties shall have otherwise agreed to the contrary or the Seller Event of Default giving rise to the Consultation Period shall have been remedied, the Lenders may exercise or the Procurers may require the Lenders to exercise their substitution rights and other rights provided to them, if any, under Financing Agreements and the Procurers would have no objection to the Lenders exercising their rights if it is in consonance with provisions of Schedule 17

. Alternatively, in case the Lenders do not exercise their rights as mentioned herein above, the Capacity Charge of the Seller shall be reduced by 20% for the period of Seller Event of Default.

14.4 Termination for Procurer Events of Default

14.4.1 Upon the occurrence and continuation of any Procurer Event of Default pursuant to Article 14.2 (i), the Seller shall follow the remedies provided under Articles 11.5.2.

14.4.2 Without in any manner affecting the rights of the Seller under Article 14.4.1, on the occurrence of any Procurer Event of Default specified in Article 14.2 the Seller shall have the right to deliver to all the Procurers a Seller Preliminary Default Notice, which notice shall specify in reasonable detail the circumstances giving rise to its issue.

14.4.3 Following the issue of a Seller Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply.

14.4.4 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

14.4.5 (i) After a period of seven (7) days following the expiry of the Consultation Period unless the Parties shall have otherwise agreed to the contrary or the Procurer Event of Default giving rise to the Consultation Period shall have been remedied, the Seller shall be free to sell the Allocated Contracted Capacity and associated Available Capacity of Procurer/s committing Procurer/s Event of Default to any third party of his choice. Provided such Procurer shall have the liability to make payments for Capacity Charges based on Normative Availability to the Seller for the period three (3) years from the eighth day after the expiry of the Consultation Period. Provided further that in such three year period, in case the Seller is able to sell electricity to any third party at a price which is in excess of the Energy Charges, then such excess realization will reduce the Capacity Charge payments due from such Procurer/s. For the avoidance of doubt, the above excess adjustment would be applied on a cumulative basis for the three year period. During such period, the Seller shall use its best effort to sell the Allocated Contracted Capacity and associated Available Capacity of such Procurer generated or capable of being generated to such third parties at the most reasonable terms available in the market at such time, having due regard to the circumstances at such time and the pricing of electricity in the market at such time. Provided further, the Seller shall ensure that sale of power to the shareholders of the Seller or any direct or indirect affiliate of the Seller/shareholders of the Seller, is not at a price less than the Tariff, without obtaining the prior written consent

of such Procurer/s. Such request for consent would be responded to within a maximum period of 3 days failing which it would be deemed that the Procurer has been given his consent. Provided further that at the end of the three year period, this Agreement shall automatically terminate but only with respect to such Procurer/s and thereafter, such Procurer/s shall have no further Capacity Charge liability towards the Seller. Provided further, the Seller shall have the right to terminate this Agreement with respect to such Procurer/s even before the expiry of such three year period provided on such termination, the future Capacity Charge liability of such Procurer/s shall cease immediately.

15 ARTICLE 15: LIABILITY AND INDEMNIFICATION

15.1 Indemnity

15.1.1 The Seller shall indemnify, defend and hold each Procurer harmless against:

(a) any and all third party claims, actions, suits or proceedings against the Procurer/s for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the Seller of any of its obligations under this Agreement, except to the extent that any such claim, action, suit or proceeding has arisen due to a negligent act or omission, breach of this Agreement or breach of statutory duty on the part of Procurers, its contractors, servants or agents; and

(b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest actually suffered or incurred by Procurer/s from third party claims arising by reason of (i) breach by the Seller of any of its obligations under this Agreement, (provided that this Article 15 shall not apply to such breaches by the Seller, for which specific remedies have been provided for under this Agreement) except to the extent that any such losses, damages, costs and expenses including legal costs, fines, penalties and interest (together to constitute "Indemnifiable Losses") has arisen due to a negligent act or omission, breach of this Agreement or breach of statutory duty on the part of Procurers, its contractors, servants or agents or (ii) any of the representations or warranties of the Seller under this Agreement being found to be inaccurate or untrue.

15.1.2 Procurer shall indemnify, defend and hold the Seller harmless against:

(a) any and all third party claims, actions, suits or proceedings against the Seller, for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by Procurer of any of its obligations under this Agreement except to the extent that any such claim, action, suit or proceeding has arisen due to a negligent act or omission, breach of this Agreement or breach of statutory duty on the part of the Seller, its contractors, servants or agents; and

(b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest ('Indemnifiable Losses') actually suffered or incurred by the Seller from third party claims arising by reason of (i) a breach by Procurer of any of its obligations under this Agreement (Provided that this Article 15 shall not apply to such breaches by Procurer, for which specific remedies have been provided for under this Agreement.), except to the extent that any such Indeminifiable Losses have arisen due to a negligent act or omission, breach of

this Agreement or breach of statutory duty on the part of the Seller, its contractors, servants or agents or (ii) any of the representations or warranties of the Procurers under this Agreement being found to be inaccurate or untrue.

15.2 Monetary Limitation of liability

A Party ("Indemnifying Party") shall be liable to indemnify the other Party ("Indemnified Party") under this Article 15 for any indemnity claims made in a Contract Year only upto an amount of Rupees Twenty (20) crores. With respect to each Procurer, the above limit of Rupees Twenty (20) crores shall be divided in the ratio of their Allocated Contract Capacity existing on the date of the indemnity claim.

15.3 Procedure for claiming indemnity

15.3.1 Third party claims

(a) Where the Indemnified Party is entitled to indemnification from the Indemnifying Party pursuant to Article 15.1.1(a) or 15.1.2(a), the Indemnified Party shall promptly notify the Indemnifying Party of such claim, proceeding, action or suit referred to in Article 15.1.1(a) or 15.1.2(a) in respect of which it is entitled to be indemnified. Such notice shall be given as soon as reasonably practicable after the Indemnified Party becomes aware of such claim, proceeding, action or suit. The Indemnifying Party shall be liable to settle the indemnification claim within thirty (30) days of receipt of the above notice. Provided however that, if:

(i) the Parties choose to contest, defend or litigate such claim, action, suit or proceedings in accordance with Article 15.3.1(b) below; and

(ii) the claim amount is not required to be paid/deposited to such third party pending the resolution of the Dispute,

the Indemnifying Party shall become liable to pay the claim amount to the Indemnified Party or to the third party, as the case may be, promptly following the resolution of the Dispute, if such Dispute is not settled in favour of the Indemnified Party.

(b) The Indemnified Party may contest, defend and litigate a claim, action, suit or proceeding for which it is entitled to be indemnified under Article 15.1.1(a) or 15.1.2(a) and the indemnifying Party shall reimburse to the indemnified Party all reasonable costs and expenses incurred by the indemnified party. However, such indemnified Party shall not settle or compromise such claim, action, suit or proceedings without first getting the consent of the indemnifying Party, which consent shall not be unreasonably withheld or delayed.

An Indemnifying Party may, at its own expense, assume control of the defence of any proceedings brought against the Indemnified Party if it acknowledges its obligation to indemnify such Indemnified Party, gives such Indemnified Party prompt notice of its intention to assume control of the defence, and employs an independent legal counsel at its own cost that is reasonably satisfactory to the Indemnified Party.

15.4 Indemnifiable Losses

Where an Indemnified Party is entitled to Indemnifiable Losses from the Indemnifying Party pursuant to Article 15.1.1(b) or 15.1.2(b), the Indemnified Party shall promptly notify the Indemnifying Party of the Indemnifiable Losses actually incurred by the Indemnified Party. The Indemnifiable Losses shall be reimbursed by the Indemnifying Party within thirty (30) days of receipt of the notice seeking Indemnifiable Losses by the Indemnified Party. In case of non payment of such losses after a valid notice under this Article 15.4, such event shall constitute a payment default under Article 14.

15.5 Limitation on Liability

Except as expressly provided in this Agreement, neither the Seller nor Procurers nor their respective officers, directors, agents, employees or Affiliates (or their officers, directors, agents or employees), shall be liable or responsible to the other Party or its Affiliates, officers, directors, agents, employees, successors or permitted assigns (or their respective insurers) for incidental, indirect or consequential damages, connected with or resulting from performance or non-performance of this Agreement, or anything done in connection herewith, including claims in the nature of lost revenues, income or profits (other than payments expressly required and properly due under this Agreement), any increased expense of, reduction in or loss of power generation production or equipment used therefore, irrespective of whether such claims are based upon breach of warranty, tort (including negligence, whether of the Procurers, the Seller or others), strict liability, contract, breach of statutory duty, operation of law or otherwise. Procurers shall have no recourse against any officer, director or shareholder of the Seller or any Affiliate of the Seller or any of its officers, directors or shareholders for such claims excluded under this Article. The Seller shall have no recourse against any officer, director or shareholder of Procurers, or any affiliate of Procurers or any of its officers, directors or shareholders for such claims excluded under this Article.

16 ARTICLE 16: ASSIGNMENTS AND CHARGES

16.1 Assignments

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns. Subject to Article 16.2, this Agreement shall not be assigned by any Party (and no Party shall create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement) other than by mutual consent between the Parties to be evidenced in writing:

Provided that, such consent shall not be withheld if any of the Procurers seeks to transfer to any transferee all of its rights and obligations under this Agreement; and

(a) such transferee is either the owner or operator of all or substantially all of the distribution system of such Procurer and /or such transferee is a successor entity of any of the Procurers; and

(b) this Agreement and the other RFP Project Documents shall continue to remain valid and binding on such successor.

Seller shall be entitled to assign its rights and obligations under this Agreement in favor of the Selectee duly appointed pursuant to the terms of Schedule 17 of this Agreement.

16.2 Permitted Charges

16.2.1 Notwithstanding anything contained in Article 16.1, the Seller may create any encumbrance over all or part of the receivables, Payment Mechanism or the other assets of the Project or the RFP Project Documents in favour of the Lenders or the Lender's Representative on their behalf, as security for:

(a) amounts payable under the Financing Agreements; and

(b) any other amounts agreed by the Parties,

Provided that:

I the Lenders or the Lender's Representative on their behalf shall have agreed in writing to the provisions of Schedule 17 of this Agreement; and

II any encumbrances granted by the Seller in accordance with this Article 16.2.1 shall contain provisions pursuant to which the Lenders or the Lender's Representative on their behalf agrees unconditionally with the Seller acting for itself and as trustee of the Procurers to release from such encumbrances all of the right, title and interest to Additional Compensation so as to enable the Procurers to claim its right of subrogation. For the purposes of this Article, Additional Compensation shall mean the compensation that the Seller is entitled, whether actually or contingently, to receive from the Procurers as well as compensated by any person other than the Procurers for the same event.

16.2.2 Article 16.1 does not apply to:

(a) liens arising by operation of law (or by an agreement evidencing the same) in the ordinary course of the Seller carrying out the Project;

(b) pledges of goods, the related documents of title and / or other related documents, arising or created in the ordinary course of the Seller carrying out the Project; or

(c) security arising out of retention of title provisions in relation to goods acquired in the ordinary course of the Seller carrying out the Project.

17 ARTICLE 17: GOVERNING LAW AND DISPUTE RESOLUTION

17.1 Governing Law

This Agreement shall be governed by and construed in accordance with the Laws of India.

17.2 Amicable Settlement

17.2.1 Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with this Agreement including its existence or validity or termination (collectively "Dispute") by giving a written notice to the other Party, which shall contain:

(i) a description of the Dispute;
(ii) the grounds for such Dispute; and
(iii) all written material in support of its claim.

17.2.2 The other Party shall, within thirty (30) days of issue of dispute notice issued under Article 17.2.1, furnish:

(i) counter-claim and defences, if any, regarding the Dispute; and
(ii) all written material in support of its defences and counter-claim.

17.2.3 Within thirty (30) days of issue of notice by any Party pursuant to Article 17.2.1 or Article 17.2.2, both the Parties to the Dispute shall meet to settle such Dispute amicably. If the Parties fail to resolve the Dispute amicably within thirty (30) days of receipt of the notice referred to in the preceding sentence, the Dispute shall be referred to Dispute Resolution in accordance with Article 17.3.

17.3 Dispute Resolution

17.3.1 Where any Dispute arises from a claim made by any Party for any change in or determination of the Tariff or any matter related to Tariff or claims made by any Party which partly or wholly relate to any change in the Tariff or determination of any of such claims could result in change in the Tariff or (ii) relates to any matter agreed to be referred to the Appropriate Commission under Articles 4.7.1, 13.2, 18.1 or clause 10.1.3 of Schedule 17 hereof, such Dispute shall be submitted to adjudication by the Appropriate Commission. Appeal against the decisions of the Appropriate Commission shall be made only as per the provisions of the Electricity Act, 2003, as amended from time to time.

The obligations of the Procurers under this Agreement towards the Seller shall not be affected in any manner by reason of inter-se disputes amongst the Procurers.

17.3.2 If the Dispute arises out of or in connection with any claims not covered in Article 17.3.1, such Dispute shall be resolved by arbitration under the Indian Arbitration and Conciliation Act, 1996 and the Rules of the Indian Council of Arbitration, in accordance with the process specified in this Article. In the event of such Dispute remaining unresolved as referred to in Article 17.2.3 hereof, any party to such Dispute may refer the matter to registrar under the Rules of the Indian Council of Arbitration.

(i) The Arbitration tribunal shall consist of three arbitrators to be appointed in accordance with the Indian Council of Arbitration Rules

(ii) The place of arbitration shall be Delhi, India. The language of the arbitration shall be English.

(iii) The arbitration tribunal's award shall be substantiated in writing. The arbitration tribunal shall also decide on the costs of the arbitration proceedings and the allocation thereof.

(iv) The award shall be enforceable in any court having jurisdiction, subject to the applicable Laws.

(v) The provisions of this Clause shall survive the termination of this PPA for any reason whatsoever.

17.4 Parties to Perform Obligations

Notwithstanding the existence of any Dispute and difference referred to the Appropriate Commission or the arbitral tribunal as provided in Article 17.3 and save as the Appropriate Commission or the arbitral tribunal may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in dispute) under this Agreement.

18 ARTICLE 18: MISCELLANEOUS PROVISIONS

18.1 Amendment

This Agreement may only be amended or supplemented by a written agreement between the Parties and after duly obtaining the approval of the Appropriate Commission, where necessary.

18.2 Third Party Beneficiaries

This Agreement is solely for the benefit of the Parties and their respective successors and permitted assigns and shall not be construed as creating any duty, standard of care or any liability to, any person not a party to this Agreement.

18.3 No Waiver

A valid waiver by a Party shall be in writing and executed by an authorized representative of that Party. Neither the failure by any Party to insist on the performance of the terms, conditions, and provisions of this Agreement nor time or other indulgence granted by any Party to the other Parties shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right under this Agreement, which shall remain in full force and effect.

18.4 Entirety

18.4.1 This Agreement and the Schedules are intended by the Parties as the final expression of their agreement and are intended also as a complete and exclusive statement of the terms of their agreement.

18.4.2 Except as provided in this Agreement, all prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement or the sale or purchase of Electrical Output and Contracted Capacity under this Agreement to the Procurers by the Seller shall stand superseded and abrogated.

18.5 Confidentiality

The Parties undertake to hold in confidence this Agreement and RFP Project Documents and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

(a) to their professional advisors;

(b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities; or

(c) disclosures required under Law.

without the prior written consent of the other Parties.

Provided that the Seller agrees and acknowledges that any of the Procurers may at any time, disclose the terms and conditions of the Agreement and the Project Documents to any person, to the extent stipulated under the Law or the Competitive Bidding Guidelines.

18.6 Affirmation

The Seller and Procurers, each affirm that:

(i) neither it nor its respective directors, employees, or agents has paid or undertaken to pay or shall in the future pay any unlawful commission, bribe, pay-off or kick-back; and

(ii) it has not in any other manner paid any sums, whether in Indian currency or foreign currency and whether in India or abroad to the other Party to procure this Agreement, and the Seller and Procurer hereby undertake not to engage in any similar acts during the Term of Agreement.

18.7 Severability

The invalidity or enforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement, unless the part held invalid or unenforceable is fundamental to this Agreement.

18.8 No Partnership

None of the provisions of this Agreement shall constitute a partnership or agency or any such similar relationship between the Seller and Procurers.

18.9 Survival

Notwithstanding anything to the contrary herein, the provisions of this Agreement, including Article 3.3.2, Article 10.2 (Application of Insurance Proceeds), Article 12 (Force Majeure), Article 14 (Events of Default and Termination), Article 15 (Liability and Indemnification), Article 17 including Article 17.3.2 (Governing Law and Dispute Resolution), Article 18 (Miscellaneous), and other Articles and Schedules of this Agreement which expressly or by their nature survive the term or termination of this Agreement shall continue and survive any expiry or termination of this Agreement.

18.10 Counterparts

This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and all of which collectively shall be deemed one and the same instrument.

18.11 Notices

All notices to be given under this Agreement shall be in writing and in the English Language.

All notices must be delivered personally, by registered post or any method duly acknowledged or facsimile to the addresses below:

Seller	Coastal Gujarat Power Limited	Coastal Gujarat Power Limited, C/o The Tata Power Company Limited Attention: Mr. R K Kanga, Corporate Centre, 34 Sant Tukaram Road, Carnac Bunder, Mumbai – 400 009 Fax: +91 22 6665 8644 Tel: +91 22 6667 8887
Procurer 1	Gujarat Urja Vikas Nigam Limited	General Manager (Commerce), Gujarat Urja Vikas Nigam Limited, Sardar Patel Vidyut Bhavan, Race Course, Vadodara – 390 007, Gujarat Fax: +91 265 2344543 Tel: +91 265 2310582
Procurer 2	Maharashtra State Electricity Distribution Company Limited	Chief Engineer (Power Purchase) Maharashtra State Electricity Distribution Company Limited 4th floor, Prakashgad, plot no. G-9 Bandra (East), Mumbai – 400051, Maharashtra Fax: +91 22 26478672 Tel: +91 22 26474644
Procurer 3	Ajmer Vidyut Vitran Nigam Limited	The Chairman and Managing Director, AVVNL, Hathi Bhata, Old Power House, Ajmer, Rajasthan Fax: +91 145 2630 636 Tel: +91 145 2421 430
Procurer 4	Jaipur Vidyut Vitran Nigam Limited	The Chairman and Managing Director, JVVNL, Vidyut Bhawan, Janpath, Jaipur, Rajasthan Fax: +91 141 2747 015 Tel: +91 141 2747 064

Procurer 5	Jodhpur Vidyut Vitran Nigam Limited	The Chairman and Managing Director, Jd. VVNL, New Power House, Industrial Area, Jodhpur, Rajasthan Fax: +91 291 2741 870 Tel: +91 291 265 1337
Procurer 6	Punjab State Electricity Board	The Secretary, Punjab State Electricity Board, The Mall, Patiala – 147 001 Fax No: +91 175 2212867 Tel No: +91 175 2212005
Procurer 7	Haryana Power Generation Corporation Limited	The Chief Engineer / PPM, Haryana Power Generation Corporation Limited, Room No. 329, Sector 6, Panchkula – 134109, Haryana Fax: +91 172 2560 136 Tel: +91 172 2560672 / 2561592

All notices or communications given by facsimile shall be confirmed by sending a copy of the same via post office in an envelope properly addressed to the appropriate Party for delivery by registered mail. All Notices shall be deemed validly delivered upon receipt evidenced by an acknowledgement of the recipient, unless the Party delivering the notice can prove in case of delivery through the registered post that the recipient refused to acknowledge the receipt of the notice despite efforts of the post authorities..

Any Party may by notice of at least fifteen (15) days to the other Parties change the address and / or addresses to which such notices and communications to it are to be delivered or mailed.

18.12 Language

The language of this Agreement and all written communication between the Parties relating to this Agreement shall be in English.

18.13 Breach of Obligations

The Parties acknowledge that a breach of any of the obligations contained herein would result in injuries. The Parties further acknowledge that the amount of the liquidated damages or the method of calculating the liquidated damages specified in this Agreement is a genuine and reasonable pre-estimate of the damages that may be suffered by the non-defaulting party in each case specified under this Agreement.

18.14 Nomination Restriction

Notwithstanding anything contained to the contrary in this Agreement, wherever a reference is made to the right of a Procurer to nominate a third Party to receive benefits

under this Agreement, such Third Party shall have a financial standing comparable to that of the Procurer in question.

18.15 Commercial Acts

The Procurers and Seller unconditionally and irrevocably agree that the execution, delivery and performance by each of them of this Agreement and those agreements included in the Collateral Arrangement to which it is a Party constitute private and commercial acts rather than public or governmental acts;

18.16 Restriction of Shareholders/Owners Liability

Parties expressly agree and acknowledge that none of the shareholders of the Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned party under this Agreement. Further, the financial liabilities of the shareholder/s of each Party to this Agreement, in such Party, shall be restricted to the extent provided in Section 426 of the Indian Companies Act, 1956.

The provisions of this Article shall supercede any other prior agreement or understanding, whether oral or written, that may be existing between the Procurers, Seller, shareholders/ owners of the Seller, shareholders/ owners of the Procurers or the Selected Bidders before the date of this Agreement, regarding the subject matter of this Agreement.

17 No Consequential or Indirect Losses

The liability of the Seller and the Procurers shall be limited to that explicitly provided in this Agreement. Provided that notwithstanding anything contained in this Agreement, under no event shall the Procurers or the Seller claim from one another any indirect or consequential losses or damages.

IN WITNESS WHEREOF the Parties have executed these presents through their authorized representatives at **New Delhi**.

For and on behalf of
Gujarat Urja Vikas Nigam Limited

L. Chuaungo, IAS
Managing Director
Gujarat Urja Vikas Nigam Ltd.
Sardar Patel Vidyut Bhavan,
Race Course, Vadodara -390007.

Signature with seal

For and on behalf of
Coastal Gujarat Power Limited

ANIL SHARMA
DIRECTOR - CGPL

Signature with seal

Witness:
1. (S.B. Khyalia)
2. (S. Sen.)

Witness:
1. (A. Chanda)
2. (BJ SHROFF)

For and on behalf of
Maharashtra State Electricity Distribution Company Limited

(Dr. Ajay B. Pandey)
MD, MSEDCL

Signature with seal

Witness:
1. V.R. SHIROORKAR
2.

V.R. SHIROORKAR AM(F) MSEDCL MUMBAI

B. VISWANATHAN, RM, MSEB HCL, New Delhi

For and on behalf of
Ajmer Vidyut Vitran Nigam Limited;
Jaipur Vidyut Vitran Nigam Limited; and
Jodhpur Vidyut Vitran Nigam Limited;

G.M. Agarwal
Chief Engineer (RPPC)
JAIPUR

Signature with seal

Witness:
1. B.P. Sharma
PA to C.E. (RPPC)
JAIPUR
2. (K. Murali, DGM-SSBJ, Jaipur)

CGPL GUVNL MSEDCL RPPC PSEB HPGCL

For and on behalf of
Punjab State Electricity Board;

Anurag Agarwal I.A.S.
Member/Finance & Accounts
P.S.E.B. PATIALA

Signature with seal

Witness:
1. Advisor/Finance
P.S.E.B. PATIALA
2.

For and on behalf of
Haryana Power Generation Company Limited

V.K. GOYAL
Chief Engineer/PPM
HPGCL, Panchkula

Signature with seal

Witness:
1.
2. R. K. Arora
Superintendent Engineer/Tariff
Haryana Power Gen. Corp.
Panchkula

CGPL GUVNL MSEDCL RPPC PSEB HPGCL

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CGPL GUVNL MSEDCL RPPC PSEB HPGCL



SCHEDULES

CGPL	GUVNL	MSEDCL	RPPC	PSEB	HPGCL

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CGPL	GUVNL	MSEDCL	RPPC	PSEB	HPGCL

1. SCHEDULE 1: NAMES AND DETAILS OF THE PROCURERS

1. Gujarat Urja Vikas Nigam Limited;

2. Maharashtra State Electricity Distribution Company Limited;

3. Ajmer Vidyut Vitran Nigam Limited;
4. Jaipur Vidyut Vitran Nigam Limited; and
5. Jodhpur Vidyut Vitran Nigam Limited

6. Punjab State Electricity Board; and

7. Haryana Power Generation Corporation Limited;

1A. SCHEDULE 1A: SITE

The Site is located near south of Tunda Wand village at 22°49' N latitude and 69°30' E longitude in Mundra Taluka, Kutch District of coastal Guajrat area. The proposed project site is located at 22 km from Mundra port and 1.5 km from Gulf of Kutch.

About 2750 acres of land has been identified for the project covering villages of Tunda Wand, Khandagra and Nana Bhadia. Out of this, about 1250 acres of land has been identified for main plant, about 1000 acres for ash disposal/dyke and 500 acres for colony.

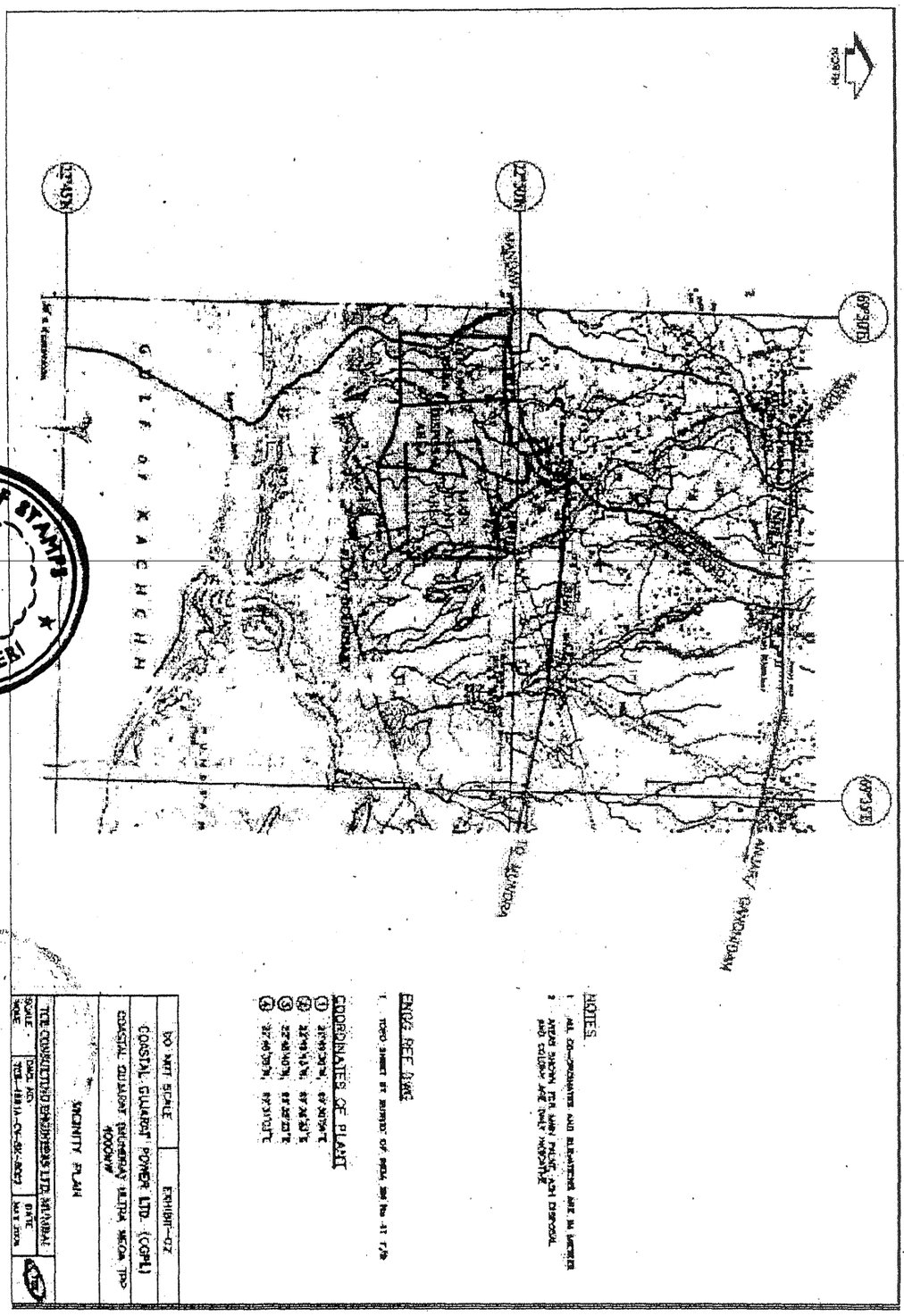
Nearest Railway stations are Bhuj/Gandhidham/Adipur which are about 65/80/70 kms from the Site. Adipur is well connected to multi-terminal Mundra port through a broad gauge rail network privately owned by Mundra Special Economic Zone Authority. Nearest Airport is Bhuj which is 70 km away from the Site.

The water source for the project is sea water from the Gulf of Kutch which is about 1.5 km from the Site.

Source of coal for the project will be imported coal.

Vicinity map of Site is enclosed.

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CGPL GUVNL MSEDCL RPPC PSEB HPGCL

2. SCHEDULE 2: INITIAL CONSENTS

PART 1

i. Necessary environmental and forest clearances for the Power Station

ii. Coastal regulation zone clearance

PART 2

The tasks as mentioned in Article 3.1.2A shall also be deemed to be part of the Initial Consents on their completion within the time period provided therein.

3. SCHEDULE 3: CALCULATION OF 'X' DAYS

(Refer Article 11.5.7)

	Number of times a Notice has been issued under Article 11.5.2 to the defaulting Procurer prior to present occurrence			
	1st time	2nd time	3rd time	4th time and onwards
	x = 20 days	x = 25 days	x = 40 days	x = 60 days
	x = 20 days	x = 30 days	x = 45 days	x = 65 days
	x = 20 days	x = 35 days	x = 50 days	x = 70 days
	x = 20 days	x = 40 days	x = 55 days	x = 75 days
	x = 20 days	x = 45 days	x = 60 days	x =90 days

4. SCHEDULE 4: FUNCTIONAL SPECIFICATION

1.1	Grid Conditions at Interconnection Point		
S. No.	Description / Voltage Level	400 kV	220 kV
i)	Nominal Voltage kV	400	220
ii)	Maximum Voltage kV	420	245
iii)	Minimum Voltage kV	380	198
iv)	Lightning impulse withstand voltage (kVp)		
	a) Line	1550	1050
	b) Transformer (winding)	1300	950
	c) Other Substation Equipment and transformer bushings	1425	1050
v)	Switching impulse withstand voltage (kVp)		
	a) Line	1050	NA
	b) Transformer (winding)	1050	NA
	c) Other Substation Equipment	1050	NA
vi)	Rated Breaking current capability of switchgear (kA) for 1 sec.	50	40
vii)	Fault clearance time (ms) (1st stage of protection)	100	100
viii)	Creepage Distance (mm/kV)	31	31

1.2	Generating Units			
a)	Frequency	Nominal	Hz	50
		Variation	%	+3 to -5
b)	Voltage	Nominal	kV	20 to 27 (As per manufacture standard)
		Variation	%	+5 to -5
c)	Combined voltage and frequency	Variation	%	+5 to -5
d)	Power Factor			0.90 lagging to 0.95 leading

1.3 Ramp Rates

All Units of the Power Station shall be capable of increasing or decreasing their output (generation level) by not less than one percent (1%) per minute. Such capability shall be demonstrated during the Unit load of more than 50%.

5. SCHEDULE 5: COMMISSIONING AND TESTING

1.1 Performance Test

i. (a) The Performance Test shall be conducted under any and all ambient conditions (temperature, humidity etc.) and any and all Fuel qualities that may exist during the time of the Performance Test and no corrections in final gross and net output of the Unit will be allowed as a result of prevailing ambient conditions or Fuel quality.

(b) The correction curves will only be used if the Grid System operation during the Performance Test exceeds Electrical System Limits.

(c) The Performance Test shall be deemed to have demonstrated the Contracted Capacity of the Unit under all designed conditions and therefore no adjustments shall be made on account of fuel quality or ambient conditions.

(d) The Seller shall perform in respect of each Unit a Performance Test, which such Unit shall be deemed to have passed if it operates continuously for seventy two consecutive hours at or above ninety five (95) percent of its Contracted Capacity as existing on the Effective Date and within the Electrical System Limits and the Functional Specifications.

ii. For the purposes of any Performance Test pursuant to this sub-article 1.1, the Electrical System Limits to be achieved shall be as follows:

(a) **Voltage**

The Unit must operate within the voltage levels described in the Functional Specification for the duration of the Performance Test. If, during the Performance Test, voltage tests cannot be performed due to Grid System, data supplied from tests of the generator step-up transformers and generators supplied by the manufacturers shall be used to establish the ability of the Unit to operate within the specified voltage limits.

(b) **Grid System Frequency**

The Unit shall operate within the Grid System frequency levels described in the Functional Specification for the duration of the Performance Test.

(c) **Power Factor**

The Unit shall operate within the power factor range described in the Functional Specification for the duration of the Performance Test. If, during the Performance Test, power factor tests cannot be performed due to the Grid System, data supplied from tests of the generators and the generator step-up transformers supplied by the manufacturers shall be used to establish the ability of the Unit to operate within the specified power factor range.

(d) **Fuel quality and cooling water temperature**

The Unit must operate to its Contracted Capacity with Fuel quality and water temperature available at the time of Testing and no adjustment shall be allowed for any variation in these parameters.

iii As a part of the Performance Test, the Seller shall demonstrate that the Unit meets the Functional Specifications for Ramping rate as mentioned in Schedule 4. For this purpose,

representative samples of ramp rates shall be taken, by ramping up or down the gross turbine load while maintaining the required temperatures and temperature differences associated with each ramp rate within the turbine while maintaining all other operational parameters within equipment limits.

iv Further, as a part of the Performance Test, the Unit shall tested for compliance with parameters of Supercritical Technology

1.2 Testing and Measurement procedures applied during Performance Test shall be in accordance with codes, practices or procedures as generally/ normally applied for the Performance Tests

1.3 The Seller shall comply with the prevalent Laws, rules and regulations as applicable to the provisions contained in this Schedule from time to time.

6. SCHEDULE 6: AVAILABILITY FACTORS

The following matters shall be determined as per the provisions of the Grid Code and ABT:

a. Availability declaration and calculation of Availability or Availability Factor;

b. Requirement for Spinning Reserves;

c. Procedure for revision of Availability;

d. Consequences of failure to demonstrate capacity or misdeclarations of capacity; and

e. Other matters which may be related to Availability or Availability Factor.

7. SCHEDULE 7: TARIFF

1.1 General

i. The method of determination of Tariff Payments for any Contract Year during the Term of Agreement shall be in accordance with this Schedule.
ii. The Tariff shall be paid in two parts comprising of Capacity and Energy Charge.
iii. For the purpose of payments, the Tariff will be Quoted Tariff, escalated as provided in this Schedule 7 for the applicable Contract Year as per Schedule 11.
iv. The full Capacity Charges shall be payable based on the Contracted Capacity at Normative Availability and Incentive shall be provided for Availability beyond 85% as provided in this Schedule shall be given. In case of Availability being lower than the Normative Availability, the Capacity Charges shall be payable on proportionate basis in addition to the penalty to be paid by Seller as provided in this Schedule.

1.2 Monthly Tariff Payment

1.2.1 Components of Monthly Tariff Payment

The Monthly Bill for any Month in a Contract Year shall consist of the following:

i. Monthly Capacity Charge Payment in accordance with Article 1.2.2 below;
ii. Monthly Energy Charge for Scheduled Energy in accordance with Article 1.2.3 below;
iii. Incentive Payment determined in accordance with Article 1.2.4 below (applicable on annual basis and included only in the Monthly Tariff Payment for the first month of the next Contract Year);
iv. Penalty Payment determined in accordance with Article 1.2.5 below (applicable on annual basis and included only in the Monthly Tariff Payment for the first month of the next Contract Year);
v. Penalty Payment determined in accordance with Article 1.2.8 below (applicable on annual basis and included only in the Monthly Tariff Payment for the first month of the next Contract Year);

1.2.2 Monthly Capacity Charge Payment

The Monthly Capacity Charge Payment for any Month m in a Contract Year n shall be calculated as below:

If CAA >= NA, $FCm = \sum_j (NA \times AFCyn \times CC \times L) - \sum FC(m-1)$

Else:
$FCm = \sum_j (AFCyn \times AA \times CC \times L) - \sum FC(m-1)$

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where:

$\sum_j$ is the summation of all the relevant values separately for each settlement period from the start of the contract year in which Month "m" occurs upto and including Month "m"

FCm is the Capacity Charge payment for the Month m (in Rupees)

AFCyn is the Capacity Charge and is sum of a) Payable Escalable Capacity Charges AEFCyn and b) Payable Non Escalable Capacity Charges ANEFCyn for the month in which the relevant settlement period occurs in Contract Year n (in Rs per kWh) and computed as mentioned hereunder;

AEFCyn is the Payable Escalable Capacity Charges for month in which the relevant settlement period occurs in the Contract Year "n", expressed in Rupees/kWh and is equal to the Quoted Escalable Capacity Charges as provided in Schedule 11 for the first Contract Year and for subsequent Contract Years duly escalated by the following formula:

AEFCyn = QAEFCyn * p/q

Where,

QAEFCyn is the Quoted Escalable Capacity Charges (in Rs./kWh) in the first Contract Year as per Schedule 11

p is the Escalation Index as per Schedule 9 at the beginning of the Month in which the relevant settlement period occurs (expressed as a number)

q is the Escalation Index as per Schedule 9 applicable as at the beginning of the first Contract Year mentioned in Schedule 11 (expressed as a number)

ANEFCyn is the Payable Non Escalable Capacity Charges for the month in which the relevant settlement period occurs, expressed in Rupees/kWh and is equal to the Quoted Non Escalable Capacity Charges for the Contract Year in which such month occurs, as provided in Schedule 11

CAA is the cumulative Availability, as per REA, from the first day of the Contract Year "n" in which month "m" occurs upto and including Month "m";

AA is the Availability, as per REA, in the relevant Settlement Period (expressed as a percentage of Contracted Capacity in such Settlement Period);

CC is the Contracted Capacity in the relevant Settlement Period (expressed in kW);

L is the number of minutes in the relevant Settlement Period, as divided by total number of minutes in one hour, (expressed as hours);

NA Normative Availability;

∑FC(m-1) is the cumulative Capacity Charge payable from the first day of the Contract Year "n" in which month "m" occurs upto and including Month "m-1" but not including month "m", (in Rupees);

Provided, no Capacity Charges shall be paid for the Settlement Period during which the RLDC has not allowed the operation of the Power Station due to Sellers failure to operate it as per the provisions of Grid Code.

1.2.3 Monthly Energy Charges

The Monthly Energy charges will be calculated as under:

The Monthly Energy Charges for Month "m" shall be calculated as under:

MEPm = AEOm x MEPn

Where:

MEPm is the Monthly Energy Charges for Month m (in Rs.)

AEOm is the Scheduled Energy during the Month m (in kwh)

MEPn is the Energy Charge, in Rs/kwh, and is the sum of (a) (i) Payable Escalable Fuel Energy Charges (MEFEPn) (ii) Payable Escalable Transportation Energy Charges (METEPn) (iii) Payable Escalable Fuel Handling Energy Charges (MEFHEPn) and (b) (i) Payable Non Escalable Fuel Energy Charges (MNEFEPn) (ii) Payable Non Escalable Transportation Energy Charges (MNETEPn) (iii) Payable Non Escalable Fuel Handling Energy Charges (MNEFHEPn) for the Contract Year "n" in which Month "m" occurs and computed as mentioned hereunder:

MEFEPn = QMEFEPn * p/q * FXn Rate

Where,

QMEFEPn is the Quoted Escalable Fuel Energy Charges quoted in the first Contract Year as per Schedule 11

p is the Escalation Index as per Schedule 9 at the beginning of Month "m" (expressed as a number)

q is the Escalation Index as per Schedule 9 as at the Bid Deadline (expressed as a number)

FXn shall be the simple average of closing SBI TT buying rate (for Rs./US$) for last fifteen (15) days prior to the first day of Month "m" for which such exchange rates are published by SBI.

METEPn = QMETEPn * p/q * FXn Rate

Where,

QMETEPn is the Quoted Escalable Transportation Energy Charges quoted in the first Contract Year as per Schedule 11

p is the Escalation Index as per Schedule 9 at the beginning of Month "m" (expressed as a number)

q is the Escalation Index as per Schedule 9 as at the Bid Deadline (expressed as a number)

FXn shall be the simple average of closing SBI TT buying rate (for Rs./US$) for last fifteen (15) days prior to the first day of Month "m" for which such exchange rates are published by SBI.

MEFHEPn= QMEFHEPn * p/q

Where,

QMEFHEPn is the Quoted Escalable Fuel Handling Energy Charges quoted in the first Contract Year as per Schedule 11

p is the Escalation Index as per Schedule 9 at the beginning of Month "m" (expressed as a number)

q is the Escalation Index as per Schedule 9 as at the Bid Deadline (expressed as a number)

MNEFEPn is the Payable Non Escalable Fuel Energy Charges of the Contract Year in which month "m" occurs expressed in Rs. /kwh and shall be calculated as under:

MNEFEPn = QNEFEPn * FXn Rate

Where,

QNEFEPn is equal to the Quoted Non Escalable Fuel Energy Charges of the Contract Year in which month "m" occurs, as provided in Schedule 11

FXn shall be the simple average of closing SBI TT buying rate (for Rs./US$) for last fifteen (15) days prior to the first day of Month "m" for which such exchange rates are published by SBI.

MNETEPn is the Payable Non Escalable Transportation Energy Charges of the Contract Year in which month "m" occurs expressed in Rs. /kwh and shall be calculated as under:

MNETEPn = QNETEPn * FXn Rate

Where,

QNEFEPn is equal to the Quoted Non Escalable Transportation Energy Charges of the Contract Year in which month "m" occurs, as provided in Schedule 11

FXn shall be the simple average of closing SBI TT buying rate (for Rs./US$) for last fifteen (15) days prior to the first day of Month "m" for which such exchange rates are published by SBI.

MNEFHEPn is the Payable Non Escalable Fuel Handling Energy Charges of the Contract Year in which month "m" occurs expressed in Rs. /kwh and shall be equal to the Quoted Non Escalable Fuel Handling Energy Charges of the Contract Year in which month "m" occurs, as provided in Schedule 11

1.2.4 Contract Year Energy Incentive Payment

If and to the extent the Availability in a Contract Year exceeds eighty five percent (85%), an incentive at the rate of 40% of the Quoted Non Escalable Capacity Charges (in Rs./kWh) for such Contract Year mentioned in Schedule 11, subject to a maximum of 25 paise/kWh shall be allowed on the energy (in kwh) corresponding to the Availability in excess of eighty five percent (85%).

1.2.5 Contract Year Penalty for Availability below 75% during the Contract Year

In case the Availability for a Contract Year is less than 75%, the Seller shall pay a penalty at the rate of twenty percent (20%) of the simple average Capacity Charge (in Rs./kWh) for all months in the Contract Year applied on the energy (in kwh) corresponding to the difference between 75% and Availability during such Contract Year.

1.2.6 Deviation from the schedule

Variation between Scheduled Energy and actual energy at the Delivery Point shall be accounted for through Unscheduled Interchange (UI) Charges as detailed in the Grid Code and ABT.

1.2.7 Transmission/Wheeling Charges and Scheduling Charges

The payment of transmission/wheeling charges shall be settled between the CTU/STU and the respective Procurer. The payment of scheduling charges to the respective nodal agency (RLDC or SLDC) shall be the responsibility of the Procurers.

1.2.8 Penalty and rights relating to Minimum Guaranteed Quantity of Fuel

In case Seller has to pay penalty to the Fuel supplier for not purchasing the minimum guaranteed quantity of Fuel mentioned in the Fuel Supply Agreement and if during that Contract Year Availability of the Commissioned Units is greater than the Minimum Offtake Guarantee but all the Procurers taken together have not Scheduled Energy corresponding to such Minimum Off-take Guarantee during that Contract Year, then Seller will raise an invoice for the lower of the following amount, on the Procurers, who have individually not achieved Minimum Off-take Guarantee during that Contract Year, in proportion to their difference between Scheduled Energy assuming offtake corresponding to Minimum Offtake Guarantee and Scheduled Energy (as applicable to such Procurer/s) for the following amount:

(a) penalty paid to the Fuel supplier under the Fuel Supply Agreement in that Contract Year, along with documentary proof for payment of such penalty, or

(b) an amount corresponding to twenty percent (20%) of cumulative Monthly Capacity Charge Payment (in Rs.) for all the Procurers made for all the months in that Contract Year multiplied by (1- x/y) where:

X is the Scheduled Energy during the Contract Year for all Procurers (in kwh); and

Y is the Scheduled Energy corresponding to Minimum Offtake Guarantee for all Procurers during the Contract Year (in kwh).

Within ten (10) days of the end of each Month after the COD of the first Unit, the Seller shall provide a statement to all the Procurers, providing a comparison of the cumulative dispatch for all previous Months during the Contract Year with the Minimum Offtake Guarantee of the Procurers. Further, such statement shall also list out the deficit, if any, in the Fuel offtake under the Fuel supply agreement, due to cumulative dispatch being less than the Minimum Offtake Guarantee. In case of a Fuel offtake deficit, within a period of fifteen (15) days from the date of receipt of the above statement from the Seller and after giving a prior written notice of al least seven (7) days to the Seller and all the other Procurers, the concerned Procurer(s) shall have the right to purchase themselves such deficit at the same price at which such deficit fuel was available to the Seller under the Fuel supply agreement and to sell such deficit to third parties. Such right of Procurers with regard to deficit fuel shall be in proportion to their respective shortfall in Minimum Offtake Guarantee

1.2.9 Tariff for the period prior to Scheduled COD of first unit and for Contract Years beyond 25 years from the COD of the first Unit

The Tariff for the period prior to Scheduled COD of the first unit shall be the Quoted Tariff of the first year with escalation for the relevant period only for Energy Charges. The Tariff for the Contract Years beyond the 25 years from the COD of the first Unit shall be the Quoted Tariff of the 25th year from the COD of the first Unit with applicable escalation.

1.3 SETTLEMENT OF BILLS

1. The penalty of actual Availability shortfall during the Contract Year, Deviation from the schedule, Transmission & Scheduling Charges and Penalty to be paid to fuel supplier will be settled as detailed in Article 1.2.2, Article 1.2.5, Article 1.2.6, Article 1.2.7 and Article 1.2.8 of this Schedule.

2. Notwithstanding anything contained in this agreement, no separate reimbursement shall be allowed for the cost of the secondary fuel.

8. SCHEDULE 8: DETAILS OF INTERCONNECTION POINT AND FACILITIES

1. The Interconnection Point or Delivery Point shall be point from where the power from the Power Station Switch Yard Bus is being injected into the Transmission Network`.

2. The Seller shall be required to provide the following facilities in the Power Station Switch Yard

400 kV Switchyard

All the generators will be stepped up to 400 kV and the generator bays required will be provided in the 400 kV switchyard by the bidder. In addition to the number of generating bays depending upon no. of generating units, the requirement at generating switchyard from evacuation point of view based in the transmission requirement arrived at is as under:

- All units to be stepped up to 400 kV
- 400 kV bays for termination of GT's - 5 nos.
- 6 nos. 400kV line bays for Mundra-Limbdi (Chorania) 400kV D/C, Mundra-Jetpur 400kV D/C and Mundra-Ranchodpura (Vadavi) 400kV D/C lines.
- Switchable line reactor of 63 MVAR at Mundra end on each of circuits of the Mundra-Limbdi (Chorania) 400kV D/C and Mundra-Jetpur 400kV D/C lines and one 63 MVAR bus reactor at Mundra 765kV bus (i.e. 4 x 63 MVAR 400 kV switchable line reactors and 1 x 63 MVAR 400kV bus reactor)
- Space provision for 4 nos. 400 kV line bays for future expansion

Start-up Power

Start-up power to the project needs to be availed at 220kV for which the bidder would need to approach GETCO, Gujarat for providing 220kV line for generator start up from nearby 220kV Grid S/S of GETCO.

Necessary provision for 220kV switchyard, step down from 220kV and station supply feeders etc. needs to be provided in the power plant.

400 / 220kV ICT for availing power supply for station auxiliaries from own generation or the 400kV system also needs to be provided in the power plant.

9. SCHEDULE 9: ESCALATION INDEX

The index ("Escalation Index") to be applied for escalation of Quoted Escalable Capacity Charges and Quoted Escalable Energy Charges shall be computed by assuming that as on the date of the Bid Deadline (for Quoted Escalable Energy Charges) and Scheduled COD of first Unit (for Quoted Escalable Capacity Charges), the value of such Escalation Index is 100. Thereafter for each Month after the Bid Deadline (for Quoted Escalable Energy Charges) and Scheduled COD of first Unit (for Quoted Escalable Capacity Charges), the value of the Escalation Index shall be computed by applying the per annum inflation rate specified by CERC for payment of escalable (or indexed) capacity charge and escalable energy charge, under the provisions of the Competitive Bidding Guidelines. For the avoidance of doubt, if the prevailing inflation rate specified by CERC is 4.7% per annum, then at the end of the first Month after the Bid Deadline, the value of the Escalation Index shall be 100.3917 [i.e. (100 + 4.7/12)] for Quoted Escalable Energy Charges. Thereafter, at the end of the second month beyond each first Month, the value of the Escalation Index shall be 100.7833 [i.e 100.3917 + 4.7/12)] and so on.

For the avoidance of doubt, the per annum inflation rate specified by CERC shall be revised only at the end of every six months.

Further, different per annum inflation rates can be specified by CERC for Quoted Escalable Capacity Charges, Quoted Escalable Fuel Energy Charges, Quoted Escalable Transportation Energy Charges, Quoted Escalable Fuel Handling Energy Charges.

The value of the Escalation Index shall be calculated upto the fourth decimal point.

In case due to some reason, CERC discontinues the publication of the inflation rate mentioned above, then the Procurers (jointly) and Seller shall replace the above inflation rate with an inflation rate which shall be computed on the same basis as was being used by CERC to estimate their notified inflation rate.

10. SCHEDULE 10: REPRESENTATION AND WARRANTIES

1. Representations and Warranties by the Procurers

Each Procurer hereby represents and warrants to and agrees with the Seller as follows and acknowledges and confirms that the Seller is relying on such representations and warranties in connection with the transactions described in this Agreement:

a) The said Procurer has all requisite powers authorising and has been duly authorised to execute and consummate this Agreement ;
b) This Agreement is enforceable against the said Procurer in accordance with its terms;
c) The consummation of the transactions contemplated by this Agreement on the part of the said Procurer will not violate any provision of nor constitute a default under, nor give rise to a power to cancel any charter, mortgage, deed of trust or lien, lease, agreement, license, permit, evidence of indebtedness, restriction, or other contract to which the said Procurer is a party or to which said Procurer is bound, which violation, default or power has not been waived;
d) The said Procurer is not insolvent and no insolvency proceedings have been instituted, nor threatened or pending by or against the said Procurer;
e) There are no actions, suits, claims, proceedings or investigations pending or, to the best of the said Procurer's knowledge, threatened in writing against the said Procurer at law, in equity, or otherwise, and whether civil or criminal in nature, before or by, any court, commission, arbitrator or governmental agency or authority, and there are no outstanding judgements, decrees or orders of any such courts, commission, arbitrator or governmental agencies or authorities, which materially adversely affect its ability to comply with its obligations under this Agreement.
f) The quantum of Allocated Contracted Capacity of said Procurer does not exceed the projected additional demand forecast for the next three (3) years, as required under the Bidding Guidelines

Each of the Procurers makes all the representations and warranties above to be valid as on the date of this Agreement.

In the event that any of the representations and warranties made by a Procurer in the Article above are not true or are incorrect, the occurrence of such event would amount to a Procurer Event of Default relatable to the Procurer making the false or incorrect representation and warranty under Article 14.2 of this Agreement and the Seller shall have the right to terminate this Agreement in accordance with Article 14 of this Agreement.

2. Representation and Warranties of the Seller

The Seller hereby represents and warrants to and agrees with the Procurers as follows and acknowledges and confirms that the Procurers are relying on such representations and warranties in connection with the transactions described in this Agreement:

a. It has all requisite power authorising and has been duly authorised to execute and consummate this Agreement;
b. This Agreement is enforceable against it in accordance with its terms;
c. The consummation of the transactions contemplated by this Agreement on the part of the Seller will not violate any provision of nor constitute a default under, nor give rise to a power to cancel any charter, mortgage, deed of trust or lien, lease, agreement, license, permit, evidence of indebtedness, restriction, or other contract to which the Seller is a party or to which the Seller is bound which violation, default or power has not been waived;
d. The Seller is not insolvent and no insolvency proceedings have been instituted, not threatened or pending by or against the Seller;
e. There are no actions, suits, claims, proceedings or investigations pending or, to the best of Seller's knowledge, threatened in writing against the Seller at law, in equity, or otherwise, and whether civil or criminal in nature, before or by, any court, commission, arbitrator or governmental agency or authority, and there are no outstanding judgements, decrees or orders of any such courts, commission, arbitrator or governmental agencies or authorities, which materially adversely affect its ability to execute the Project or to comply with its obligations under this Agreement.
f. The Selected Bidder has neither made any statement nor provided any information in his Bid, which was materially inaccurate or misleading at the time when such statement was made or information was provided. Further, all the confirmations, undertakings, declarations and representations made in the RFP Bid are true and accurate and there is no breach of the same.

The Seller makes all the representations and warranties above to be valid as on the date of this Agreement, except as stated in sub-article (f) above.

In the event that any of the representations and warranties made by the Seller in the Article above not true or are incorrect, the occurrence of such event would amount to a Seller Event of Default under Article 14.1 of this Agreement and the Procurers shall have the right to terminate this Agreement in accordance with Article 14 of this Agreement.

11. SCHEDULE 11: QUOTED TARIFF

S. No.	Commencement Date of Contract Year	End Date of Contract Year	Quoted Non-Escalable Capacity Charges (Rs./kwh)	Quoted Escalable Capacity Charges (Rs./kwh)	Quoted Non-Escalable Fuel Energy Charges (US$/kwh)	Quoted Escalable Fuel Energy Charges (US$/kwh)	Quoted Non-Escalable Transportation Energy Charges (US$/kwh)	Quoted Escalable Transportation Energy Charges (US$/kwh)	Quoted Non-Escalable Fuel Handling Energy Charges (Rs./kwh)	Quoted Escalable Fuel Handling Energy Charges (Rs./kwh)
1	27-Jun-12	31-Mar-13	0.872	0.033	0.00705	0.00585	0.00285	0.00109	0.042	0.046
2	01-Apr-13	31-Mar-14	0.870	Same as Above	0.00707	Same as Above	0.00284	Same as Above	0.048	Same as Above
3	01-Apr-14	31-Mar-15	0.868	Same as Above	0.00707	Same as Above	0.00284	Same as Above	0.048	Same as Above
4	01-Apr-15	31-Mar-16	0.866	Same as Above	0.00707	Same as Above	0.00284	Same as Above	0.047	Same as Above
5	01-Apr-16	31-Mar-17	0.864	Same as Above	0.00707	Same as Above	0.00284	Same as Above	0.051	Same as Above
6	01-Apr-17	31-Mar-18	0.862	Same as Above	0.00707	Same as Above	0.00284	Same as Above	0.051	Same as Above
7	01-Apr-18	31-Mar-19	0.859	Same as Above	0.00707	Same as Above	0.00285	Same as Above	0.051	Same as Above
8	01-Apr-19	31-Mar-20	0.857	Same as Above	0.00707	Same as Above	0.00284	Same as Above	0.056	Same as Above
9	01-Apr-20	31-Mar-21	0.854	Same as Above	0.00707	Same as Above	0.00284	Same as Above	0.055	Same as Above
10	01-Apr-21	31-Mar-22	0.852	Same as Above	0.00707	Same as Above	0.00284	Same as Above	0.055	Same as Above
11	01-Apr-22	31-Mar-23	0.849	Same as Above	0.00707	Same as Above	0.00284	Same as Above	0.060	Same as Above
12	01-Apr-23	31-Mar-24	0.846	Same as Above	0.00711	Same as Above	0.00286	Same as Above	0.060	Same as Above
13	01-Apr-24	31-Mar-25	0.842	Same as Above	0.00714	Same as Above	0.00287	Same as Above	0.059	Same as Above
14	01-Apr-25	31-Mar-26	0.839	Same as Above	0.00714	Same as Above	0.00287	Same as Above	0.065	Same as Above
15	01-Apr-26	31-Mar-27	0.836	Same as Above	0.00714	Same as Above	0.00287	Same as Above	0.065	Same as Above
16	01-Apr-27	31-Mar-28	0.832	Same as Above	0.00714	Same as Above	0.00288	Same as Above	0.063	Same as Above
17	01-Apr-28	31-Mar-29	0.828	Same as Above	0.00714	Same as Above	0.00287	Same as Above	0.071	Same as Above
18	01-Apr-29	31-Mar-30	0.824	Same as Above	0.00714	Same as Above	0.00287	Same as Above	0.069	Same as Above
19	01-Apr-30	31-Mar-31	0.819	Same as Above	0.00714	Same as Above	0.00287	Same as Above	0.067	Same as Above
20	01-Apr-31	31-Mar-32	0.550	Same as Above	0.00714	Same as Above	0.00287	Same as Above	0.076	Same as Above
21	01-Apr-32	31-Mar-33	0.545	Same as Above	0.00714	Same as Above	0.00287	Same as Above	0.074	Same as Above
22	01-Apr-33	31-Mar-34	0.540	Same as Above	0.00719	Same as Above	0.00289	Same as Above	0.072	Same as Above
23	01-Apr-34	31-Mar-35	0.534	Same as Above	0.00721	Same as Above	0.00290	Same as Above	0.082	Same as Above
24	01-Apr-35	31-Mar-36	0.529	Same as Above	0.00721	Same as Above	0.00290	Same as Above	0.079	Same as Above
25	01-Apr-36	31-Mar-37	0.523	Same as Above	0.00721	Same as Above	0.00290	Same as Above	0.076	Same as Above
26	01-Apr-37	27-Jun-37	0.516	Same as Above	0.00723	Same as Above	0.00291	Same as Above	0.088	Same as Above

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12. SCHEDULE 12: LIST OF ARTICLES

List of Articles under which rights and obligations of the Procurers (including all matters incidental thereto and related follow-up), which are required to be undertaken by the Procurers jointly, will be performed by Lead Procurer for and on behalf of all the Procurers

- Article 1.1
- Article 2.2
- Article 3.1.2
- Article 3.1.3 (i)
- Article 3.3.2
- Article 3.3.3
- Article 3.4.5
- Article 4.3.2
- Article 4.7.2
- Article 5.3
- Article 5.5
- Article 5.7.1
- Article 6.2.3
- Article 8.1.1
- Article 8.1.2
- Article 8.1.3
- Article 8.1.4
- Article 8.1.5
- Article 8.1.6
- Article 8.2.2 (c)
- Article 13.3.2
- Article 14.1 (ii)
- Article 14.1 (ix)
- Article 14.1 (x)
- Article 14.1 (xi)
- Article 14.3.1

and any other Articles of this Agreement not specifically mentioned herein, which provide for a joint action by all the Procurers.

13. SCHEDULE 13: ALLOCATED CONTRACTED CAPACITY

Contracted Capacity allocated to each of the Procurers shall be as under

Mundra UMPP			
Procurer wise allocation and name of authorised entity			
S.No.	Procuring Utility	Allocated Contracted Capacity (Percentage)	Allocated Contracted Capacity (MW)
1	Gujarat Urja Vikas Nigam Limited	47.500%	1805.00
2	Haryana Power Generation Corporation Limited	10.000%	380.00
3	Maharashtra State Electricity Distribution Company Limited	20.000%	760.00
4	Punjab State Electricity Board	12.500%	475.00
5	Rajasthan Power Procurement Centre - authorised entity on behalf of		
5a	Jaipur Vidyut Vitran Nigam Ltd.	3.600%	136.80
5b	Ajmer Vidyut Vitran Nigam Ltd.	3.600%	136.80
5c	Jodhpur Vidyut Vitran Nigam Ltd.	2.800%	106.40
	Total	100%	3800.00

14. SCHEDULE 14: CAPITAL STRUCTURE SCHEDULE

(this will need to be filled up on or before NTP)

15. SCHEDULE 15: FORMAT OF THE PERFORMANCE GUARANTEE

In consideration of the [Insert name of the Selected Bidder or Selected Bidder on behalf of the Seller] agreeing to undertake the obligations under the PPA and the other RFP Project Documents and [Insert the name of the Procurer], agreeing to execute the PPA and the other RFP Project Documents inter alia with the Seller, regarding setting up the Power Station of the capacity of ..... MW, at .....[Insert name of the place] for supply of power there from on long term basis, the _____ (insert name of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to [*Insert Name of the Procurer]* at [*insert the Place from the address of the respective Procurer indicated in PPA]* forthwith on demand in writing from [*Name of the Procurer] or* any Officer authorised by it in this behalf, any amount upto and not exceeding Rupees _____only [Insert the amount of the bank guarantee in respect of the respective Procurer as per the terms of PPA], on behalf of M/s. _____ [Insert name of the Seller or the Selected Bidder on behalf of the Seller].

This guarantee shall be valid and binding on this Bank up to and including _____ and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs. _____ (Rs. _____ only). Our Guarantee shall remain in force until _____. The Procurer shall be entitled to invoke this Guarantee till _____ [Insert date which is 30 days after the date in the preceding sentence].

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by the Procurer, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to the Procurer.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by the Seller and/or any other person. The Guarantor Bank shall not require the Procurer to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against the Procurer in respect of any payment made hereunder

The Guarantor Bank hereby agrees and acknowledges that the Procurer shall have a right to invoke this BANK GUARANTE in part or in full, as it may deem fit.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly the Procurer shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Seller, to make any claim against or any demand on the Seller or to give any notice to the Seller or to enforce any security held by the Procurer or to exercise, levy or enforce any distress, diligence or other process against the Seller.

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to the Procurer and may be assigned, in whole or in part, (whether absolutely or by way of security) by Procurer to any entity to whom the Procurer is entitled to assign its rights and obligations under the PPA.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. _____ (Rs. _____ only) and it shall remain in force until _____ [Date to be inserted on the basis of Article 3.1.1 of PPA]. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if the Procurer serves upon us a written claim or demand.

Signature _____
For
_____

Banker's Seal and Full Address.

16. SCHEDULE 16: SELECTED BID

Bid for Supply of Power from Coastal Gularat Power Limited

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Certified True Copy

Section 'A'

Covering Letter

(as per Annexure 9 of RFP)

TATA

Bidder's Name: The Tata Power Company Limited
Full Address: Bombay House
24, Homi Mody Street,
Mumbai 400 001
Telephone No: 022 6665 8883
E-mail address: acharan@tpc.co.in
Fax/No: 022 6665 8866

To,
The Chief Executive
Coastal Gujarat Power Ltd.
Chandralok Building
36 Janpath, New Delhi 110001

Sub: Bid for Supply of Power from Coastal Gujarat Power Limited

Dear Sir,

We, the undersigned Bidder having read and examined in detail the RFP dated August 21, 2006 and amendments thereto issued by Coastal Gujarat Power Limited for supply of power on long term basis from Coastal Gujarat Power Ltd., hereby submit our Bid comprising of Financial Bid and Non-Financial Bid.

1) **Bid Bond**

We have enclosed a Bid Bond of Rs 120 Crores, in the form of bank guarantee No. 0999606BG0001738 dated 5th Dec 2006 as per your proforma (Annexure 2) from State Bank of India, Tolstoy Marg, New Delhi - 110001 and valid up to 16.06.2007, in terms of Clause 2.12 of the RFP.

2) **Acceptance**

We hereby unconditionally and irrevocably agree and accept that the decision made by the Authorized Representative or the Procurers regarding any matter regarding or arising out of the RFP shall be binding on us. We hereby expressly waive any and all claims in respect of the Bid Process.

TATA POWER
The Tata Power Company Limited
Registered Office Bombay House 24 Homi Mody Street Mumbai 400 001
Tel 91 22 5665 8282 Fax 91 22 5665 8801

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TATA

3) **Familiarity With Relevant Indian Laws & Regulations**

We confirm that we have studied the provisions of relevant Indian laws and regulations as required to enable us to quote for this Bid and execute the RFP Project Documents, if awarded. We further undertake and agree that all such factors as mentioned in Clause 2.7.2 of RFP have been fully examined and considered while submitting the Bid.

4) **Contact Person**

Details of contact person as required under Clause 2.14.2 furnished as under:

Name:	Mr. Amulya Charan
Designation:	Vice President
Company Address:	Bombay House, 24 Homi Mody Street, Mumbai 400 001
Phone Nos:	022 66858883
Fax Nos:	022 66658866
Email address:	acharan@tpc.co.in

COLLECTOR ... AN

We are enclosing herewith Envelope I and Envelope II containing duly signed formats each one duly sealed separately, in one (1) original + six (6) copies (duly attested) as desired by you in your RFP for your consideration.

Dated the 7th day of December of 2006

Thanking you,
We remain,

Yours faithfully,

(Sowmyan Ramakrishnan)
Executive Director
Authorised signatory as per clause 2.7.1.1 of RFP

Section 'B'

Board Resolutions

(as per Annexure 8-Format 1 of RFP)

TATA

CERTIFICATE

This is to certify that the Board, after discussion, at the duly convened Meeting on 26th October 2006, with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 1956, passed the following Resolution :

"RESOLVED that pursuant to the provisions of the Companies Act, 1956 and compliance thereof and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded for investment upto 100% of the total equity share capital of Coastal Gujarat Power Limited representing the entire amount proposed to be invested by the Company for the Power Station to be set up at Mundra, District Kutch, Gujarat partly by acquisition of the existing equity shares from Power Finance Corporation and partly by subscribing to the new equity shares, as per the terms of the Request For Participation (RFP).

FURTHER RESOLVED that Mr P R Menon, Managing Director, Mr S Ramakrishnan, Executive Director and Mr A Charan, Vice-President be and are hereby severally authorised to enter into, take all the steps required to be taken by the Company in this regard, including in particular, signing of the Bid, making changes thereto and submitting amended Bid, all the related documents, certified copy of this Board resolution or letter, undertakings etc., required to be submitted to Coastal Gujarat Power Limited as part of the RFP or such other documents as may be necessary in this regard."

For The Tata Power Company Limited

THE TATA POWER COMPANY LIMITED MUMBAI

(B J Shroff)
Vice-President & Company Secretary

Dated 5th day of December 2006

COLLECTOR

THE TATA POWER COMPANY LIMITED MUMBAI

TATA POWER

The Tata Power Company Limited
Registered Office : Bombay House, 24 Homi Mody Street, Mumbai 400 001
Tel 91 22 5663 8282, Fax 91 22 5665 8801

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Section 'C'

Bid Bond

(as per Annexure 2 of RFP)

STATE BANK OF INDIA
CORPORATE ACCOUNTS GROUP, NEW DELHI
CORPORATE ACCOUNTS GROUP
11 TOLSTOY MARG, NEW DELHI - 110001

TEL NO:011-23353029
FAX NO:011-23718122
SWIFT NO:SBININBB172
PIN CODE:110001

12/5/2006 (MM/DD/YY)

To

GUJARAT URJA VIKAS NIGAM LIMITED,
SARDAR PATEL VIDYUT BHAVAN,
RACE COURSE,
VADODARA,390007 GUJARAT

DEAR SIR(S),

GUARANTEE NUMBER	:	0999606BG0001736
DATE OF ISSUE	:	12/5/2006
GUARANTEE AMOUNT	:	INR 1,20,00,00,000.00
DATE OF EXPIRY	:	9/16/2007
DATE OF CLAIM	:	9/15/2007
APPLICANT NAME	:	THE TATA POWER COMPANY LTD.

We confirm having Issued / Extended the captioned Bank Guarantee in your favour on behalf of our above named Constituent and the same signed by the officers of the Bank.

YOURS FAITHFULLY,

AUTHORISED SIGNATORY.

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STATE BANKOF INDIA
CORPORATE ACCOUNTS GROUP, NEW DELHI
CORPORATE ACCOUNTS GROUP
1 TOLSTOY MARG, NEW DELHI - 110001

TEL NO:011-23353029
FAX NO:011-23718122
SWIFT NO:SBININBB172
PIN CODE:110001

GUJARAT URJA VIKAS NIGAM LIMITED,
SARDAR PATEL VIDYUT BHAVAN,
RACE COURSE,
VADODARA 390007 GUJARAT

12/5/2006 (MM/DD/YY)

DEAR SIRS,

GUARANTEE NO :099E606BG0001738
AMOUNT OF GUARANTEE :INR1,20,00,00,000.0
GUARANTEE COVER FROM :12/5/2006 TO 8/16/2007
LAST DATE FOR LODGEMENT OF CLAIM :9/15/2007

THIS DEED OF GUARANTEE IS EXECUTED BY THE STATE BANK OF INDIA, CONSTITUTED UNDER THE STATE BANK OF INDIA ACT , 1955 HAVING THE CENTRAL OFFICE AT NARIMAN POINT , MUMBAI AND AMONGST OTHER PLACES, A BRANCH AT CORPORATE ACCOUNTS GROUP, NEW DELHI HEREIN AFTER REFERRED TO AS 'THE BANK') IN FAVOUR OF GUJARAT URJA VIKAS NIGAM LIMITED, [illegible] (HEREIN AFTER REFERRED TO AS 'BENEFICIARY') FOR AN AMOUNT NOT EXCEEDING
1,20,00,00,000.00
one hundred twenty crore only

AT THE REQUEST OF THE TATA POWER COMPANY LTD.
AND THE GUARANTEE SHALL REMAIN IN FULL FORCE UPTO 8/16/2007
AND CANNOT BE INVOKED OTHERWISE THAN BY WRITTEN DEMAND OR CLAIM UNDER THIS GUARANTEE SERVED ON THE BANK ON OR BEFORE THE 9/15/2007

SUBJECT TO AS AFORESAID

NOTWITHSTANDING ANYTHING CONTAINED HEREIN ABOVE, OUR LIABILITY UNDER THIS GUARANTEE IS RESTRICKED TO
1,20,00,00,000.00
one hundred twenty crore only

OUR GUARANTEE SHALL REMAIN IN FORCE UNTIL 8/16/2007 . UNLESS A DEMAND OR CLAIM UNDER THE GUARANTEE IS MADE ON OUR BANK IN WRITING ON OR BEFORE 9/15/2007 ALL YOURS RIGHTS UNDER THE SAID GUARANTEE BE FORFEITED AND WE SHALL BE RELIEVED AND DISCHARGED FROM ALL LIABILITES THEREUNDER.

AUTHORISED SIGNATORY

AUTHORISED SIGNATORY

CGPL GUVNL MSEDCL RPPC PSEB HPGCL



दिल्ली DELHI

STATE BANK OF INDIA

A-250892

THIS STAMP PAPER FORM INTEGRAL PART OF
BANK GUARANTEE No. 0999LG8000173S
DATED AS ON 30.09.09 FOR Rs.
IN FAVOUR OF GUJARAT URJA VIKAS NIGAM LIMITED
ON BEHALF OF THE TATA POWER COMPANY LTD., NEW DELHI
ISSUED/PURCHASED BY US ON 30/9/2009

MANAGER VSB
STATE BANK OF INDIA
Corporate Accounts Group Branch, New Delhi

P.5061

CGPL GUVNL MSEDCL RPPC PSEB HPGCL

STATE BANK OF INDIA

BID BOND

THE UNCONDITIONAL AND IRREVOCABLE BANK GUARANTEE FOR BID BOND

(To be stamped in accordance with applicable stamp Act)

In consideration of the The Tata Power Company Limited, Bombay House, 24 Homi Mody Street, Mumbai 400001, submitting the Bid inter alia for setting up the Power Station of the capacity of 4000 MW, at Mundra, Dist. Kutch, Gujarat for supply of power there from on long term basis, in response to the Request For Proposal (RFP) dated August 21, 2006 and amendments thereto issued by Coastal Gujarat Power Limited and Coastal Gujarat Power Limited considering such Bid of The Tata Power Co. Ltd. as per the terms of the RFP, the State Bank of India, Corporate Accounts Group Branch, New Delhi, hereby agrees unequivocally, irrevocably and unconditionally to pay to M/s Gujarat Urja Vikas Nigam Limited, Sardar Patel Vidyut Bhavan, Race Course, Vadodara 390007 (hereinafter referred to as "Lead Procurer") at Vadodara, Gujarat forthwith on demand in writing from M/s Gujarat Urja Vikas Nigam Limited or any Officer authorized by it in this behalf any amount upto and not exceeding Rupees One Hundred and twenty Crores (Rs.120,00,00,000/-) only on behalf of M/s The Tata Power Company Limited.

This guarantee shall be valid and binding on this Bank up to and including 16.08.2007 and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between concerned parties.

Our liability under this Guarantee is restricted to Rupees One Hundred and Twenty Crores (Rs.120, 00, 00,000/-) only. Our Guarantee shall remain in force until 16.08.2007.The Lead Procurer shall be entitled to invoke this Guarantee until 16.09.2007.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by the Lead Procurer, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to the Lead Procurer.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by the Bidder or any other person. The Guarantor Bank shall not require Lead Procurer to justify the invocation of this BANK GUARANTEE nor shall the Guarantor Bank have any recourse against the Lead Procurer in respect of any payment made

For STATE BANK OF INDIA

Chief Manager (I.B.D.)
Corporate Accts. Group Br., New Delhi

For STATE BANK OF INDIA

Chief Manager (I.B.D.)
Corporate Accts. Group Br., New Delhi

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STATE BANK OF INDIA
[redacted] 1738

hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reasons of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly Lead Procurer shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder or to enforce any security held by Lead Procurer or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

Not withstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs 120, 00, 00,000/- (Rs One Hundred and Twenty Crores only) and it shall remain in force until 16.06.2007 with an additional claim period of 30 days thereafter. We are liable to pay the guaranteed amount or any part thereof under this BANK GUARANTEE only if the Procurer serves upon us a written claim or demand.

Signature _____
For

STATE BANK OF INDIA
[redacted]
Banker's Seal and Full Address

COLLECTOR OF ... ANDH...

For STATE BANK OF INDIA
Chief Manager (I.B.O.)
Corporate Asstt. Group Br., New Delhi
P5061

For STATE BANK OF INDIA
Chief Manager (I.B.O.)
Corporate Asstt. Group Br., New Delhi

CGPL GUVNL MSEDCL RPPC PSEB HPGCL

Section 'D'

Undertakings, Scheduled COD & Contracted Capacity

(as per Annexure 6-Format 1, 2 & 3 of RFP)

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CGPL GUVNL MSEDCL RPPC PSEB HPGCL

TATA

7th December 2006

To,
The Chief Executive
Coastal Gujarat Power Limited
3rd Floor, Chandralok Building
36 Janpath, New Delhi 110001

Dear Sir,

Sub: Bidder's Undertakings for Bid for supply of power from Coastal Gujarat Power Limited

We hereby undertake on our own behalf and on behalf of the Seller, that if selected as the Successful Bidder for the Project:

1. We give our unconditional acceptance to the RFP Project Documents issued by Authorized Representative as a part of the RFP dated August 21, 2006 and amendments thereto. We shall ensure that the Seller shall execute such RFP Project Documents as per the provisions of the RFP.

2. We have submitted our Financial Bid strictly as per the formats provided in Annexure 4 of the RFP, without any deviations, conditions and without mentioning any assumptions or notes for the Financial Bid in the said Annexure.

3. We have submitted the Bid on the terms and conditions contained in the RFP and we hereby confirm our acceptance of all the terms and conditions of RFP.

4. Our Bid (including Financial Bid) is valid upto the period required under Clause 2.9 of the RFP.

5. Our Bid (including Financial Bid) has been duly signed by authorized signatory and sealed in the manner and to the extent indicated in this RFP and the Power of Attorney / Board Resolution as per Clause 2.7.1.1 in requisite format as per RFP has been enclosed in original with this undertaking.

6 We agree to sell our entire shareholding in the Seller as per the provisions of Article 3.3.3 A of the PPA.

(Bowmyan Ramakrishnan)
Executive Director
Authorised signatory as per clause 2.7.1.1 of RFP
Encl: Original Power of Attorney/Board Resolution as per Clause 2.7.1.1 is enclosed. Rubber stamp of the Bidder is affixed.

TATA POWER
The Tata Power Company Limited
Registered Office Bombay House 24 Homi Mody Street Mumbai 400 001
Tel 91 22 5665 8282 Fax 91 22 5665 8801

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CGPL GUVNL MSEDCL RPPC PSEB HPGCL

TATA

Executive Summary

1.1.a Name of the Bidding Company: The Tata Power Company Limited.

1.1.b Name of the Lead Member in the case of a bidding Consortium: – NA

1.2.a Details of the Bidding Consortium: – N A

Sr. No.	Name of the Company	% of equity participation	Role envisaged
	NA		

(Sowmyan Ramakrishnan)
Executive Director
Authorised signatory as per clause 2.7.1.1 of RFP

TATA POWER
The Tata Power Company Limited
Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001
Tel 91 22 5665 8282 Fax 91 22 5665 8801

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CGPL GUVNL MSEDCL RPPC PSEB HPGCL

TATA

Scheduled COD and Contracted Capacity

Unit	Gross Capacity of Unit (in MW)	Contracted Capacity of Unit (In MW)	Scheduled COD of Unit (In months from Effective Date)
First	800	760	64
Second	800	760	70
Third	800	760	76
Fourth	800	760	82
Fifth (Last)	800	760	88
All units	4000	3800	88

Important Conditions:

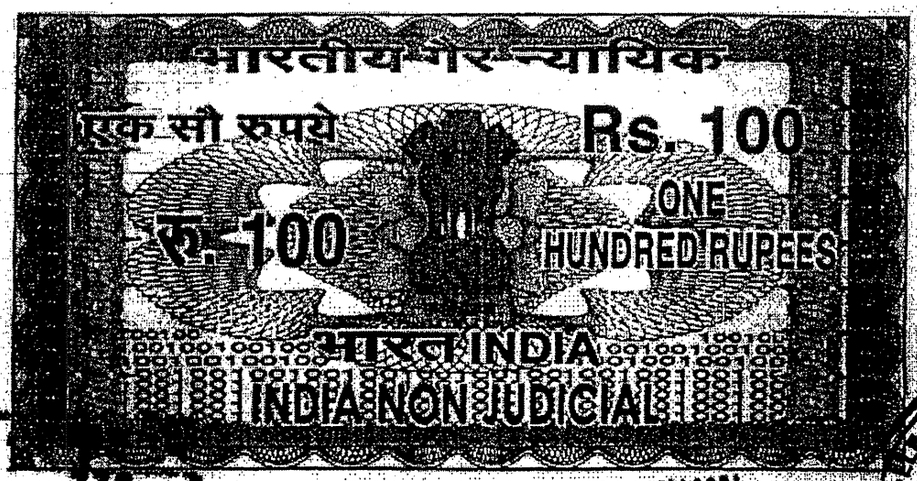
1. The scheduled COD of the first unit shall not be later than Sixty Nine (69) months from the effective date as defined in the PPA, subject to the provisions of the PPA.
2. The Scheduled COD of the Power Station shall not be later than ninety three (93) months from the effective date as defined in PPA, subject to the provisions of the PPA.
3. Difference in Scheduled COD of any two successive Units shall not exceed a period of eight (8) months, subject to the provisions of the PPA.
4. The sum total of the contracted capacities of all the units shall not be less than 3500 MW and more than 3800 MW at the delivery point.
5. The units shall be based on Supercritical Technology.

(Sowmyan Ramakrishnan)
Executive Director
Authorised signatory as per clause 2.7.1.1 of RFP

Section 'E'

Power of Attorney

(as per Annexure 10- Form 1 of RFP)



महाराष्ट्र MAHARASHTRA 16 NOV 2006 AD 8297080

The Tata Power Co. Ltd.

Power of Attorney

Know all men by these presents, We, The Tata Power Company Limited, having our registered office at Bombay House, 24, Homi Mody Street, Mumbai 400 001 do hereby constitute, appoint and authorize Mr Sowmyan Ramakrishnan residing at D-9, Income-tax Officers' Colony, Peddar Road, Mumbai 400 026, who is presently employed with us and holding the position of Executive Director (Finance) as our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of our Bid for the Project in response to the Request For Proposal dated 21st August 2006 issued by Costal Gujarat Power Limited ('RFP'), including signing and submission of the Bid and all documents specified in the RFP, including, undertakings, letters, certificates, acceptances, clarifications, guarantees, etc. making representations to the Authorised Representative or the Procurers named in the RFP, and providing information / responses to the Authorised Representative or the Procurers named in the RFP, representing us in all matters before the Authorised Representative or the Procurers named in the RFP, and generally dealing with the Authorised Representative or the Procurers named in the RFP, in all matters in connection with our Bid for the said Project.

.2

Ms. ROSHAN M. MASTER
NOTARY, GREATER BOMBAY
16 T, DALAL ESTATE,
LAMINGTON ROAD,
MUMBAI - 400 008

-2-

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the RFP.

IN WITNESS WHEREOF the Common Seal of THE TATA POWER COMPANY LIMITED has hereunto been affixed the 17th day of November Two thousand six.

The Common Seal of THE TATA POWER COMPANY LIMITED was hereunto affixed pursuant to Resolution passed by its Committee of Directors on 10th day of November, 2006 in the presence of Dr. H S Vachha and Mr. T R Menon two of the Directors of the Company.

Witnesses :

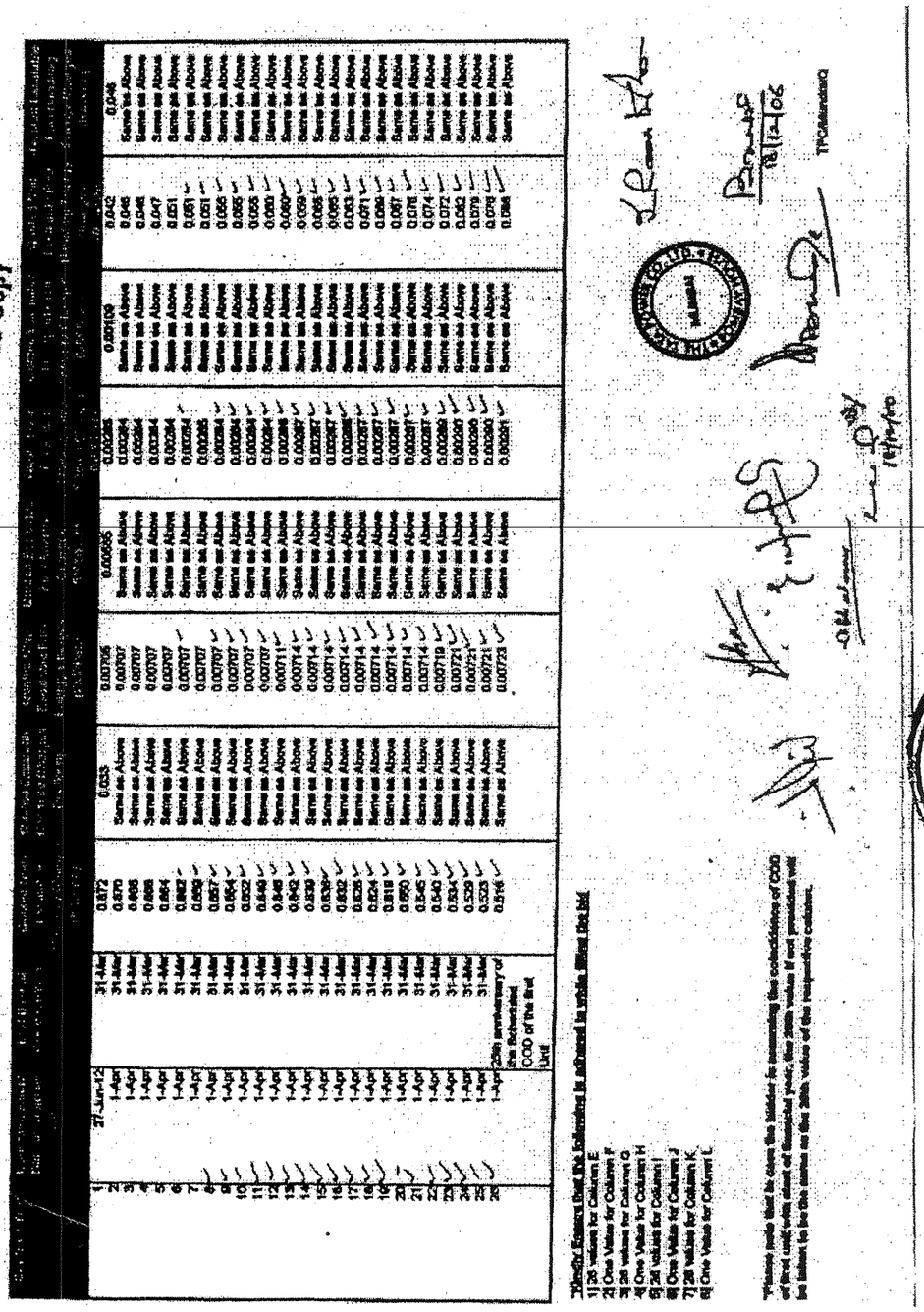
1)
2)

Accepted

Mr Sowmyan Ramakrishnan
Executive Director (Finance)
D-9, Income-tax Officers' Colony,
Peddar Road, Mumbai 400 026

Attested
Ms. ROSHAN M. MASTER
NOTARY, GREATER BOMBAY
16 T, DALAL ESTATE,
LAMINGTON ROAD,
MUMBAI - 400 008
S.No. 5560
Reg. No. 604
17.11.2006

Financial Bid



17. SCHEDULE 17: SUBSTITUTION RIGHTS OF THE LENDERS

1. Substitution of the Seller

a) Subject to the terms of the PPA, upon occurrence of a Seller Event of Default under the PPA, the Lenders shall, have the right to seek substitution of the Seller by a Selectee for the residual period of the PPA, for the purposes of securing the payments of the Total Debt Amount from the Seller and performing the obligations of the Seller, in accordance with the provisions of this Schedule.

b) The Lenders may seek to exercise right of substitution by an amendment or novation of the PPA and other Project Documents executed between Procurers and the Seller in favour of the Selectee, the Procurers and the Seller shall cooperate with the Lenders to carry out such substitution.

2. Procurers Notice of Default

The relevant Procurer (i.e. the Procurer who serves the Preliminary Default Notice on the Seller as per this Agreement) shall, simultaneously also issue a copy of the same to the Lenders.

3. Substitution Notice

In the event of failure of the Seller to rectify the event giving rise to Preliminary Default Notice and on receipt of a copy of the Termination Notice by the Procurer, the Lenders, either on their own or through its representative ("the Lenders' Representative") shall be entitled to notify the Procurers and the Seller of the intention of the Lenders to substitute the Seller by the Selectee for the residual period of the PPA (the **"Substitution Notice"**).

5. Interim operation of Project

a) On receipt of a Substitution Notice, no further action shall be taken by any Party to terminate the PPA, except under and in accordance with the terms of this Schedule 17 of this Agreement.

b) On issue of a Substitution Notice, the Lenders shall have the right to request the Procurers to enter upon and takeover the Project for the interim and till the substitution of the Selectee is complete and to otherwise take all such steps as are necessary for the continued operation and maintenance of the Project, including levy, collection and appropriation of payments thereunder, subject to, the servicing of monies owed in respect of the Total Debt Amount as per the Financing Agreements and the Seller shall completely cooperate in any such takeover of the Project by the Procurers. If the Procurers, at their sole and exclusive discretion agree to enter upon and takeover the Project, till substitution of the Selectee in accordance with this Agreement, such Procurers shall be compensated for rendering such services in accordance with clause 10.1.3 herein.

c) If the Procurers refuse to takeover the Project on request by the Lenders in accordance with clause 5(b) above, the Seller shall have the duty and obligation to continue to operate the Project in accordance with the PPA till such time as the Selectee is finally substituted under clause 8.8 hereof.

d) The Lenders and the Procurers shall, simultaneously have the right to commence the process of substitution of the Seller by the Selectee in accordance with these terms and the Seller hereby irrevocably consents to the same.

6. Process of Substitution of Seller

The Lenders' Representative may, on delivery of a Substitution Notice notify the Procurers and the Seller on behalf of all the Lenders about the Lenders' decision to invite and negotiate, at the cost of the Lenders, offers from third parties to act as Selectee, either through private negotiations or public auction and / or a tender process, for the residual period of the PPA. Subject to and upon approval of the Lead Procurer referred to in clause 8.5, such Selectee shall be entitled to receive all the rights of the Seller and shall undertake all the obligations of the Seller under the PPA and other Project Documents executed between the Seller and the Procurers, in accordance with these terms of substitution.

The Lenders and the Seller shall ensure that, upon the Lead Procurer approving the Selectee, the Seller shall transfer absolutely and irrevocably, the ownership of the Project to such Selectee simultaneously with the amendment or novation of the PPA and other Project Documents executed between the Seller and the Procurers in favour of the Selectee as mentioned in clause 1 (b).

7. Modality for Substitution

7.1 Criteria for selection of the Selectee.

The Lenders and / or the Lenders' Representative shall in addition to any other criteria that they may deem fit and necessary, apply the following criteria in the selection of the Selectee:

(a) if the Seller is proposed to be substituted during the Construction Period, the Selectee shall possess the technical and financial capability used to pre-qualify bidders in the RFQ stage (including the methodology prescribed therein) to perform and discharge all the residual duties, obligations and liabilities of the Seller under the PPA. If the Seller is proposed to be substituted during the Operation Period, this criteria shall not be applicable.

(b) the Selectee shall have the capability and shall unconditionally consent to assume the liability for the payment and discharge of dues, if any, of the Seller to the Procurers under and in accordance with the PPA and also payment of the Total Debt Amount to the Lenders upon terms and conditions as agreed to between the Selectee and the Lenders;

(c) the Selectee shall have not been in breach of any agreement between the Selectee and any Bank or any Lender or between the Selectee and any of the Procurers, involving sums greater than Rupees twenty (20) crores at any time in the last two (2) years as on the date of the substitution of the Seller.

(d) any other appropriate criteria, whereby continuity in the performance of the Selectee's obligations under the PPA is maintained and the security in favour of the Lenders under the Financing Agreements is preserved.

8. **Modalities**

The following modalities shall be applicable to any substitution of the Seller by the Selectee pursuant to this Agreement:

8.1 The Lenders' Representative shall on behalf of the Lenders propose to the Procurers (the "Proposal") pursuant to sub-clause 8.2 below, the name of the Selectee for acceptance, seeking:

(a) grant of all the rights and obligations under the PPA and the other Project Documents executed between the Procurers and the Seller, to the Selectee (as substitute for the Seller);

(b) amendment of the PPA and the other Project Documents executed between the Procurers and the Seller, to the effect that the aforementioned grant to the Selectee, shall be such that the rights and obligations assumed by the Selectee are on the same terms and conditions for the residual period of the PPA as existed in respect of the Seller under the original PPA and the other Project Documents executed between the Procurers and the Seller; and

(c) the execution of new agreements as necessary, by the proposed Selectee for the residual period of the PPA on the same terms and conditions as are included in this Agreement.

8.2 The Proposal shall contain the particulars and information in respect of the Selectee, the data and information as any of the Procurers may reasonably require. The Procurers may intimate any additional requirement within thirty (30) days of the date of receipt of the Proposal.

8.3 The Proposal shall be accompanied by an unconditional undertaking by the Selectee that it shall, upon approval by the Procurers of the Proposal:

(a) observe, comply, perform and fulfil the terms, conditions and covenants of the PPA and all Project Documents executed between Seller and the Procurers or a new power purchase agreement or respective Project Document (in the case of the novation thereof), which according to the terms therein are required to be observed, complied with, performed and fulfilled by the Seller, as if such Selectee was the Seller originally named under the PPA; or the respective Project Document; and

(b) be liable for and shall assume, discharge and pay the Total Debt Amount or then outstanding dues to the Lenders under and in accordance with the Financing Agreements or in any other manner agreed to by the Lenders and the Procurers as if such Selectee was the Seller originally named under such Financing Agreements.

8.4 At any time prior to taking a decision in respect of the Proposal received under clause 8.1, the Procurers may require the Lender / Lenders' Representative to satisfy it as to the eligibility of the Selectee. The decision of the Procurers as to acceptance or rejection of the Selectee, shall be made reasonably and when made shall be final, conclusive and binding on the Parties.

8.5 All Procurers shall convey their approval or disapproval of such Proposal, through the Lead Procurer, to the Selectee. Such decision shall be made by the Procurers at their reasonably exercised discretion within twenty one (21) days of:

(a) the date of receipt of the Proposal by the Procurers; or

(b) the date when the last of further and other information and clarifications in respect of any data, particulars or information included in the Proposal requested by any of the Procurers under clause 8.2 above is received;

whichever is later.

Notwithstanding anything to the contrary mentioned in this Agreement, the approval of the Procurer(s) or Lead Procurer for the Selectee shall not be withheld in case the Selectee meets the criteria mentioned in Clause 7.1.

8.6 Upon approval of the Proposal and the Selectee by the Procurers, the Selectee mentioned in the Proposal shall become the Selectee hereunder.

8.7 Following the rejection of a Proposal, the Lenders and/or the Lenders' Representative shall have the right to submit a fresh Proposal, proposing another Selectee (if the rejection was on the grounds of an inappropriate third party proposed as Selectee) within sixty (60) days of receipt of communication regarding rejection of the Selectee previously proposed. The provisions of this clause shall apply *mutatis mutandis* to such fresh Proposal.

8.8 The substitution of the Seller by the Selectee shall be deemed to be complete upon the Selectee executing all necessary documents and writings with or in favour of the Seller, Procurers and the Lenders so as to give full effect to the terms and conditions of the substitution, subject to which the Selectee has been accepted by the Lenders and the Procurers and upon transfer of ownership and complete possession of the Project by the Procurers or the Seller, as the case may be, to the Selectee. The Procurers shall novate all the Project Documents, which they had entered in to with the Seller in order to make the substitution of the Seller by the Selectee effective. The quantum and manner of payment of the consideration payable by the Selectee to the Seller towards purchase of the Project and assumption of all the rights and obligations of the Seller under the PPA and the Project Documents as mentioned in this Agreement shall be entirely between the Seller,

Selectee and the Lenders and the Procurers shall in no way be responsible to bear the same.

8.9 Upon the substitution becoming effective pursuant to sub-clause 8.8 above, all the rights of the Seller under the PPA shall cease to exist:

Provided that, nothing contained in this sub-clause shall prejudice any pending / subsisting claims of the Seller against a Procurer or any claim of the Procurers against the erstwhile Seller or the Selectee.

8.10 The Selectee shall, subject to the terms and conditions of the substitution, have a period of ninety (90) days to rectify any breach and / or default of the Seller subsisting on the date of substitution and required to be rectified and shall incur the liability or consequence on account of any previous breach and / or default of the Seller.

8.11 The decision of the Lenders and the Procurers in the selection of the Selectee shall be final and binding on the Seller and shall be deemed to have been made with the concurrence of the Seller. The Seller expressly waives all rights to object or to challenge such selection and appointment of the Selectee on any ground whatsoever.

8.12 The Lenders shall be solely and exclusively responsible for obtaining any and all consents/approvals or cooperation, which may be required to be obtained from the Seller under this Agreement and the Procurers shall not be liable for the same.

8.13 All actions of the Lenders' Representative hereunder shall be deemed to be on behalf of the Lenders and shall be binding upon them. The Lenders' Representative shall be authorised to receive payment of compensation and any other payments, including the consideration for transfer, if any, in accordance with the Proposal and the Financing Agreements and shall be bound to give valid discharge on behalf of all the Lenders.

9. Seller's Waiver

9.1 The Seller irrevocably agrees and consents (to the extent to which applicable law may require such consent) to any actions of the Lenders, the Lender's Representative and the Procurers or exercise of their rights under and in accordance with these terms.

9.2 The Seller irrevocably agrees and consents (to the extent to which applicable law may require such consents) that from the date specified in clause 8.9, it shall cease to have any rights under the PPA or the Financing Agreements other than those expressly stated therein.

9.3 The Seller warrants and covenants that any agreement entered into by the Seller, in relation to the Project, shall include a legally enforceable clause providing for automatic novation of such agreement in favour of the Selectee, at the option of the Lenders or the Procurers. The Seller further warrants and covenants that, in respect of any agreements which have already been executed in relation to the Project and which lack a legally enforceable clause providing for automatic novation of such agreement, the Seller shall procure an amendment in the concluded agreement to incorporate such clause.

10. Interim Protection Of Service And Preservation Of Security

10.1 Appointment of a Receiver

10.1.1 In every case of the Lenders issuing a Substitution Notice and the Procurers refusing to takeover the Project and the Seller failing to operate the Project in accordance with Clause 5(c) above and the Procurers not electing to act as Receiver as per sub-clause 10.1.1A hereof, the Lenders may institute protective legal proceedings for appointment of a receiver (the "**Receiver**") to maintain, preserve and protect the assets held as security by the Lenders if such right is granted under the terms of the Financing Agreements.

10.1.1A If the assets of the Project are, in the opinion of the Procurers, necessary and required for the operation and maintenance of the Project, the Procurers shall be entitled to elect to act as the Receiver for the purposes of this Clause and be entitled to maintain, preserve and protect the said assets by engaging an operator/service provider to act on their behalf and the Lenders and Seller hereby consent and agree to the same. Upon the Procurers so intimating the Seller and the Lender's representative their desire to act as Receiver, the Seller and the Lender's representative shall co-operate with the Procurers to facilitate the same.

10.1.2 Upon appointment of the Court appointed Receiver or the Procurers acting as Receiver, all the Receivables received by such Receiver shall be deposited by the Receiver in the bank account jointly designated by the Procurers and the Lenders. The Receiver shall be responsible for protecting the assets in receivership and shall render a true and proper account of the receivership to the lenders in accordance with the terms of its appointment.

10.1.3 When acting as a Receiver or operator in accordance with this clause 10 or clause 5(b), Procurers shall be entitled to be remunerated for such services as may be determined by Central Electricity Regulatory Commission. Furthermore, when acting as a Receiver, the Procurers shall not be liable to the Lenders, the Lenders' Representative, Seller or any third party for any default under the PPA, damage or loss to the Power Station or for any other reason whatsoever, except for wilful default of the Procurers.

11. Substitution Consideration

11.1 The Lenders and Procurers shall be entitled to appropriate any consideration received for the substitution of the Seller as hereinabove provided, from the Selectee towards the payment of Lenders' and the Procurer's respective dues, to the exclusion of the Seller.

11.2 The Seller shall be deemed to have nominated, constitutes and appoints the Lenders' Representative as its constituted attorney for doing all acts, deeds and things as may be required to be done for the substitution of the Seller by the Selectee pursuant to these terms.

12. Change in the Procurers or Lenders

The Parties hereto acknowledge that during the subsistence of the PPA, it is possible that any Procurer(s) may cease to be a party to this Agreement by reason of termination of PPA vis-à-vis such Procurer and any Lender may cease to remain as a Lender by reason of repayment of the debt or otherwise. Further it may possible that any Lender may be substituted or a new Lender may be added. In the event of any Procurer ceasing to be a party to the PPA or Financing Agreement respectively, the term and conditions as prescribed in this Schedule shall cease to automatically apply to such Procurer or Lender as the case may be. Further, upon any entity being added as a Lender and in the event such entity is given the right to substitute the Seller under the Financing Agreement and then the contents of this Schedule shall be applicable to the exercise of such right by the said new entity.

ANNEXURE - 3

रजिस्ट्री सं. डी.एल.- 33004/99 REGD. No. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

सी.जी.-डी.एल.-अ.-01042021-226335
CG-DL-E-01042021-226335

असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (i)
PART II—Section 3—Sub-section (i)

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं. 192] नई दिल्ली, बृहस्पतिवार, अप्रैल 1, 2021/चैत्र 11, 1943
No. 192] NEW DELHI, THURSDAY, APRIL 1, 2021/CHAITRA 11, 1943

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 31 मार्च, 2021

सा.का.नि. 243(अ).—केन्द्रीय सरकार, पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3, धारा 6 और धारा 25 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, पर्यावरण (संरक्षण) नियम, 1986 का और संशोधन करने के लिए निम्नलिखित नियम बनाती है, अर्थात् :-

1. (1) इन नियमों का संक्षिप्त नाम पर्यावरण (संरक्षण) संशोधन नियम, 2021 है।

(2) ये नियम राजपत्र में प्रकाशन की तारीख को प्रवृत्त होंगे।

2. पर्यावरण (संरक्षण) नियम, 1986 की अनुसूची-1, के क्रम संख्यांक 25 में, "*टीपीपी (इकाईयां) इस अधिसूचना के प्रकाशन की तारीख से दो वर्ष के भीतर सीमाओं को पूरा करेंगी", अक्षरों, कोष्ठकों और शब्दों के स्थान पर, निम्नलिखित रखा जाएगा, अर्थात् :-

"*(i) पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, विद्युत मंत्रालय, केन्द्रीय विद्युत प्राधिकरण (सीईए) और केन्द्रीय प्रदूषण नियंत्रण बोर्ड के प्रतिनिधियों से मिलकर बने कार्य बल का गठन केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) द्वारा सारणी-1 में यथाविनिर्दिष्ट तीन प्रवर्गों में सारणी-1 के स्तंभ (4) में यथाविनिर्दिष्ट समय सीमा के भीतर उत्सर्जन मानदंडों के अनुरुप होने के लिए उनकी अवस्थिति के आधार पर तापीय विद्युत संयत्रों के प्रवर्गीकरण हेतु किया जाएगा, अर्थात् :-

सारणी-1

क्र.सं.	प्रवर्ग	अवस्थिति/स्थान	अनुपालन के लिए समय सीमाएं	
			निवृत्त नहीं होने वाली इकाईयां	निवृत्त होने वाली इकाईयां
(1)	(2)	(3)	(4)	(5)
1	प्रवर्ग क	10 लाख से अधिक जनसंख्या वाले राष्ट्रीय राजधानी क्षेत्र या शहरों की 10 किलोमीटर की परिधि के भीतर 1	31 दिसम्बर, 2022 तक	31 दिसम्बर, 2022 तक
2	प्रवर्ग ख	गंभीर रूप से प्रदूषित क्षेत्रों या गैर प्राप्ति शहरों की 10 किलोमीटर की परिधि के भीतर 2	31 दिसम्बर, 2023 तक	31 दिसम्बर, 2025 तक
3	प्रवर्ग ग	प्रवर्ग क और ख में सम्मिलित से भिन्न	31 दिसम्बर, 2024 तक	31 दिसम्बर, 2025 तक

[1] भारत की 2011 की जनगणना के अनुसार।

[2] सीपीसीबी द्वारा यथापरिभाषित।

(ii) सारणी-1 के स्तंभ (5) में यथाविनिर्दिष्ट तारीख के पूर्व निवृत्त होने के लिए घोषित तापीय विद्युत संयत्र से, उस स्थिति में जहां ऐसे संयंत्र उनके निवृत्त होने के आधार पर छूट के लिए सीपीसीबी और सीईए को एक प्रतिज्ञान प्रस्तुत करते हैं, विनिर्दिष्ट मानदंडों को पूर्ण करने की अपेक्षा नहीं की जाएगी:

परन्तु ऐसे संयत्रों से, उस स्थिति में जहां उनका प्रचालन प्रतिज्ञान में यथाविनिर्दिष्ट तारीख से आगे जारी रहता है, जनित विद्युत के प्रति यूनिट पर 0.20 रुपए की दर से पर्यावरण प्रतिकर उद्ग्रहीत किया जाएगा;

(iii) निवृत्त नहीं होने वाले तापीय विद्युत संयंत्र से, सारणी-1 के स्तंभ (4) में यथाविनिर्दिष्ट तारीख के पश्चात्, सारणी-2 में विनिर्दिष्ट दरों के अनुसार पर्यावरण प्रतिकर उद्ग्रहीत किया जाएगा, अर्थात् :-

सारणी-2

समय-सीमा से आगे गैर अनुपालन प्रचालन	पर्यावरणीय प्रतिकर (रुपए प्रति यूनिट जनित विद्युत)		
	प्रवर्ग क	प्रवर्ग ख	प्रवर्ग ग
0-180 दिवस	0.10	0.07	0.05
181-365 दिवस	0.15	0.10	0.075
366 दिवस और अधिक	0.20	0.15	0.10"

[फा.सं. क्यू-15017/40/2007-सीपीडब्ल्यू]

नरेश पाल गंगवार, संयुक्त सचिव

टिप्पण: मूल नियम, भारत के राजपत्र, असाधारण, भाग II, खंड 3, उपखंड (i) में अधिसूचना संख्या का.आ. 844(अ), तारीख 19 नवम्बर, 1986 द्वारा प्रकाशित किए गए थे और उनका अंतिम संशोधन अधिसूचना संख्या सा.का.नि. 662(अ), तारीख 19 अक्तूबर, 2020 द्वारा किया गया।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 31st March, 2021

G.S.R. 243(E).—In exercise of the powers conferred by sections 3, 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:—

1. (1) These rules may be called the Environment (Protection) Amendment Rules, 2021.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Environment (Protection) Rules, 1986, in Schedule – I, in serial number 25 for letters, brackets and words "*TPPs (units) shall meet the limits within two years from date of publication of this notification", the following shall be substituted, namely: -

"* (i) A task force shall be constituted by Central Pollution Control Board (CPCB) comprising of representative from Ministry of Environment and Forest and Climate Change, Ministry of Power, Central Electricity Authority (CEA) and CPCB to categorise thermal power plants in three categories as specified in the Table-I on the basis of their location to comply with the emission norms within the time limit as specified in column (4) of the Table-I, namely: -

Table-I

Sl. No.	Category	Location/area	Timelines for compliance	
			Non retiring units	Retiring units
(1)	(2)	(3)	(4)	(5)
1	Category A	Within 10 km radius of National Capital Region or cities having million plus population[1].	Upto 31st December 2022	Upto 31st December 2022
2	Category B	Within 10 km radius of Critically Polluted Areas[2] or Non-attainment cities[2]	Upto 31st December 2023	Upto 31st December 2025
3	Category C	Other than those included in category A and B	Upto 31st December 2024	Upto 31st December 2025

[1] As per **2011** census of India.

[2] As defined by CPCB.

(ii) the thermal power plant declared to retire before the date as specified in column **(5)** of Table-I shall not be required to meet the specified norms in case such plants submit an undertaking to CPCB and CEA for exemption on ground of retirement of such plant:

Provided that such plants shall be levied environment compensation at the rate of rupees **0.20** per unit electricity generated in case their operation is continued beyond the date as specified in the Undertaking;

(iii) there shall be levied environment compensation on the non-retiring thermal power plant, after the date as specified in column **(4)** of Table-I, as per the rates specified in the Table-II, namely:-

Table-II

Non-Compliant operation beyond the Timeline	Environmental Compensation (Rs. per unit electricity generated)		
	Category A	**Category B**	**Category C**
0-180 days	0.10	0.07	0.05
181-365 days	0.15	0.10	0.075
366 days and beyond	0.20	0.15	0.10. "

[F. No. Q-15017/40/2007-CPW]

NARESH PAL GANGAWAR, Jt. Secy.

Note: The principle rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i) vide number S.O. 844(E), dated the 19th November, 1986 and lastly amended vide notification G.S.R. 662(E), dated the 19th October, 2020.

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CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 168/MP/2019

Coram:

Shri P.K. Pujari, Chairperson
Shri I.S. Jha, Member

Date of Order: 22nd June, 2020

In the matter of

Petition, under Section 79 of the Electricity Act, 2003 read with Article 13 of the Power Purchase Agreement dated 22.04.2007 and Clause 4.7 of the Competitive Bidding Guidelines and this Hon'ble Commission's Order dated 17.09.2018 in Petition No. 77/MP/2016.

And

In the matter of

Coastal Gujarat Power Limited (CGPL),
C/o- Tata Power Company Limited,
34, Sant Tukaram Road, Carnac Bunder,
Mumbai- 400021

...Petitioner

Versus

1. Gujarat Urja Vikas Nigam Ltd,
   Sardar Patel Vidhyut Bhavan, Race Course,
   Vadodara-390007, Gujarat

2. Maharashtra State Electricity Distribution Company Ltd.,
   4th Floor, Prakashgad, Plot No. G-9,
   Bandra (East), Mumbai-400051, Maharashtra

3. Ajmer Vidyut Vitaran Nigam Ltd.
   Hathi Bhata, Old Power House,
   Ajmer,Rajasthan

4. Jaipur Vidyut Vitaran Nigam Ltd.
   Vidyut Bhawan, Janpath,
   Jaipur, Rajasthan.

5. Jodhpur Vidyut Vitaran Nigam Ltd.
   New Power House, Industrial Area,

Jodhpur, Rajasthan.

6. Punjab State Power Corporation Limited
PP&R, Shed T-1, Thermal Design,
Patiala-147001

7. Uttar Haryana Bijli Vitran Nigam Limited,
Vidyut Sadan, Plot No. C-16, Sector-6,
Panchkula-134112, Haryana

8. Dakshin Haryana Bijli Vitran Nigam Limited
Vidyut Nagar, Vidyut Sadan,
Hisar, Haryana-125005

9. Central Electricity Authority
Sewa Bhawan,
R.K. Puram, Sector-1,
New Delhi-110066 **...Respondent**

Parties present:

Shri Amit Kapur. Advocate, CGPL
Shri Kunal Kaul, Advocate, CGPL
Shri Samikrith Rao, Advocate, CGPL
Ms. Ranjitha Ramachandran, Advocate, GUVNL, Haryana & Rajasthan Utilities and PSPCL
Ms. Poorva Saigal, Advocate, GUVNL, Haryana & Rajasthan Utilities and PSPCL
Ms. Tanya Sareen, Advocate, GUVNL, Haryana & Rajasthan Utilities and PSPCL
Shri Pulkit Tare, Advocate, MSEDCL
Shri Anup Jain, Advocate, MSEDCL

ORDER

The petitioner, Coastal Gujarat Power Ltd. (CGPL), is a generating company operating Mundra Ultra Mega Power Project (UMPP), having installed capacity of 4150 MW (5x830 MW) at Mundra, Gujarat. The Respondents are mainly distribution licensee buying electricity generated from Mundra UMPP that have entered into Power Purchase Agreements ("PPA") dated 22.4.2007 with the petitioner consequent upon determination of tariff on basis of competitive bidding carried out under Section 63 of the Electricity Act, 2003 (hereinafter referred to as the "Act").

Background

2. Ministry of Environment, Forest and Climate Change, Government of India ("the MoEF&CC") vide notification dated 7.12.2015 (hereinafter referred to as the "2015 Notification") *inter-alia* specified revised standards of emission applicable to thermal generating stations (hereinafter referred to as the "Revised Norms"). The Petitioner filed Petition no. 77/MP/2016 under Article 13 of the PPA, which was disposed by the Commission on 17.9.2018 with the direction to approach this Commission for determining increase in cost or/and revenue expenditure on account of implementation of Revised Norms prescribed in the 2015 Notification, in accordance with the guidelines to be issued by Central Electricity Authority ("the CEA"). On 27.9.2018, Petitioner submitted feasibility report with regard to SO_2 abatement to the CEA. On 21.2.2019, CEA furnished its report detailing the "suggestive technology" and "indicative cost" for installation of FGD system at Mundra Project to comply with revised emission standards. Subsequent to feasibility report with regard to SO_2 abatement, CGPL had, on 9.11.2018, submitted a feasibility report with regard to Nitrogen Oxide abatement measures. However, CEA has not provided any recommendation as regards Nitrogen Oxide. Though as per the 2015 Notification, the Revised Norms were to be implemented within two years of its notification, it has been revised by Central Pollution Control Board (CPCB) vide its letter dated 11.12.2017 and the same now stands as under with respect to Mundra UMPP:

Unit No.	**1**	**2**	**3**	**4**	**5**
PM	Immediately				
SO_2	30.6.2020	31.3.2021	30.6.2021	31.3.2022	31.3.2022
NOx	2022				

3. The main prayers of the Petitioner are as under:

(a) Approve the total capital expenditure of Rs. 2715 Crores to be incurred

by CGPL due to installation of FGD;

(b) Approve the recurring annual operating expenditure to be incurred by CGPL due to installation of FGD, as provided in the instant petition,

(c) Approve the revised tariff as provided in the instant petition.

(d) In the alternative to Prayer (d) above, prescribe, devise and apply appropriate norms for computing the adjustment in tariff to offset the additional investment/ increase in costs due to MoEFCC Notification for restituting CGPL to the same economic position as if such Change in Law event had not occurred.

(e) Pass any such other and further reliefs as this Hon'ble Commission deems just and proper in the nature and circumstances of the present case.

4. The Respondents, GUVNL and Rajasthan Discoms have filed their reply vide affidavits dated 21.10.2019 and 17.2.2020; the Respondent, MSEDCL has filed its reply vide affidavit dated 4.11.2019; the Respondents, Haryana Utilities have filed their reply vide affidavit dated 19.10.2019; the Respondent, PSPCL has filed its reply vide affidavit dated 18.10.2019. The Respondent, CEA has not filed its reply. The petitioner has filed its consolidated rejoinder vide affidavits dated 11.11.2019 and 21.11.2019 and submitted information sought by the Commission vide affidavit dated 10.2.2020.

Submissions of the Petitioner

5. The petitioner has made the following submissions vide its affidavit filed with the main Petition:

a) On 07.12.2015, MoEF&CC had notified the Environment (Protection) Amendment Rules, 2015 (the 2015 Notification). The Revised Norms notified by this Amendment were to be complied by all Thermal Power Plants including CGPL on or before 6.12.2017.

b) On 28.6.2018, MoEF&CC issued a notification stating, amongst others, that the water consumption requirement and installation of Cooling Tower is not applicable to Thermal Power Plants using sea water. Further, MoEF&CC also provided a stack height limit for all the Thermal Power Plants with wet limestone FGD.

c) CGPL is complying with the Revised Norms prescribed in the 2015 Notification, except the emission norms in regard to Sulphur Dioxide and Nitrogen Oxide. To meet the Revised Norms in respect of Sulphur Dioxide and Nitrogen Oxide, CGPL is required to retrofit certain equipment, which would require it to incur one-time capital expenditure (including other ancillary expenditure/ liability to be incurred by CGPL) and recurring operational expenditure during the term of the PPA, for which CGPL is to be restituted to the same economic position as if such Change in Law event has not occurred.

d) Accordingly, CGPL filed Petition No. 77/MP/2016, inter-alia, seeking:

(i) A declaration that the 2015 Notification constitutes a Change in Law event under the PPA; and

(ii) In-principle approval for incurring the capital cost and prescribing a methodology for computing the adjustment in tariff to offset the additional investment or increase in costs due to the 2015 Notification, so as to restitute CGPL to the same economic position as if such Change in Law event had not occurred.

e) On 17.9.2018, the Commission had passed an Order in the aforesaid Petition No. 77/MP/2016 holding that the 2015 Notification amounts to Change in Law in terms of Article 13 of the PPA. Further, liberty was also granted to CGPL to approach this Commission for 'determining increase in cost or/and revenue expenditure on account of implementation of revised norms prescribed in the 2015 Notification, in accordance with the Guidelines to be issued by CEA and the mode of recovery of the same through monthly tariff'.

f) Thereafter, on 27.9.2018, CGPL submitted feasibility report to CEA, detailing Sulphur Dioxide abatement measures, specific to the Mundra UMPP. The said report provided justification for selecting sea water based FGD system and the tentative capital and operational expenditure to be incurred for retrofitting the FGD. On 9.11.2018, CGPL submitted feasibility report to CEA detailing the Nitrogen Oxide abatement measures, specific to Mundra UMPP. However, CEA has not provided its recommendations with regard to Nitrogen Oxide abatement technology or the approximate capital and operational cost.

g) On 21.2.2019, CEA issued its report recommending the technology and indicative cost for installing the FGD system to meet the Revised Norms pertaining to Sulphur Dioxide and has considered indicative capital expenditure of Rs. 0.30 crores/MW (i.e. total capital expenditure of Rs. 1,245 crores). CEA has not provided any justification, scope of work, norms, assumptions considered by it for computing the capital expenditure to be incurred by CGPL for installation of FGD system. The capital expenditure considered by CEA is merely an indicative figure and the same does not reflect the actual capital expenditure which would be incurred by CGPL to install the FGD. CGPL has carried out a detailed bidding process followed by a round of negotiations, to discover the lowest price available. However, the amount discovered is higher than the price suggested by CEA.

h) The changes in environmental parameters vide the 2015 Notification constitutes a Change in Law in terms of the PPA, which has a substantial impact on the cost (capital and operational) of the Mundra UMPP. Therefore, CGPL needs to be appropriately restituted to the same economic position as if such Change in Law had not occurred. Considering the financial health of CGPL, it would not be possible for CGPL to execute the FGD system on its own without seeking debt from the lenders. Thus, clarity is required qua revision in tariff so as to enable CGPL to arrange for necessary finance from the lenders and to proceed further.

i) Thus, in term of the liberty granted by this Commission in its Order dated 17.9.2018 in Petition No. 77/MP/2016 and in terms of Section 79 of the Electricity Act, 2003; Article 13 of the PPA; and Clause 4.7 of the Competitive Bidding Guidelines issued by the Ministry of Power, CGPL has filed the present Petition for seeking approval of Capital Cost (including recovery of other ancillary expenditure/ loss) and Operational Cost which may be incurred/ caused to CGPL for installing FGD system so as to meet the Revised Norms. Further, CGPL has sought approval of additional tariff to be allowed to offset the additional investment/ increase in costs to be incurred by CGPL due to the 2015 Notification.

j) CGPL may also be permitted to file a separate petition seeking approval of capital, operational and other expenditure qua installation of Nitrogen Oxide abatement technology, as and when the same is approved by CEA.

k) CGPL has carried out a detailed bidding process followed by a round of

negotiations, to discover the lowest price available. The tender was divided into the following five packages:

(i) FGD Main Package [Package 1];

(ii) Civil Works Package [Package 2];

(iii) Chimney Civil Works [Package 3];

(iv) HT electric power supply package [Package 4]; and

(v) Fire-fighting System [Package 5].

Of the above five packages, CGPL has resorted to competitive bidding process to award the four critical packages i.e. packages 1 to 4. Package 5 i.e. 'Fire-fighting system' is ancillary in nature and not very cost-intensive that is estimated at Rs. 10 crores (i.e. less than 0.5% of the total expenditure of around Rs.1634.33 crores). Since most of the requirements and specifications would be firmed up after detailed engineering of packages 1 to 4 awarded to successful bidders, package 5 works may be awarded to contractor through limited tendering. In the interest of time, an open tendering process, which is time consuming, is not being envisaged in respect of this package 5.

l) Based on the competitive bidding process conducted for packages 1 to 4 and internal cost assessment in respect of package 5, the total price for the installation and operationalization of the entire FGD system is Rs. 1,634.33 crores (i.e. Rs. 0.39 crores/MW as against Rs. 0.30 crores/MW suggested by CEA). The details of the price discovered from the said bidding process is as under:

S. No.	Description	Capital Expenditure (Rs. in crores)
1.	FGD Main System Package	1,122
2.	General Civil Works Package	333.30
3.	Chimney Package	104.03
4.	HT Electric Power Supply Package	65.00
5.	Fire Protection and Detection System	10*
Total		**1,634.33**

** Note: The said costs are based on the internal estimate of CGPL.*

m) None of the bidders were willing to install FGD system and other equipment at the price indicated by CEA (Rs. 0.30 crores/MW). The variation between the price indicated by CEA vis-a-vis the price discovered under the bidding process could be due non-consideration of certain equipment and/ or the cost related thereto, by CEA while giving its recommendations qua installation of FGD. Some of the equipment along with the associated cost which have not been considered by CEA are as under:

Sl. No.	Equipment	Estimated Cost (Rs. in crores)
1	Gas to Gas Heater	75
2	Booster Fan	30
3	Installation of Sea Water Intake channel	105
4	Temporary Circulating Water Outfall Bypass channel	53
5	Restoration of existing access roads and re-routing of Utilities	12
6	FGD Return Water	132
7	Miscellaneous cost- Installation of Electrical & Fire safety System	75
Total		**482**

n) In terms of the CEA's recommendation, CGPL has carried out the bidding process to discover the lowest possible price for installation of FGD package. The capital cost to be incurred by CGPL comprises of the following:

(i) Basic cost discovered (including GST).

(ii) Estimated capital costs for which the negotiations are ongoing (including GST).

(iii) Owner's cost: includes CGPL's costs towards site survey, project management, consultancy services and pre-operational expenses. CGPL has estimated the same to be around 5% of the total EPC Costs. However, there is no normative basis of computing the said expenditure and this cost has been considered to be around 5% on the basis of prudent utility practices, keeping in mind the time required for finishing the entire work. In this regard, CGPL considered some of the recent petitions filed by NTPC before this Commission. Based on the data provided in Form 5B of the Tariff Petition filed by NTPC, CGPL has worked out the fraction (i.e. percentage) of hard cost towards the owner's costs which is in the form of construction and pre-commissioning expenditure.

(iv) IDC computed with an estimated projection of cash flows.

(v) Contingency expenditure: CGPL has considered a contingency expenditure of 5% of total capital expenditure. Contingency expenditure covers the expenditure which could not have been visualised at the time of planning and the same depends on the extent of uncertainty that may be envisaged. Further, such expenditure would also depend on the hard cost projected. In case of lower total costs, the contingency expenditure (in % terms) would be higher compared to the case when total cost is higher. Further, expenditure on FGD system is quite new to the country and there may be certain additional expenditure which may not have been contemplated at the time of initiation of work. Hence, though in the petitions of NTPC for the above power plants, the contingency expenditure is around 1%, CGPL is of the view that this quantum is quite low for a new brown field project, especially when the experience in FGD system equipment, its construction and commissioning is limited in the country. Hence, CGPL has considered 5% of the expenditure towards contingency expenditure.

(vi) Other ancillary expenditure (Opportunity Cost): The implementation of the aforesaid scheme/ installation or modification of equipment to meet revised standards would require shutting down of Mundra UMPP and/ or planned outages. As a result, Mundra UMPP may not be completely/ partially available during the period when these equipment are being installed and connected to the existing plant. In this regard, as per CGPL's estimate installation of FGD package would lead to outage for about 22 days for each unit thereby reducing the recovery of the capacity charges for this period.

o) The computation of Capital Cost is provided in the table below:

Sr.No.	Descriptions	Capex Estimate (Rs. in crores)
A	Capital Cost	
1	Total FGD EPC Cost	
1.1	FGD Main System Package	1,122.00
1.2	General Civil Works Package	333.30
1.3	Chimney Package	104.03
1.4	HT Electrical Power Supply Package	65.00
1.5	Fire Protection & Detection System	10.00
1	**Total FGD EPC Basic Price**	**1,634.33**
2	Spares	Included in 1
3	Owner's Cost (Consultancy Services, Site Survey, Project Management etc.)	81.72
4	GST (@18% of base cost i.e. 1+2)	308.89
5	EPC Cost incl Tax	**2,024.93**
6	Contingencies (@5% of EPC Cost)	101.25
7	**Total EPC Cost Incl Tax & Contingencies**	**2,126.18**
8	IDC (@10.41%*)	408.01
9	Opportunity Costs	181.18
10	**Project Cost including IDC**	**2,715**

**considered as per the Tariff order dated 19th March 2019 for renewable source*

p) The difference between estimates of CEA and that of the petitioner is on

account of following:

(i) The CEA has considered an Auxiliary Consumption of 1% and additional 0.153% for cases using GGH with old and existing chimney, whereas additional auxiliary consumption is independent of installation of chimney.

(ii) CEA has considered a total additional annual operational expenditure of Rs. 114 crore towards auxiliary consumption, but CEA has failed to consider that the increase in auxiliary consumption would have twin impact, viz. impact on Capacity Charges (due to decrease in Declared Capacity) and the impact on Energy Charges (on account of excess consumption of coal). There is an overall reduction of availability to the tune of 1.153% due to additional auxiliary consumption which needs to be grossed up by 1.153% and the Normative Availability is to be reduced to 78.847% [80% less 1.153%]. The Net Heat Rate would be required to increase further which in turn would impact the Energy Charge.

(iii) CEA has considered additional annual operational expenditure of Rs. 24.9 crores towards operation and maintenance expenses of FGD i.e. about 2% of the total capital cost (i.e. basic cost of Rs. 0.30 crores/MW) whereas estimated annual expenditure on account of operation and maintenance of FGD would be around Rs. 65.77 crores, which works out to about 4.05% of the total capital cost as against 2% estimated by CEA.

(iv) CEA has not considered the expenditure towards insurance which is to be considered as 0.13% of GFA as an additional cost towards insurance charges.

q) The installation of FGD would impact the tariff to procurer in the following ways:

(i) Increase in capacity charge due to capital expenditure incurred.

(ii) Increase in capacity charge due to recurring operating expenditure (i.e. increase in Auxiliary Consumption, O&M expenses of FGD system and insurance cost).

(iii) Increase in energy charge due to increase in Auxiliary Consumption.

r) The capital expenditure to be incurred for installation of FGD is similar to renewable project, where the impact of capital cost incurred can be captured in terms of levelized tariff. This comes to levelized tariff of Rs 0.20 per kWh on account of the capital cost and increased O&M expenditure.

s) It would be difficult for banks to give loan for additional capital expenditure required for installing FGD system. Also, having infused so much equity and perpetual debt in the project for last six and half years, the Petitioner is not in a position to execute the FGD system on its own without loan from lenders. Even if the

petitioner is able to tie up loan for FGD system, the interest rate would be significantly higher than that applicable for similar project of other power generators.

t) Government of Gujarat had set up a High-Power Committee ("HPC") in July 2018 to address the issue of stress faced by three projects situated in the State of Gujarat (i.e. CGPL, Essar Power Limited and Adani Power (Mundra) Limited). In this regard, the draft of Supplemental Agreement has been agreed between GUVNL and the petitioner. The Supplemental PPA is being discussed with the other Procurers. Due to very poor financial condition of the petitioner, the implementation of HPC report through Supplemental PPA is imperative and without this, it would become difficult to raise funds (either Debt or Equity) to complete the capital expenditure envisaged under this petition.

u) The compliance to the change in law would depend on the outcome of the implementation of the HPC report to enable to source required funds to finance the capital expenditure. The petitioner sought directions to the Procurers to provide for necessary contractual payment mechanism as may be required by the banks for them to lend additional funds to an already loss making project.

Submissions of the Respondents

6. The Respondent No.6 vide affidavit dated 18.10.2019, Respondents 7 & 8 vide affidavit dated 19.10.2019, Respondent No. 1 vide affidavit dated 21.10.2019 and Respondent No. 2 vide affidavit dated 4.11.2019 have mainly submitted the following:

a) CGPL is seeking in-principle approval of costs which has not even been incurred yet, which cannot be granted. The in-principle approval of Change in Law has already been granted and the same should be sufficient for CGPL to undertake the work. In any case any consideration of costs at this stage should be subject to true up of actual costs including on prudency.

b) The CEA is a technical body and it has, based on considerations and submissions of CGPL, provided recommendation with regard to installation of FGD system. However, CGPL has claimed various deviations from the said recommendation. This Commission in its Order dated 17.09.2018 in Petition No. 77/MP/2016 directed CGPL to implement the revised norms in consultation with

CEA. In case CGPL is seeking to deviate from the CEA recommendations, it has to be presented to and approved by the CEA before the same can be considered.

c) CGPL has claimed that gas to gas heater is required even for new chimney though the same has not been recommended by CEA and has claimed a cost of Rs. 75 crores and additional Rs. 30 crores for booster fan. The inclusion of gas to gas heater has to be first verified by CEA.

d) The contention of CGPL that the CEA has not appropriately considered the intake system for FGD is not acceptable. CEA has considered the technology of sea water based FGD and has accounted for any additional work associated with coastal region and intake systems. This is clear from the relevant portions quoted in the Petition itself at page 16 and 28. CGPL has claimed that the existing channel is far away from FGD area and therefore a channel/ piping of approx. 2 km would be needed. However, this has to be verified. Further the cost of Rs. 105 crores for this purpose is extremely high. The cost claimed is alleged to be based on CGPL internal estimate but presumably is part of Rs. 39 lakhs/MW being the quoted amount. Similarly, CGPL has claimed temporary circulating water outfall channel which is stated to be not considered by CEA. The claim for restoration of existing access roads and re-routing of utilities is based on the requirement of the above intake and outfall channel. The requirement of the same may also be verified by the CEA.

e) In addition, CGPL is also claiming FGD return water which is not clear. This is required to be verified by CEA particularly when a substantial cost of Rs. 132 crores is being claimed. CGPL is claiming miscellaneous costs which are largely related to electricity consumption. It is not acceptable that increase in electricity consumption, if any, due to installation of FGD system would not be met from existing electric system. CGPL has not provided any details for the said contention.

f) CGPL has claimed that cost of new chimney is less than the existing chimney. In such case, it may be considered that new chimney may be more economical. However, CGPL should not be allowed to later claim higher costs after having chosen the option of new chimney on the basis of lower costs.

g) CEA noted that one of the advantages of the cost of sea water based FGD is lower costs including capital costs. In this regard, it may be noted that similarly sea

water based FGD was allowed for Adani Power Plant (1980 MW) at Mundra at Rs. 0.32 crores/MW which in fact was inclusive of all taxes, duties, miscellaneous costs etc. Even as per the CEA recommendation for plant of Talwandi Sabo Power Limited which is Wet FGD and not a sea water based FGD, the recommended cost was Rs. 0.40 crores/MW.

h) Further, the impact has to be considered based on 4000 MW power project and not 4150 MW. The bid of Tata Power was selected and the PPA was executed based on a 4000 MW Ultra Mega Power Project being 5X800 MW. It was CGPL's choice to seek expansion of the units to 830 MW and total project capacity to 4150 MW. The PPA between CGPL and the procurers do not reflect such expanded capacity and continues to be 4000 MW. Therefore, the impact of the additional 150 MW cannot be passed onto the procurers and their consumers.

i) CGPL has claimed more than Rs. 1000 crores as costs in addition to the basic hard cost of Rs. 1634.33 crores. Such costs are approx. 40% of the total cost claimed. Such high ratio cannot be accepted. CGPL has claimed owner's cost at 5% of FGD Basic cost based on petitions filed by NTPC. It is submitted that in the case of NTPC, the costs are based on the entire project whereas CGPL is considering FGD system which is a single component. Further FGD system is to be implemented through the competitive bidding route and there is no logic or rationale for the varied costs being claimed by CGPL. The costs already incurred, if any, need to be provided and there is no clarity as regards the other costs to be incurred when the project is to be implemented by the selected bidder.

j) The claimed site survey cost is without any basis. The site is already identified and the power project is already standing. It is not clear why there has to be a site survey.

k) CGPL has claimed IDC at 10.41%. The claim may be scrutinized by this Commission based on documents to be submitted by CGPL. The component of IDC is approximately 15% of the total costs which is contrary to the NTPC stations relied on which are 13.4% and 12.5% though Kudgi is 15.6% and this is inclusive of IDC, FC, FERV and hedging costs. CGPL has only claimed IDC at 15%.

l) The opportunity cost cannot be considered at all. Normative PLF for Mundra UMPP is 80% which means that CGPL can coordinate its shutdown for installing FGD system during 20% period of annual maintenance and, therefore, CGPL should plan in an appropriate manner and not burden beneficiaries with additional costs. The PPA deals with the situations of fall in availability due to any force majeure reasons.

m) CGPL is seeking to claim GST as a separate cost. However, the costs discovered in competitive bidding are inclusive of GST. The cost recommended by CEA is based on other competitive bids which may include taxes. Even otherwise, the claim of 18% as a flat rate is not justified and there is no supporting documentation. Various goods and services have different rates and as per understanding of GUVNL, the effective tax rate for works contract is 8.9% (under Notification No. 24/2018-Central (Tax) Rate of Notification 25/2018– Integrated (Tax) Rate).

n) The CEA has considered the O&M cost at 2% of the capital cost of FGD system. This was also considered by this Commission in the case of Adani Power in 104/MP/2017. Therefore, the claim of CGPL for higher costs cannot be accepted. CGPL has considered expenditure of Rs. 65.77 crores towards O&M of FGD whereas CEA, in its report, has considered total additional annual operational expenditure of Rs. 24.9 crores (2% of Base Cost @0.30 crores/MW) towards O&M of FGD. Even if basic cost is considered as 0.39 crores/MW, O&M cost @ 2% would work out to Rs. 33 crores.

o) CGPL has claimed 1.153% of auxiliary consumption. This is based on the assumption that gas to gas heater is required. Since new chimney is envisaged, the auxiliary as recommended by CEA is 1%. In case of Adani Power (Petition No. 104/MP/2017), the CEA had recommended and this Commission had accepted the additional auxiliary consumption at 1%. The auxiliary consumption may be considered as 1% or actual whichever is lower.

p) With regard to insurance cost, it is submitted that the same is included in the O&M cost of 2% of capital cost. There was no such separate cost allowed to Adani Power in Petition No. 104/MP/2017.

q) The tariff impact for increase in capital cost has to be computed by way of the formula provided in the Article 13 of PPA for increase in capacity charges due to increase in capital cost. There cannot be any separate determination considering elements of Section 62 of the Electricity Act, 2003. The PPA provides for any change of Rs. 50 crores in Capital Cost to be reflected in the change in the non-escalable capacity charges equal to 0.267%. Therefore, even if there is an increase of Rs. 2715 crores as claimed by the Petitioner, the same should be considered as 54 times change of Rs. 50 crores that translates to 14.42% (54*0.267%) increase in non-escalable capacity charges.

r) The competitive bid process has not been done in consultation with the Procurers. This Commission may therefore consider whether the competitive bid has been transparently and reasonably carried out.

s) The contentions of CGPL on its financial position are not relevant and nor can compliance with the law be defaulted on that basis. The contentions of HPC Report and any agreement/ negotiations pursuant thereto are not relevant and cannot be considered in this Petition.

7. The Respondent No.1, 3, 4, 5, 7 and 8 vide affidavit dated 17.2.2020 have mainly reiterated submissions as above at paragraph 6 of this Order. Therefore, they are not repeated for sake of brevity. Additionally, they have submitted the following:

a) The Petitioner has claimed Rs. 2715 crores for installation of FGD system which is substantially higher than Rs. 2400 crores claimed by Sasan Power Ltd. for 3960 MW Ultra Mega Power Project (claimed in Petition No. 446/MP/2019). The awarded cost in case of Sasan Power is Rs. 0.40 crores/MW. The cost for Petitioner should be substantially lower as the Petitioner is installing sea water based FGD system as compared to wet limestone based FGD system being installed by Sasan Power Ltd. In fact, one of the benefits of sea water based FGD system given by the Petitioner is that the capital cost is lower. This was also noted in the Report of CEA wherein it is mentioned that advantages of sea water based FGD system is its low capital cost, low auxiliary power consumption, no reagent etc.

b) The bid submitted by the Petitioner/ Tata Power which was incorporated into the PPA provided for gross capacity of 4000 MW and contracted capacity of 3800 MW. The RFP required both gross capacity and contracted capacity to be bid by the bidders. The Environment Clearance for the Power Station was an Initial Consent under Schedule 2 which was obtained by the Authorised Representative (on behalf of procurers) prior to the PPA dated 22.4.2007. The said Environment Clearance dated 2.3.2007 was for 4000 MW.

c) The claim of the Petitioner is that it was decided to change the turbine or steam cycle at paragraph 7 of Additional Information – such decision was obviously of the Petitioner and it was taken at the time of construction and not at the time of the bid. Therefore, the decision to increase the installed capacity to 4150 MW and incur higher auxiliary consumption was entirely of the Petitioner.

d) The Petitioner has claimed that despite increase in auxiliary consumption, the quantum of fuel fired did not change. It is incorrect to claim that the capacity of FGD system would remain the same irrespective of plant capacity of 4150 MW or 4000 MW. In any case, the FGD system is being installed for 4150 MW whereas the capacity as per the RFP, bid and PPA is 4000 MW. The costs, therefore, have to be in proportion to 4000 MW.

e) Auxiliary consumption claimed by the Petitioner is 47.85 MW in the note handed over on 21.1.2020. This percentage of 1.153% is w.r.t. 4150 MW, but the same can be considered only vis-à-vis 4000 MW. In fact, auxiliary consumption is to be considered at 1% of 4000 MW. Even assuming but not admitting that there is no impact of emissions, there cannot be any consideration of higher auxiliary consumption due to higher installed capacity.

f) The capacity charges are payable for declared availability (Schedule 7) and the Petitioner is not entitled to any such charges (opportunity cost) on deemed availability basis or as part of change in law compensation. Respondents are also losing supply of power during shutdown, but cannot claim costs from the Petitioner for the same. Inability of the Petitioner to generate due to shutdown means that the Petitioner is perhaps not liable to pay any penalty for the shortfall in generation against the normative availability. Allowing such compensation would be outside the

scope of the PPA. This would be unfair and inequitable for the Respondent/ Procurers who not only have to deal with the shutdown and consequent non-availability of power, but shall have to incur additional loss towards alternative arrangement of power for the period of shutdown and also need to pay capacity charges to the Petitioner for such non-availability.

g) The competitive bid process for installation of FGD system has not been done in consultation with the Procurers. Further, the Petitioner has not complied with the directions in ROP of hearing wherein various information had been sought including the bidders and the L1 Bidder. The Petitioner has not disclosed the names, has not produced the documents of bidding nor produced sufficient information for the Commission to conduct a prudence check. The bid was carried out before the CEA report and, therefore, it is required to be certified whether the specifications are as per the CEA recommendation.

Rejoinder of the Petitioner

8. The Petitioner has filed its consolidated rejoinder vide affidavit dated 11.11.2019 to the reply of Respondent No.1, 3, 4, 5, 6, 7 and 8 and adopted the same rejoinder vide affidavit dated 21.11.2019 to the reply of Respondent No.2. The Petitioner in its rejoinder has mainly submitted the following:

a) The Commission vide Order dated 29.8.2019 in Petition No. 77/MP/2016 had directed CGPL to approach CEA to firm up the technology being employed for FGD. Further, CEA was directed to examine CGPL's proposal in this regard. Pursuant thereto, CGPL issued a letter dated 17.9.2019 setting out CGPL's requirements for FGD, along with detailed explanations/ justifications for the same. In response to CGPL's letter dated 17.9.2019, CEA issued a letter on 07.10.2019 stating that:

(i) Sea water based FGD is technically better and cost optimum.

(ii) Such option of technology has been discovered by CGPL based on life cycle cost analysis and other studies as advised by CEA. Accordingly, CGPL may adopt sea water based FGD technology that is best suitable for its plant specific requirement.

b) As regards seeking approval of CEA for additional costs/ equipment, the following events may be noted:

(i) On 17.9.2018, this Commission passed its Order in Petition No.77/MP/2016.

(ii) On 21.2.2019, CEA issued its report regarding installation of FGD to comply with the revised emission standards relating to SO_2. CEA in its report gave an indicative capital expenditure of Rs. 30 lakh/MW for the purpose. The CEA report did not give any recommendation/ view on various elements of cost for installing FGD nor has it provided any justification, scope of work, norms, assumptions et al considered by it for computing the capital expenditure to be incurred by CGPL.

(iii) On 6.3.2019, CGPL issued a letter to CEA providing its comments on CEA Report on FGD inter alia, raising the issue of need for a Gas to Gas Heater et al.

(iv) On 6.6.2019, CEA issued a letter in response stating that

(a) Capital Expenditure mentioned in its Report is only indicative in nature.

(b) Actual capital expenditure will be discovered after finalisation of the open competitive bidding;

(c) For additional Capital Expenditure (if any) above the base cost due to plant specific requirements, CGPL can approach the concerned regulator.

c) GGH (gas to gas heater) is a must for sea water based FGD system as it re-heats the cold, treated flue gas to exiting the scrubbing system by transferring the heat of the hot untreated flue gas to the cold treated flue gas. This will prevent acidic corrosion to plant equipment. Need for a GGH has been intimated to the CEA also. In the CEA's Report, it is merely stated that the indicative cost of Rs. 30 lakhs/MW excludes costs regarding GGH. The costs submitted by CGPL for a gas to gas heater are included in the lumpsum price that has been discovered in the competitive bidding and these are not additional costs and its price has been mentioned separately, merely to explain the possible reasons for difference in the costs as considered by CEA and as discovered by CGPL in the competitive bid. In any case, by its letters dated 6.6.2019 and 7.10.2019, CEA has approved CGPL's request for installation of a sea water based FGD and has stated that for any specific requirements not being part of the CEA Report, and for the costs related thereto, CGPL may approach this Commission.

d) As regards the sea water intake system, CGPL is merely portraying the on-ground needs as regards the distance for which piping is required. The additional

cost is on account of such distance. In any case, the Procurers cannot summarily claim that cost is high while completely disregarding the ground realities and the actual requirements of Mundra UMPP or provide any alternative justifiable means/ cost to achieve the said piping.

e) As regards re-routing of roads, FGD installation is a retrofit project in nature and requires even greater planning and optimisation as compared to a green field project. Since the new project would interfere with the existing infrastructure, it would involve necessary re-routing of utilities. All works to be carried out and the costs associated thereto by CGPL for complying with the 2015 Notification are genuine and necessarily required. It is nobody's case that the requirements set out by CGPL are unnecessary or can be done away with to achieve the end result.

f) As regards FGD return water, the amount of expenditure is dependent on the length, diameter and material of the pipe, its route and associated infrastructure. Procurers cannot summarily claim that cost is high while disregarding the actual requirements of Mundra UMPP. Further, it is clarified that the sea water supplied for scrubbing the flue gas becomes a low pH effluent after absorbing SO_2 from flue gas. This acidic sea water is termed as FGD return water. It shall be discharged back to existing outfall channel for dilution and aeration process through GRP pipes. It is pertinent to note that the costs indicated for these works form part of the total cost discovered through competitive bidding process.

g) As regards miscellaneous costs like electrical system etc., it is stated that the present electrical system at Mundra UMPP is designed to cater to the existing Units and Station auxiliaries. The power supply of CGPL is just adequate for concurrent loading of the existing Unit Auxiliary Transformer (UT) and existing Station Transformer (ST) for normal and various contingency conditions without much margin. The additional electrical load of 48 MW (additional aux of 1.153% on the installed capacity (4150 MW) for all 5 units, on account of installing the FGD systems and its operation cannot be accommodated by way of the existing electrical system. To cater to this additional load, a new station transformer is required to be installed and hence proposed. Adding a station transformer at the Generator Transformer LV voltage (26kV) would be difficult due to constraints in existing plant layout and would involve long unit outage for construction, existing bus duct modification and major modification of control and protection scheme of the power

plant/ unit. Hence, for this purpose, a station transformer at 400 kV levels is proposed to be installed and integrated to the existing 11kV system. The new augmented system will include one station transformer, extension of switchyard bay for this transformer, 11kV & 415V FGD switchgears for common systems near outfall channel, cable tie connection of this new 11kV switchgear with existing 11kV station buses (located in Main Plant building), extension of existing 11kV switchgear of each unit to cater unitised FGD loads, etc.

h) As regards the submission that costs of installing FGD for certain other power projects have been lower, it is stated that the costs of FGD depend on various criteria such as location, structure/ design of existing plant et al. In other words, the costs of installation and/ or operation would be plant specific. The FGD related costs approved by this Commission for Adani Power Ltd. was for the FGD that was commissioned in March 2014. The commissioning of FGD for CGPL would be in FY 2022 and the costs in terms of inflation, exchange rates are bound to increase over this period. More importantly, the price that has been discovered under a bidding process would depend on the demand and supply of the equipment at a particular point of time and such costs cannot be compared with a cost arrived at almost a decade back. Costs of any project depend on the peculiarity of the site, whether it is brown field or green field and whether any modifications are required to be carried out to the existing infrastructure. Hence, there cannot be an equitable comparison of costs for two difference projects and that too when such costs have been incurred at different points in time.

i) The Gross Capacity of 4000 MW or 4150 MW has no relevance to the Procurers since the Contracted Capacity which is arrived at after subtracting the Auxiliary Consumption is 3800 MW and has remained unchanged since the time of signing of the PPA. The Procurers continue to pay as per the Contracted Capacity and not as per the installed capacity. The name plate capacity of the plant is 4150 MW. Even the environment clearance had been amended (EC dated 5.4.2007) to change the capacity from 4000 MW to 4150 MW.

j) The emissions of SO_2 would be dependent on 4150 MW and not 4000 MW. The FGD project has been designed keeping in mind this name plate capacity and the ratings of the equipment for the project have been arrived at on the basis of this capacity. Further, the system has been designed for 4150 MW capacity and the

capital cost of the project for 4000 MW capacity would not proportionately come down and therefore it would also be incorrect to consider a proportionate reduction. The emission of SO_2 is dependent on amount of coal to be fired and Sulphur in the coal. The installation of 4150 MW plant capacity in place of 4000 MW by CGPL is to cater to the power consumption requirement of Electrical motor driven BFPs keeping same contractual output of 3800 MW to procurers. Selection of 4000 MW plant with turbine driven BFP would have accounted for higher heat rate which in turn would have required higher coal consumption and SO_2 emission for the same contractual output.

k) Procurers fail to realise that the entire Project has been setup for their benefit. In such circumstances the Procurers cannot seek to claim the benefit of capacity increase from 4000 MW to 4150 MW without dealing with the corresponding cost liability, if any. In any case, it is reiterated that despite the increased Installed Capacity, the Contracted Capacity continues to remain the same and the Procurers continue to pay capacity charges as per the Contracted Capacity.

l) The Procurers submission that FGD is a single component is incorrect. Implementation of FGD is not merely about purchasing and commissioning of a single component. The FGD project is an aggregation of various systems like the water handling system, flue gas treatment system and return water treatment system and is by itself akin to a large project. Such large projects involve complex engineering, long procurement mechanism, monitoring, obtaining approvals and arrangement of finances. Hence the involvement of any owner is quite large and deep. Moreover, the implementation of the project stretches over 36 months.

m) IDC would be actually based on the interest rates for loans that are available for such project, the financial health of the company, loan drawl schedule and the construction period. This Commission is aware that CGPL is suffering losses on every unit of electricity generated and sold. The current financial health of CGPL also plays a big role in the IDC considered by CGPL for installation of FGD. For the purpose of estimating the IDC, CGPL has considered the rate as per norms being followed for renewable power projects (single part tariff mechanisms) and construction and cash flow progress based on internal estimates. IDC is merely the outcome of the calculations performed with these assumptions. In any case, IDC of about 15%, is in line with what has been considered by other NTPC projects and is prima facie reasonable.

n) Having set plant availability at 80%, the remaining 20% is to take care of routine outages, forced outage, breakdowns, non-availability of adequate fuel and limitations imposed on running equipment. Such “non-availability” of 20% is not for accommodating long outages required for implementing and commissioning of a complex FGD system. This is further evident from the fact that the PPA itself does not contemplate 20% of non-availability for long outages which are required to implementing new environmental norms. The FGD project is a brown field project and the commissioning of FGD would require dovetailing with the existing system which is in operation. This in turn would require an additional outage of units over and above the normal outage. CGPL has estimated a period 22 days for carrying out this job based on its internal computations. The opportunity costs have been estimated on the basis of the loss of capacity charge during this period.

o) The basic cost of Rs.1634 crores does not include GST. The owner’s cost is essentially in terms of services provided and would in turn attract levy of GST at the rate of 18%. Therefore, GST has been considered on the basic cost and owner’s cost together. CGPL has considered the GST rate of 18% that is applicable for composite supply of works contract as defined in clause 119 of section 2 of Central Goods and Services Tax Act, 2017. As regards the rate of 8.9% suggested by the Procurers under Notification No 24/2018 dated 31.12.2018, no workings have been provided for arriving at such rate. In fact, the said Notification is applicable for only renewable projects and not thermal projects.

p) The O&M expenditure @2% of the capital cost is without any basis. In the case of Adani Power Ltd. in Petition No. 104/MP/2017, Adani Power Ltd. had claimed a flat expenditure of Rs. 48 crores per annum. No norm has been determined by this Commission through any consultative process. On the other hand, CGPL has provided a ‘bottom up’ approach for arriving at the O&M expenditure in the Petition, justifying the assumption made. It cannot be denied that the insurance expenses of CGPL would go up on account of the addition of FGD system. CGPL has projected the insurance expenses considering an average insurance cost toward premium for protecting these assets.

q) The installation of GGH would increase the auxiliary consumption. As mentioned in the Petition, the GGH is required for preventing creation of droplet ‘raining’ in the chimney. However, the GGH would also contribute to a pressure drop

of about 100 mm water column. Hence to compensate for this additional pressure drop, a booster fan needs to be of higher capacity which in turn would account for higher auxiliary consumption of 0.15%. Hence the auxiliary consumption would go up on account of GGH irrespective of whether the old chimney is used or a new chimney is installed. The increase of auxiliary consumption on account of GGH is also acknowledged by CEA in its report. Thus, the auxiliary consumption of 1.15% is justified.

r) The Procurers' submissions that tariff impact for increase in capital cost must be computed in terms of the formula provided under Article 13.2(a) of the PPA is wrong as such formula is provided only for construction phase, and not during operation phase. The present situation is unique in that the Change in Law event is taking place during the operating phase and has an impact on the capital as well as operating cost of CGPL. Hence, the present scenario is not contemplated either under the PPA and/ or the Competitive Bidding Guidelines. In terms of the law laid down by the Hon'ble Supreme Court in Energy Watchdog v. CERC & Ors. (2017) 14 SCC 80, this Commission ought to exercise its regulatory powers and grant appropriate relief to CGPL. In CGPL's view, the tariff impact of FGD installation can properly be mitigated only by implementing Section 62 tariff elements as provided by CGPL.

s) CEA's recommendations were available to CGPL only on 21.2.2019, while CGPL initiated the comprehensive bidding process on 20.9.2018 keeping in mind the stringent deadlines imposed. Nowhere does this Commission's Order dated 17.9.2018 in Petition No. 77/MP/2016 mandated CGPL to carry out competitive bidding in consultation with the Procurers. In any case, in order to discover the best price, a thorough process of transparent bidding was followed.

t) The financial position of CGPL is very much relevant in light of the fact that no compliance would be possible if lenders do not advance finances for the project. The lenders need regulatory certainty that the amounts advanced by them for installation of FGD shall be recovered through tariff and for servicing of debt by CGPL. Hence, CGPL is constrained to approach this Commission by way of the above Petition to seek clarity in terms of the cost impact since there is a clear divergence in the costs estimated by CGPL and CEA. CGPL wants to avoid a scenario where it incurs the costs based on the bid carried out by it and later is only

permitted to recover the costs approved by CEA.

Analysis and Decision

9. In the light of the submissions of the Petitioner, Respondents and documents placed on record, the following issues arise for our consideration:

Issue No.1: Whether provisional approval of capital expenditure can be granted to the petitioner for incurring proposed expenditure towards installation of FGD system?

Issue No.2: Whether additional O&M expenses and the relaxation in other operating norms due to installation of FGD system are admissible as claimed by the petitioner?

Issue No.3: Whether capacity of 4150 MW or 4000 MW is to be considered towards expenditure/ relief for Installation of FGD system?

Issue No.4: What shall be the norms and mechanism for computing the adjustment in tariff corresponding to the additional investment and increase in the operating costs due to the 2015 Notification so as to restore the petitioner to same economic position as if such Change in Law event has not occurred?

10. We deal with the above issues in subsequent paragraphs.

Issue No. 1: Whether provisional approval of capital expenditure can be granted to the petitioner for incurring proposed expenditure towards installation of FGD system?

11. The petitioner, CGPL has submitted that it had filed Petition No. 77/MP/2016 before this Commission praying that introduction of the Revised Norms be declared as event of Change in Law in terms of Article 13 of the PPA read with paragraph 4.7 of the Competitive Bidding Guidelines and requested that in-principle approval for the capital expenditure to be incurred in order to comply with the Revised Norms may be granted. This Commission vide Order dated 17.9.2018 held that a) the introduction of the Revised Norms is a Change in Law event, b) CGPL shall implement the Revised Norms as per the 2015 Notification in

consultation with CEA, c) Mundra UMPP meets the norms prescribed in the 2015 Notification with regard to particulate matters and mercury, d) there is no provision for in-principle approval in the PPA, and e) CGPL shall approach the Commission for determination of increase in cost or/and revenue expenditure on account of implementation of revised norms in accordance with the Guidelines to be issued by CEA and the mode of recovery of the same through monthly tariff. The relevant extracts of the Commission's order dated 17.9.2018 in Petition No. 77/MP/2016 are as under:

> *"49. Summary of our decisions in this order are as under:*
> *(a) MoEFCC Notifications, 2015 prescribing the revised environmental norms in respect of thermal Power plants which has been issued after the cut-off date of Mundra UMPP are in the nature of Change in Law in terms of the PPA dated 22.4.2007 and the MoP directions issued under Section 107 of the Act.*
>
> *(b) The Petitioner has given notice regarding Change in Law arising out of MoEFCC Notification in terms of the PPA.*
>
> *(c) The Petitioner is required to take steps to implement revised norms in respect of Sulphur Dioxide, Nitrogen Oxide and water consumption. The Petitioner has taken up the matter with MoEFCC for exemption from implementing the norms for water consumption and therefore, the implementation of the norms of water consumption shall be dependent on the decision of MoEFCC in this regard.*
>
> *(d) Mundra UMPP meets the norms prescribed in MoEFCC Notification, 2015 with regard to particulate matters and mercury and accordingly, the Petitioner has not claimed the relief under Change in Law.*
>
> *(e) The Commission has directed CEA vide its order dated 22.7.2018 in Petition No. 98/MP/2017 to prepare guidelines specifying the suitable technology for each plant and operational parameters such as auxiliary consumption, Station Heat Rate, O&M expenses, norms of consumption of water, lime stones etc. for implementation of revised environmental norms. The Petitioner shall implement the revised norms as per the MoEFCC Notification, 2015 in consultation with CEA.*
>
> *(f) There is no provision for in-principle approval in the PPA. However, the Commission has decided that MoEFCC Notification, 2015 is in the nature of Change in Law. Accordingly, the Petitioner shall approach the Commission for determination of increase in cost or/and revenue expenditure on account of implementation of revised norms in accordance with the Guidelines to be issued by CEA and the mode of recovery of the same through monthly tariff."*

12. It is observed that pursuant to the above decision of the Commission, the Petitioner approached CEA vide letter dated 17.9.2018. CEA vide letter dated 21.2.2019 has recommended sea water based FGD system and provided the corresponding indicative

cost for Mundra UMPP. CEA has also suggested that the FGD system installation should be done through the process of open competitive bidding in consultation with representative of beneficiary States with whom PPAs had been executed. However, responsibility for adhering to timelines of relevant pollution control board was the responsibility of the Petitioner. Relevant extracts from CEA's report as regards technology and cost aspects, are as under:

"<u>TECHNOLOGY:</u>

In the case of CGPL, two technologies are proposed as below:

i. Sea water base FGD

***ii.** Wet lime stone based FGD*

***I -** The Sea Water based FGD is suitable for this plant considering its proximity to sea. The source of water for the plant is seawater drawn from the sea (Gulf of Kutch), which is 1.5 km from the site of Project. Seawater is used directly for condenser cooling. The outfall water from condenser will be used as source of water for FGD. The discharge of sulphur rich effluent from FGD will be diluted using outfall channel water to bring the pH to required level.*

II---Wet Lime stone base FGD.

<u>Engineering aspects considered for recommendation:</u>

1. Individual Sea Water based FGD is considered for each Unit.

2. Limit S02 below environment norms with up to 1 % Sulphur content in Coal.

3. Absorber Lining - such as Ceramic Tiles or C276 (Nickel Alloy) or Steel Alloy lining or Glass flake filled multi-functional epoxy lining or glass flake lining.

4. Chimney

a) Old chimney to be changed to wet stack with suitable lining by providing temporary chimney over Absorber/ on ground. If required necessity of GGH may be explored in this case only

Or

b) Permanent FRP/Steel Chimney over Absorber.

Or

c) 05 nos. new single wet stacks Steel or RCC or FRP.

……..

10. APC

• Additional Auxiliary power Consumption (APC) for complete FGD facilities is 1.0 %.

• Extra APC of 0.153% to be considered only when using GGH with old/existing chimney in FGD system.

<u>CAPEX:</u>

The cost of retrofitting FGD for the plant should be discovered through open competitive

bidding in consultation with representatives of beneficiary states with whom PPA had been done, information in this regard has been sent by CEA separately Vide letter No: 44/FGD/UMPP/CEA/2019/-193 to GSECL The indicative base cost worked out to Rs 0.30 Cr/MW (CAPEX), it excludes, Opportunity cost related to interconnection period, GGH, any Tax or Duty and other financial miscellaneous costs.

OPEX

The Annual indicative Operating Cost (OPEX) will include annual APC for FGD, annual Reagent cost (if any), annual Additional water consumption associated with FGD, annual Manpower charges for O & M of FGD, annual By-product handling (if any) and annual revenue earned from disposal of by product, this shall be calculated after detailed engineering and life cycle cost benefit analysis. Also the regulator may regulate the different aspects of OPEX (as per actual) at appropriate time when the FGD starts operating. Refer the chapter no 09 OPEX.

OPPORTUNITY COST:

Since interconnection of newly lined chimneys or New wet stack or stack above absorber may result in loss of generation of the plant, hence CGPL is advised to minimize this interconnection time by taking suitable measure so that the "Opportunity cost" associated with interconnection may have least impact on CAPEX and eventually on tariff revision….."

13. Through prayers (a) and (b) in the instant Petition, the Petitioner has requested for provisional approval of capital expenditure of Rs. 2715 crores and also for approval of recurring annual operating expenditure on account of FGD system installation. CGPL submitted that due to its precarious financial position, it is not in a position to arrange for funds to finance the capital expenditure required for installing FGD system. The petitioner submitted that it would be difficult for banks to give loan for additional capital expenditure required for installing FGD system without approval from Commission.

14. On the other hand, the Respondents have submitted that despite clear denial to grant in-principle approval of the project cost by this Commission vide Order dated 17.9.2018 in Petition No. 77/MP/2016, the Petitioner has again filed the present Petition seeking in-principle approval of costs and the same cannot be granted. The in-principle approval of Change in Law has already been granted and the same should be sufficient for CGPL to undertake the work.

15. We have considered the submissions of the Petitioner and Respondents. It is observed that the petitioner had approached the Commission by way of Petition No.

77/MP/2016 for in-principle approval based on estimated expenditure wherein Commission disallowed the prayer considering the fact that the PPA does not have a provision of in-principle approval. Subsequent to above, as per direction of the Commission, the petitioner approached the CEA and CEA vide its letter dated 21.2.2019 after considering various alternatives has suggested the technology and total indicative cost for installation of FGD system. In addition, the Petitioner has also completed the open competitive bidding for the installation of FGD system. Rejection of in-principle approval of costs and subsequent Petition for grant of provisional approval of costs has been decided by the Commission in case of another Ultra Mega Power Project i.e. Sasan Power Ltd ('SPL') that had filed petition no. 446/MP/2019. The Commission vide order dated 23.4.2020 in petition 446/MP/2019 held as under:

> *"18. We have considered the submissions of the Petitioner and the Respondents. There has been material change in the situation as regards the Petitioner after the Commission issued orders in Petition No. 133/MP/2016 wherein request for in-principle approval was denied since no such provision existed in the PPA. As per directions of the Commission, the Petitioner approached CEA that has indicated the appropriate technology for installation of FGD system in the Project. CEA has also indicated tentative base cost for such installation. Through competitive bidding process, the Petitioner has selected a vendor for installation of FGD system. The Petitioner has approached financial institutions for loans where the banks through IBA have expressed difficulty in funding in view of prevailing situation in the power sector. Similar is the case with PFC that has informed the Petitioner that it needs comfort in terms of approval of the Commission so that there are no problems in debt servicing of loans that may be availed by the Petitioner. Commission is also conscious of the fact that the installation of FGD system in thermal power stations is being monitored by the Hon'ble Supreme Court. Any further delay in securing loan from financial institutions is likely to further delay installation of FGD system."*

16. We also observe that the Ministry of Power has also recognised the problems being faced by generating companies on account of financial institutions seeking assurance of fund flow after installation of FGD system. The Ministry of Power, vide its letter dated 21.1.2020, addressed to Secretary to Forum of Regulators (who is also Secretary to the Commission), stated as under:

> *"2. A copy of the minutes of the meeting held in Ministry of Power on 21.10.2019 with Banks/Financial Institutions regarding issues related to financing of FGDs is enclosed wherein as per Para 4.2 inter alia mentioned as follows:*

"IPPs requested that provisional tariff on account of FGD may be allowed as Banks are not willing to finance unless there is clear cut CERC orders on additional tariff, which could be possible only when FGD is commissioned. It was requested that based on the estimation of cost by CEA, CERC may fix provisional tariff after allowing some discount (say 10%). Chairperson, CEA informed that they had drafted some norms on provisional tariff and it had been sent to CERC for consideration. Hon'ble Minister advised CEA to follow up with CERC and this issue may be taken up in the Forum of Regulators (FOR) meeting which could be convened at the earliest. The matter regarding fixation of provisional tariff on account of FGD installation may be discussed with CERC."

3. In this regard, CEA has informed that:

i. Financing of pollution control equipment is mainly an issue for the projects commissioned under section 63 of the Act.

ii. During discussion, CERC pointed out that a few generating companies, which have set up generating station under section 63 of the Act have filed petition for compensation due to change in law impacting revenue and cost during the operating period.

iii. CERC has already passed some orders in such petitions recommending requirement of installing additional equipment to meet revised environmental norms as change in law and giving liberty to the petitioner to approach to the commission for determination of revised norms.

iv. CERC was of the opinion that normally such assurance from regulator should be sufficient for the lenders to fund additional capital expenditure required to meet revised environmental norms.

4. In view of the above, it is requested that the issue on 'provisional tariff' on account of installation of FGD, may be included as an Agenda for the next Forum of Regulators (FOR) meeting and the decision taken, therein, may be communicated to Ministry of Power, at the earliest."

17. Further, the Ministry of Power vide its letter dated 20.4.2020 addressed to the Secretary of the Commission, has stated as under:

*"I am directed to refer to the meeting taken by Secretary (Power) through Video Conferencing on 09.04.2020 (copy of the meeting are enclosed as **Annex-I)** and this Ministry's letter of even number dated 21.01.2020 (copy enclosed as **Annex-II)** with regard to taking up the matter with Forum of Regulators on the above mentioned subject. It was observed that CERC was also contemplating to amend the Tariff Regulations 2019-24 to provide for norms for installation of FGDS for complying with the environmental operating norms as Change in Law.*

2. In the above mentioned meeting held on 09.04.2020, it was recommended that in view of the stipulated timelines decided by the Hon'ble Supreme Court for installation of FGDs, investment approval may be accorded by CERC at the earliest possible on applications of FGDS submitted by Gencos based on the CEA's benchmark cost and indicative technologies so as to facilitate funding of banks/ FIs. It was also felt that upon completion of the installation of FGD or a month before the completion of installation, the applications for fixation/revision of tariff may be filed and CERC would, as far as possible, dispose them in a time frame of 3

months so that the Gencos are not cash strapped and the lenders feel assured. Similar process may also be taken up by CERC with SERCs.

3. Accordingly, CERC is requested to take necessary action and devise a mechanism vide which applications of Gencos for installation of FGD as per norms of CEA, gets decided by the Appropriate Commission within a period of three months for Investment approval. The same is expected to facilitate assurance for lenders on their lending to Gencos for installation of FGD.

4. This issue with the approval of Hon'ble Minister of State (IC) Power and NRE."

18. The Respondents have submitted and raised concerns about various elements of the provisional capital cost claimed by the Petitioner. They have submitted that the costs are higher than the recommendations of CEA and that certain equipment even though not envisaged in CEA recommendations, have been claimed by the Petitioner.

19. We note that consequent upon order dated 17.9.2018 of the Commission in Petition No. 77/MP/2016, the Petitioner approached CEA and the CEA vide its letter dated 21.2.2019 has made recommendations as regards cost for installation of FGD system for the Project. CGPL submits that the entire FGD project was sub-grouped into 5 packages. Further, CGPL submitted that pursuant to an open competitive bidding process for packages 1 to 4 and on basis on internal assessment in respect of package 5, the total price for installation and operationalization of the FGD system (the FGD main package) is Rs. 1,634.33 crores. The details of the price of the five packages as discovered from the said bidding process/ internal assessment are as under:

Package	**Description**	**Capital Expenditure (Rs. in crores)**
1.	FGD Main System Package	1122
2.	General Civil Works Package	333.30
3.	Chimney Package	104.03
4.	HT Electric Power Supply Package	65.00
5.	Fire Protection and Detection System	10*
Total		**1,634.33**

** Note: The said costs are based on the internal estimate of CGPL.*

20. The Petitioner has claimed total capital cost for installation of FGD to be around Rs. 2715 crores. The break-up of claimed Capital Cost is in the table below:

Sr. No.	Descriptions	Capex Estimate (Rs. in crores)
A	Capital Cost	
1	Total FGD EPC Cost	
1.1	FGD Main System Package	1122.00
1.2	General Civil Works Package	333.30
1.3	Chimney Package	104.03
1.4	HT Electrical Power Supply Package	65.00
1.5	Fire Protection & Detection System	10.00
1	**Total FGD EPC Basic Price**	**1634.33**
2	Spares	Included in 1
3	Owner's Cost (Consultancy Services, Site Survey, Project Management etc.)	81.72
4	GST (@18% of base cost i.e. 1+2)	308.89
5	EPC Cost incl Tax	2024.93
6	Contingencies (@5% of EPC Cost)	101.25
7	**Total EPC Cost Incl Tax & Contingencies**	**2126.18**
8	IDC @10.41%*	408.01
9	Opportunity Costs	181.18
10	**Project Cost including IDC**	**2715**

**considered as per the Tariff order dated 19th March 2019 for renewable source*

21. The Petitioner has submitted that the variation in costs between the price recommended by CEA and the price discovered under the bidding process is due to non-consideration of certain equipment and/ or the cost related thereto by CEA while giving its recommendations for installation of FGD system. Further, CGPL submitted that some of the equipment along with the associated cost which have not been considered by CEA are as under:

Sl. No.	Equipment	Estimated Cost (Rs. in crores)
1	Gas to Gas Heater	75
2	Booster Fan	30
3	Installation of Sea Water Intake channel	105
4	Temporary Circulating Water Outfall Bypass channel	53
5	Restoration of existing access roads and re-routing of Utilities	12
6	FGD Return Water	132

7	Miscellaneous cost- Installation of Electrical & Fire safety System	75
Total		**482***

**A part of claimed amount of Rs.1634.33 crore discovered through competitive bidding.*

22. Respondents have submitted that the petitioner's claim is not consistent with the recommendations of the CEA and have objected to the expenditure of Rs. 482 crore related to additional equipment. The petitioner in its rejoinder has submitted its response to these objections of the Respondents. The Commission vide Record of Proceedings dated 21.1.2020 directed staff of the Commission to request CEA to comment on the necessity of these equipment/ assets and their associated cost. Vide letter dated 12.2.2020, suggestions of CEA were sought with regard to additional system/ equipment and their associated cost claimed by the Petitioner. The CEA vide its letter dated 12.3.2020 in response to the said letter dated 12.2.2020, has examined the variation and sent its response. Relevant extract of the CEA letter dated 12.3.2020 is as under:

> *"3. The variation in the cost recommended by CEA and the cost discovered by CGPL is due to facilities very specific to plant and cannot be estimated in advance. Without these plant specific CAPEX requirements of CGPL which is discovered through open competitive bidding (i.e. 0.39 Cr./MW), the basic cost of FGD would have been close to CEA's recommended cost.*
>
> *4. As per CERC's Record of Proceedings RoP) attached at ANNEXURE-I. The observation on following equipment/facility at CGPL are as under:*
>
> i. ***Gas to Gas Heater**: In RoP page:30 para:44 it has been mentioned that Treated flue gases after scrubbing will attain same temperature of 20-25 Degree celesius as of sea water and may cause "raining" effect in nearby areas.*
>
> *Hence to avoid dispersal of residual pollutants in nearby areas CGPL may look into the option of using GGH with new chimney.*
>
> ii. ***Booster Fan**: In RoP page:31 para:5, it has been mentioned that due to GGH installation the Flue Gas Path / duct layout will be longer, which will result in extra pressure drop. Additionally, GGH installation will also contribute to pressure drop of 100mm Water column (WC) and this extra pressure drop will be created by suitable sized Booster fan.*
>
> *CEA is of the view that Booster fan is standard / essential equipment in all wet type FGD system and CGPL may choose **the correct Booster Fan size** to cater to their requirements.*

iii. ***Installation of Sea Water Intake Channel****: In RoP page:31 para:51 it has been mentioned that sea water will be used for scrubbing purpose of flue gases, which will be sourced from existing condenser outfall cooling channel. The Proposed FGD absorber site is about 2km from condenser outfall cooling channel and a covered RCC channel is required to route water to FGD site as assessed by CGPL internally.*

Since scrubbing water requirement of Sea Water based FGD system operating in open cycle are higher than conventional Wet FGD systems, CGPL may need a dedicated water intake channel from condenser outfall cooling channel to the Absorber location.

iv. ***FGD return water channel****: In RoP page:33 para58, it has been mentioned that as assessed by CGPL internally Glass reinforced Plastic (GRP) piping for FGD return water (post treatment to Flue gases) is required. The length of GRP piping for each until will be approx. 02 km. These GRP piping will carry return water through Gravity flow to Aeration Basin in existing outfall channel.*

Hence, to evacuate scrubbing water post treatment of Flue gases, a dedicated return route using GRP piping may be needed.

v. ***Temporary circulating water outfall bypass channel****: In RoP page:32 para:54, it has been mentioned that as per CGPL's internal assessment of site conditions a temporary circulating water outfall bypass channel is required to make provision of Aeration basin after dilution (Dilution of return water will done through mixing it with CW outfall channel water) of FGD return water. Aeration basin is required to increase the pH level of FGD return water, post scrubbing to Flue gases.*

Since CGPL is using FGD scrubbing water in open cycle, aeration process is essential to elevate that pH value to scrubbed water before finally releasing it to open sea. Hence CGPL may construct temporary circulating water outfall bypass channel as per their requirements.

vi. *In RoP page:32 para:57 & page:33 para:59 it has been mentioned that there is requirements of Restoration of existing access roads and re-routing of Utilities, installation.*

It is opined that such requirements are not directly related to FGD technology. CGPL may access miscellaneous Costs due to construction of Intake water channel and FGD the suitable option on its own to execute these works, as it is difficult for us, to comment on such requirements."

23. It is observed from the above response of CEA that the CEA based on its technical evaluation has held that additional equipment/ assets (except for two items i.e. sl.no. 5 and 7 of table at paragraph 21 of this Order) as listed by the petitioner are required for operationalization of FGD system. However, for the two assets (items at sl.no. 5 and 7 of the table at paragraph 21 of this Order) i.e. 'Restoration of Existing Access Roads and Re-Routing Of Utilities' (Rs. 12 crores), and 'Miscellaneous Costs- Installation of Electrical & Fire safety System (Rs. 75 crores) (consequent to construction of Intake water channel

and FGD installation)', CEA has observed that such requirements are not directly related to FGD technology and CGPL may assess the suitable option on its own to execute these works as it is difficult for CEA to comment on such requirements.

24. CEA, the apex technical body, has examined the technical aspects related to requirement of additional equipment. The cost of additional equipment based on the above recommendations of CEA, considered for provisional cost, is as under:

Sl. No.	Equipment	Estimated Cost (Rs. in crores)	Allowable additional cost (Rs. in crores)	Remarks based on CEA recommendations
1	Gas to Gas Heater	75	75	Recommended but not as site specific additional equipment as it is standard requirement of FGD
2	Booster Fan	30	30	
3	Installation of Sea Water Intake channel	105	105	Recommended as site specific additional equipment
4	Temporary Circulating Water Outfall Bypass channel	53	53	Recommended as site specific additional equipment
5	Restoration of existing access roads and re-routing of Utilities	12	-	**Additional asset not considered by CEA**
6	FGD Return Water	132	132	Recommended as site specific additional equipment
7	Miscellaneous cost- Installation of Electrical & Fire safety System	75	-	**Additional equipment not considered by CEA**
Total		**482***	**395****	

**included in base FGD cost claimed of Rs.1634.33 crore*

*** Out of Rs.482 crores, Rs.377 crores (i.e. excluding Rs.105 crores for Booster Fan and GGH given at sl.no. 1 and 2 of the table) is purely for site specific additional equipment while Rs. 105 crores is recommended by CEA as being requirement for FGD system. Further, Rs.87 crores (sl. no. 5 and 7 of the above table) has not been considered by the CEA.*

25. Thus, by the aforesaid letter of CEA dated 12.3.2020, the contentions of the Respondents as regards claims for some items which had not been recommended by CEA in its initial report of 21.02.2019 stand settled. The two items for which CEA has indicated that they are not directly related to installation of FGD system and for which the Petitioner has to make its own assessment as to their requirements, the Commission is of the view

that these two items would not be considered at this stage and any decision would be taken after the installation of FGD.

26. We note that CEA in its recommendations (quoted at paragraph 13 of this order) has stated that:

> *The cost of retrofitting FGD for the plant should be discovered through open competitive bidding in consultation with representatives of beneficiary states with whom PPA had been done, information in this regard has been sent by CEA separately Vide letter No: 44/FGD/UMPP/CEA/2019/-193 to GSECL The indicative base cost worked out to Rs 0.30 Cr/MW (CAPEX), it excludes, Opportunity cost related to interconnection period, GGH, any Tax or Duty and other financial miscellaneous costs.*

It is thus clear that the cost recommended by CEA (0.30 crores/MW) is an indicative cost that excludes opportunity cost, gas to gas heater, taxes, duties and other financial miscellaneous costs. CEA has also stated that the costs are 'base cost' only.

27. Even otherwise, it is not possible to indicate exact cost that can be discovered through a competitive bidding process and that is the reason CEA has only recommended the indicative cost. The generating companies such as the Petitioner are required to discover the price through open competitive bidding process. We are also aware that in recent times, bids for installation of FGD system have been floated by other generating stations as well and these may lead to change in prices of FGD system in the international market. Therefore, while approving costs of installation of FGD system, the Commission needs to take into account the recommendations of CEA and the discovered cost through open competitive bidding process and then take a view as to reasonableness of costs.

28. Issue regarding CEA recommended cost has been dealt with by the Commission in the matter of Maithon Power Ltd. in Petition No. 152/MP/2019. Though the tariff in case of Maithon Power Ltd. is determined as per provisions of Section 62 of the Act, while in the instant case, tariff has been determined as per Section 63 of the Act, the principles as

regards costs recommended by CEA and the prices discovered in competitive bidding process remain the same. Relevant extract of the Order dated 11.11.2019 is as under:

> *"21. As regards the estimated expenditure, it is observed that there is difference of Rs.0.32Cr/MW (Rs.0.740-Rs.0.420) between the estimate of CEA and the petitioner. CEA has indicated that its estimates are indicative only and the petitioner shall go for open competitive bidding. This difference is due to the fact that CEA has not considered cost towards "Fire protection and detection" package, IDC, IEDC and GST @18% considered by the petitioner and also attributable to difference in cost towards "FGD main package" and "Opportunity cost."*
>
> *22. It is observed that for the two packages i.e. "FGD main package" and "Electrical power supply package", cost discovered through competitive bidding by the petitioner is Rs.0.438 Crore/MW, which is higher by Rs.0.101 Crore/MW in comparison to CEA cost of Rs.0.337 Crore/MW, including spares. This difference of Rs0.101 Crore/MW gets reduced to Rs.0.058 Crore/MW compared to the revised base cost considered by CEA in its report dated 21.02.2019. CEA, in its report dated 21.02.2019, has increased the base cost of FGD system from Rs. 0.362 crore/MW to Rs.0.405 Crore/MW based on the prices discovered by various thermal plants.*
>
> *23. Considering the above facts and recognizing that the cost considered by CEA is indicative only and the cost claimed by the petitioner has been discovered based on open competitive bidding, Commission allows the cost claimed by the petitioner for the two packages i.e. "FGD main package" and "Electrical power supply package".*

Therefore, the Commission needs to treat the cost recommended by CEA as indicative cost and ensure that a transparent international competitive bidding process has been followed, so that prices discovered are reasonable.

29. We now proceed to compare the costs as claimed by the Petitioner with CEA recommended costs. It is clear from the table at paragraph 20 above that the claimed base cost of Rs.1634.33 crore towards "FGD main package", works out to Rs. 0.39 crore/MW as against the CEA's indicative figure of Rs.0.30 crore/MW that translates into Rs. 1245 crore for the 4150 MW Mundra UMPP. We note that the cost of purely site-specific additional equipment/ assets amount to Rs. 377 crores (refer footnote of table at para 24 above) in the claimed cost of Rs.1634.33 crores. Excluding this site-specific cost, the cost of FGD system comparable in scope with CEA recommended scope of FGD system, works out to Rs. 1257.33 crores (1634.33 - 377) which is very close to CEA recommended base cost of Rs. 1245 crores (0.30 crore/MW). In our view, there is hardly any difference

in the cost claimed by the petitioner vis-à-vis that indicated by CEA as regards the "FGD Main package".

30. The Respondents have also raised objections for claimed costs other than that for the "FGD main package", claiming that they are on the higher side or even exorbitant. Respondents have raised issues such as claims on account of IDC being higher; admissibility of opportunity costs; GST being treated as separate cost; higher claims on O&M expenses and auxiliary consumption; admissibility of insurance costs; applicability of provisions of Section 62 of the Act despite there being formula of compensation in Article 13 of the PPA itself; non-involvement of Procurers in the competitive bid process; non-relevance of financial position of the Petitioner as far as implementation of FGD is concerned; consideration of FGD for installed capacity of 4150 MW while the bid capacity was only 4000 MW etc. The Petitioner has submitted its reply to issues raised by the Petitioner in the rejoinder filed by it.

31. We note that apart from the cost of Rs. 1634.33 crores for the "FGD main package", the Petitioner has claimed Rs. 1080.67 crores towards other components such as owner's cost (consultancy services, site survey, project management etc.) (Rs. 81.72 crores); GST (Rs. 308.99 crores); contingencies (Rs. 101.25 crores); IDC (Rs. 408.01 crores) and opportunity costs (Rs. 181.18 crores). Petitioner has given basis of arriving at these numbers corresponding to each of the costs.

32. In a similar case related to Sasan Power Ltd. in Petition No. 446/MP/2019, vide Order dated 23.04.2020, the Commission decided as under:

> *"27. ------ The Petitioner has submitted that taxes and duties @24% of base cost and expense towards project management & engineering services @3% of base cost are based upon CEA recommendations. Thus, while the provisional cost of Rs. 1663 Crores for "FGD main package" claimed by the Petitioner is almost same as that recommended by CEA, the costs claimed towards taxes and duties (Rs. 399 crores) and expense towards project management & engineering services (Rs. 50 crores) are based on percentage of base cost*

as per CEA recommendations. As regards claim towards interest during construction (Rs. 286 crores), it is a verifiable cost that is consequential to installation of FGD system. The only item that is not covered under CEA recommendations is the claim towards pre-operative expenses. Such cost can be allowed only after proper justification by the Petitioner and after prudence check by the Commission, once the FGD system is installed.

xxxxx

30. The Commission also allows the petitioner to claim expenditure towards IDC, taxes & duties, FERV (if any) and expenditure towards project management & engineering services at actuals after commissioning of the FGD system, which may be allowed after prudence check. As regards pre-operative expenses, the cost may be allowed subject to proper justification for such expense and after prudence check by the Commission."

33. However, we note that in the instant case, CEA has not given any recommendations as regards taxes & duties and project management and engineering expenses as it had done in case of Sasan Power Ltd. In our view, these are similar projects and should be considered similarly.

34. As regards claim towards interest during construction (Rs. 408.01 crores), in our view, it is a verifiable cost that is consequential to installation of FGD system. The Petitioner and the Respondents have different views on payment of GST (and other taxes & duties). However, they are to be reimbursed as per actuals and any assessment made can only be an estimate. We note that CEA had estimated taxes & duties @24% of base cost towards taxes & duties in case of Sasan Power Ltd.

35. In view of the above, the Commission accords approval to the petitioner for following capital cost on provisional basis:

Sr. No.	**Descriptions**	**Claimed**	**Allowed on provisional basis Capex Estimate (Rs. in crores)**
A	Capital Cost		
1	**FGD EPC Cost**		
1	**Total FGD EPC Basic Price**	**1634.33**	**1547.33 {1634.33-87 (not considered by CEA)}**
2	Spares	Included in 1	Included in 1

36. The Commission also allows the petitioner to claim expenditure towards IDC (at actuals); GST, taxes and duties (as applicable); FERV (if any); and expenditure towards

owner's cost (at actuals) after commissioning of the FGD system, which may be allowed after prudence check.

37. As regards contingency, the Petitioner has not given proper justification. For this item, the cost may be allowed subject to proper justification for such expense and subject to prudence check by the Commission after the installation of FGD system is completed. As regards claim towards "Restoration of Existing Access Roads and Re-Routing Of Utilities" (Rs. 12 crores) and "Miscellaneous Costs- Installation of Electrical & Fire safety System" (Rs. 75 crores), we have observed that CEA has stated that these are not directly required for installation of FGD system and the Petitioner has to assess their requirements. These costs may be allowed after installation of FGD system and after considering proper justification of expenditure, subject to prudence check by the Commission.

Issue No.2: Whether additional Operational expenses including O&M expenses and the relaxation in other operating norms due to installation of FGD system and Opportunity cost are admissible as claimed by the petitioner?

Additional Operational expenses:

38. The petitioner has submitted that installation of FGD would have impact on operating expenditure on account of increase in auxiliary consumption and operation and maintenance expenditure. Further, the Petitioner has submitted that the increase in auxiliary consumption would have twin impact, viz. impact on Capacity Charges (due to decrease in Declared Capacity) and the impact on Energy Charges (on account of excess consumption of coal). There is an overall reduction of Availability to the tune of 1.153% and impact on net Heat Rate which in turn would impact the Energy Charge.

39. The Respondents have submitted that claim of auxiliary consumption as 1.153% of 4150 MW is wrong and any auxiliary consumption can be considered only vis-à-vis 4000

MW contracted capacity. The capacity charges are payable for declared availability (Schedule 7) and the Petitioner is not entitled to any such charges on deemed availability basis or as part of change in law compensation. Allowing such compensation would be outside the scope of the PPA.

40. The CEA vide its 'Recommendation Report' for CGPL dated 21.2.2019 stated the following with regard to O&M cost and Auxiliary Power Consumption of FGD

*"**Estimated (indicative) OPEX for FGD system***

Sl. No	***DESCRIPTION (FOR 5×830 MW)***	***ONLY FOR FGD IMPLEMENTATION 5×830 MW (CRORE INR)***	***PER MW/YEAR COST***	***REMARK***
1	*Annual Reagent Cost*	*Nil*	*Nil*	
2	*Annual Clarified & DM water consumption cost*	*3.39*	*0.000804*	*PLF-85%*
3	*Annual cost of APC-3.69/unit @1.0% (41.5 MW)*	*114.0*	*0.02746*	*PLF-85%*
4	*Annual Fixed O&M Cost (O&M manpower, services, Maint. Etc.)*	*24.9*	*0.00600*	*2% of Total FGD CAPEX*
5	*Annual By-Product handling Cost*	*Nil*	*Nil*	
Annual OPEX FOR 5×830 MW Unit		*142.29 (Crore INR) = 0.0342 CR/MW per year*		

The Annual indicative OPEX calculated is Approximately 142.29 (Crore INR) for CGPL (0.0342 CR/MW per year) taking per unit power cost as Rs. 03.69 (as provided by CGPL). The OPEX cost should be kept low as Reagent cost and By-product handling cost is nil. More over FGD is designed on open cycle using Cooling Tower discharge for Dilution of FGD discharge.

OPEX

The Annual indicative Operating Cost (OPEX) will include annual APC for FGD, annual Reagent cost (if any), annual Additional water consumption associated with FGD, annual Manpower charges for O&M of FGD, annual By-product handling (if any) and annual revenue earned from disposal of by product, this shall be calculated after detailed engineering and life cycle cost benefit analysis. Also, the regulator may regulate the different aspects of OPEX (as per actual) at appropriate time when the FGD starts operating. Refer the chapter no 9 OPEX."

41. In the present case, CEA has provided the factors to be considered for OPEX including annual O&M Expenses (O&M manpower, services, maintenance, etc.), cost of auxiliary power consumed, cost of annual Clarified & DM water consumption etc. CEA has

provided the basis of arriving at the OPEX corresponding to each factor as provided in the table above at paragraph 39. CEA has also opined that the regulator may regulate the different aspects of OPEX (as per actual) at appropriate time when the FGD starts operating. The major operating cost (Rs.114 crores/annum) indicated by CEA is the cost of the Auxiliary Energy consumed by the FGD system corresponding to 1% Auxiliary consumption & 85% availability @ Rs.3.69/kWh.

42. The issue of plant capacity i.e. 4000 MW vis-à-vis 4150 MW as raised by the Respondents has been dealt as a separate issue (Issue No.3) in later part of this Order. Further, the issue raised by the Respondents regarding compensation in capacity charges consequent to operationalization of FGD system, has been dealt as Issue No.4.

43. With regard to the recovery of cost of Auxiliary Energy consumed (Rs. 114 crores) by FGD system, Commission is of the view that that impact of increased auxiliary consumption after installation of FGD system would be allowed to be recovered through increase in quoted Energy Charge Rate and Capacity Charge rate and not through OPEX at normative availability as suggested by CEA. With regard to cost of additional water consumption, Commission would consider the same after prudence check of the data collected after installation of FGD system at various Thermal Generating stations.

44. With regard to Annual O&M expenses for FGD operation, CEA has considered the same at the rate of 2% of total FGD CAPEX (Rs.0.30 crore/MW). As such, for FGD system, the O&M expenditure as considered by CEA works out to Rs.24.90 crore/MW (4150x0.30x0.02) for plant capacity of 4150 MW. However, the Petitioner has contested that the O&M expenses would be around Rs. 65.77 crores per annum. Petitioner has further submitted that CEA has not considered the expenditure towards insurance which is to be considered as 0.13% of GFA as an additional cost towards insurance charges. In

this regard, the Commission has dealt similar matter in case of Adani Power Ltd. in order dated 28.3.2018 in petition no 104/MP/2017. It was decided that the additional O&M expenses provisionally be considered @2% per annum of the capital cost of FGD system. Relevant Para is extracted below:

> *"49. Pending the prescription of norms by CEA, we allow the O&M expenses provisionally at the rate of 2% per annum of the capital cost of FGD, subject to adjustment in the light of the norms to be prescribed by CEA."*

45. Similar decisions have been taken by the Commission in respect of Sasan Power Limited (446/MP/2019) and Sembcorp Energy India Limited (209/MP/2019) wherein O&M expenditure @2% per annum of the capital cost of FGD has been allowed. Therefore, in the instant case also, O&M expenditure is provisionally allowed @2% of the capital cost of FGD system at this stage. We direct the petitioner to submit the O&M expenses relating to FGD system on actual basis at the time of filling the petition for determination of tariff on commissioning of the FGD system.

Additional Auxiliary Power Consumption and Opportunity Cost

46. With regard to additional auxiliary power consumption and opportunity cost, the Commission in its order dated 23.4.2020 in petition 446/MP/2019 held as under:

> ***"Operational norms**:*
> *35. The Commission is yet to specify operational norms in respect of systems to be commissioned for meeting Revised Norms. In absence of notified operational norms, Commission allows increased auxiliary consumption of 1% as recommended by CEA subject to revision based on the norms specified by the Commission, if any. This allowed increase in auxiliary consumption by 1% is allowed for the modification in formulae for Availability, Energy Charge and PLF on account of increased auxiliary consumption.*
>
> *36. CEA, in its report, has observed that the generating station may be allowed to recover the opportunity cost towards shutdown of the generating units for interconnection of chimney with the absorber. However, CEA has not specified number of days for which units would have to be shutdown for interconnection of FGD system with the chimney. CEA has opined that shutdown period can be minimized by taking suitable measures. It is, however, observed that the Petitioner's claim is based on the shutdown period of 30 days. The Commission is of the view that beneficiaries and the petitioner shall plan the interconnection of FGD system with main plant by synchronizing it with annual overhaul. Therefore, the Commission is not considering the opportunity cost at this stage. However, the same would be considered on actual number of days of shutdown after prudence check to the effect that the Petitioner has*

tried to synchronize the interconnection of FGD system with annual overhaul and has consulted the beneficiaries in this respect."

47. The CEA in its 'Recommendation Report' dated 21.2.2019 in regard to APC and opportunity cost for the Mundra UMPP has recommended the following:

"10. APC

- *Additional Auxiliary power Consumption (APC) for complete FGD facilities is 1.0%.*
- *Extra APC of 0.153% to be considered only when using GGH with old/existing chimney in FGD system."*

OPPORTUNITY COST:

Since interconnection of newly lined chimneys or New wet stack or stack above absorber may result in loss of generation of the plant, hence CGPL is advised to minimize this interconnection time by taking suitable measure so that the "Opportunity cost" associated with interconnection may have least impact on CAPEX and eventually on tariff revision….."

48. In view of the above, since the operational norms are yet to be specified by the Commission and based on the above precedence, the Commission allows increased auxiliary consumption of 1.153% as recommended by CEA for FGDs having GGH as their integral part. This would be subject to revision based on the norms specified by the Commission, if any. This allowed increase in auxiliary consumption by 1.153% is allowed for the modification in formulae for Availability, Energy Charge and PLF on account of increased auxiliary consumption.

49. In its report, CEA has observed that the generating station may be allowed to recover the opportunity cost towards shutdown of the generating units for inter-connection of chimney with the absorber. However, CEA has not specified number of days for which units would have to be shut down for interconnection of FGD system with the chimney. CEA has opined that shutdown period can be minimized by taking suitable measures. It is, however, observed that the Petitioner's claim is based on the shutdown period of 22 days. The Commission is of the view that beneficiaries and the petitioner shall plan the interconnection of FGD system with main plant by synchronizing it with annual overhaul.

Therefore, the Commission is not considering the opportunity cost at this stage. However, the same would be considered on actual number of days of shutdown after prudence check to the effect that the Petitioner has tried to synchronize the interconnection of FGD system with annual overhaul and has consulted the beneficiaries in this respect.

Issue No.3: Whether capacity of 4150 MW or 4000 MW is to be considered towards expenditure/ relief for Installation of FGD system?

50. The Respondents have submitted that the impact has to be considered based on 4000 MW power project as the Petitioner was selected as the successful bidder and the PPA was executed based on a 4000 MW Ultra Mega Power Project (5X800 MW). It was CGPL's choice to seek expansion of the units to 830 MW and total project capacity to 4150 MW. The PPA between CGPL and the Procurers do not reflect such expanded capacity and continues to be at 4000 MW. Additional capacity installed by the Petitioner has impact on capital expenditure, operating expenditure as well as auxiliary power consumption.

51. The Petitioner has submitted that at the time of constructing and setting up of Mundra UMPP, it was decided to change the Turbine or Steam Cycle. This entailed substituting the 'Steam Driven Boiler Feed Pump' from the Steam Cycle in the original design to 'Motor or Electricity Driven Boiler Feed Pump'. The said design modification improved the gross capacity by 30 MW per unit (or 150 MW for the plant) but at the same time increased the auxiliary consumption. However, this change did not alter the Contracted Capacity of 3800 MW. Further, CGPL submits that the Boiler (or Steam Generator) side of the plant was also not altered. The content of the SO_2/ flue gases produced in the boiler is dependent on the fuel fired. It has, therefore, submitted that since the Boiler design was not altered when the capacity was enhanced, the quantum of fuel fired did not undergo a change.

52. The Commission vide order dated 17.9.2018 in Petition No. 77/MP/2016 in regard to Change in law event for SO_2 emission held as under:

"30. We have considered the submissions of the Petitioner and Respondents. The Petitioner was selected for execution of the Mundra UMPP through a Case 2 competitive bidding. Clause 1.4(iii) of the RFP provides as under:

"1.4 The Procurers through the Authorised Representative, have initiated development of the Project at Mundra, District Kutch, Gujarat and shall complete the following tasks in this regard by such time as specified hereunder:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
iii. Obtain necessary environmental, coastal regulation zone and forest clearances for the Power Station, prior to the issue of the Letter of Intent. The draft environment management plan will be made available at least ninety (90) days prior to Bid Deadline. These clearances are being obtained in relation to a project of gross capacity of 4000 MW employing Supercritical Technology;"

As per the above provisions in the RFP, the Procurers through their authorized representative are required to obtain the necessary environmental clearance, coastal zone clearance and forest clearance for the power station prior to the issue of the Letter of Intent. It further provides that the draft environment management plan would be made available at least 90 days prior to the Bid Deadline. The purpose of providing the draft environment management plan would be made available at least 90 days prior to the Bid Deadline is to make the bidders aware of the environmental requirements and make provision for the cost of their implementation in the quoted tariff in the bid. Recital B of the PPA dated 22.4.2007 notes the status of clearances as under:

"B. The Procurers, through their Authorised Representative, have completed the initial studies as contained in Project Report; and obtained Initial Consents required for the Project which are set out in Part 1 of Schedule 2 and have been made available to the Seller on date of execution of this Agreement, except Forest Clearance for the Power Station and Coastal Regulation Zone Clearance. These clearances are being expedited and are expected shortly."

Part 1 of Schedule 2 of the PPA is extracted as under:

"2. SCHEDULE 2: INITIAL CONSENTS
PART 1
i. Necessary environmental and forest clearances for the Power Station
ii. Coastal regulation zone clearance"

It is therefore clear from the above that the environment clearance for Mundra UMPP was obtained by procurers on 2.3.2007 and was made available to the successful bidder on 22.4.2007. Moreover, all RFQ qualified bidders were advised by PFC (Bid Coordinator) to consider/earmark certain amount towards land cost and R&R cost while submitting the bids by its e-mail dated 23.10.2006 and the said e-mail did not specify any amount to be considered/earmarked for FGD.

xxxxxxxxxxxxxxxxxxxxx

32……On the contrary, Mundra UMPP was granted environment clearance on 2.3.2007 after the cut-off date (i.e. 30.11.2006) and the environmental clearance was made available to the Petitioner on the date of execution of the PPA (22.4.2007). Therefore, unlike the case of JSW, Tata Power being the successful bidder was not aware of the requirements of environment clearance while submitting the bid and therefore, could not be expected to include the expenditure on FGD in the quoted tariff. Further, condition in para 3(xxx) of the

Environment Clearance dated 2.3.2007 provides for separate funds for environmental protection measures and reporting of year-wise expenditure to MoEF.

The Petitioner has submitted that an amount of Rs.200 crore had been earmarked by the Petitioner for environment protection measures for a period of 25 years. The Petitioner has filed the copies of the letters under which the Petitioner has submitted the compliance reports regarding environment protection measures in terms of condition 3(xxx) of the EC dated 2.3.2007 for the years 2013-14, 2014-15, 2015-16 and 2016-17. Perusal of the said letters shows that the expenditure on FGD does not form part of the environment protection measures. The fact that no objection has been raised by MoEFCC with regard to the expenditure earmarked/incurred for environment protection measures shows that FGD is not included in the expenditure under condition 3(xxx) of the EC. Therefore, it cannot be said that the Petitioner was required to include the expenditure on FGD to be incurred in future if required at a later stage in terms of condition 3(ii) of the EC dated 2.3.2007. In view of the above reasons, we hold that the judgement of the Appellate Tribunal in JSW case is not applicable in the case of the Petitioner. The requirement of installation of FGD for compliance with the revised norms for sulphur dioxide in terms of the MoEFCC Notification, 2015 is covered under Change in Law in terms of the PPA dated 22.4.2007.

53. It is evident from the above that the RFP document for CGPL project was for 4000 MW capacity and the Environment Clearance was issued on dated 2.3.2007 and the cut-off date was 30.11.2006. The PPA was signed on 22.4.2007 between the Petitioner and the Respondents. Subsequent to the above, on 1.4.2011, Petitioner requested MoEF&CC for amendments in Environment Clearance. The MoEF&CC vide corrigendum dated 26.4.2011 approved the change in total capacity of the Mundra UMPP. Relevant extracts of the MoEF&CC Corrigendum dated 26.4.2011 is as under:

"2. d) Under Para No.3, the condition no. (xxiv) read as 'The proposed configuration of the project (5×800 MW) could be changed provided that the total capacity of the power plant shall not exceed 4000 MW and that no individual unit shall be less than 500 MW', shall be substituted by the following:
'The proposed generation capacity of the project could be increased only by way of adoption of waste heat recovery and entailing no additional coal and water consumption. The generation capacity thus obtained taking waste heat recovery into account shall however not exceed 4150 MW and configuration of units may be accordingly adopted at 5×830 MW'."

54. The Commission vide order dated 19.9.2007 in petition no.18/2007 in regard to adoption of Tariff for the Mundra UMPP observed as under:

"3. The Central Government has been facilitating development of a number of Ultra Mega Power Projects by using the economies of scale which aims at making available comparatively cheaper power to more than one state. Mundra Ultra Mega Power Project (4000 MW) in the state of Gujarat has been conceived with the purpose of supplying power to the following distribution licensees (also referred to as the procurers) of the beneficiary states:

(i) Gujarat Urja Vikas Nigam Ltd.
(ii) Maharashtra State Electricity Distribution Co. Ltd.
(iii) Ajmer Vidyut Vitran Nigam Ltd.
(iv) Jaipur Vidyut Vitran Nigam Ltd.
(v) Jodhpur Vidyut Vitran Nigam Ltd.
(vi) Punjab State Electricity Board.
(vii) Haryana Power Generation Corporation Ltd."

55. It is noticed that capacity recognized under the PPA dated 22.4.2007 is 4000 MW whereas the contracted capacity in the said PPA is 3800 MW. In the bid itself, the auxiliary consumption was recognized as 200 MW, equivalent to about 5%. It is admitted that the Petitioner itself had sought the expansion of Mundra UMPP. Further, the petitioner in its affidavit dated 14.10.2013 in petition 159/MP/2012 submitted that auxiliary consumption was assumed as 4.75% in its bid and installed capacity of 4000 MW. The impact of the additional capital expenditure and operating expenditure is considered within the PPA. The installed capacity of 4000 MW was one of the bid considerations at the time of entering into PPA that has not been amended or altered till today. Therefore, any consideration of impact based on installed capacity of 4150 MW would tantamount to alter the provision of PPA. Further, there will be impact on the CAPEX and auxiliary power consumption by considering the higher installed capacity of 4150 MW. The Mundra UMPP is a case-2 project, wherein the bidder is awarded the project based on the quoted tariff by the Petitioner.

56. We also take notice of the submission of the Petitioner that the FGD system has been designed for 4150 MW capacity and the costs have been accordingly claimed. It has contended that the capital cost of the project for 4000 MW capacity would not proportionately come down and, therefore, it would also be incorrect to consider a proportionate reduction. The emission of SO_2 is dependent on amount of coal to be fired and Sulphur content in the coal. The installation of 4150 MW plant capacity in place of 4000 MW by CGPL is to cater to the power consumption requirement of electrical motor

driven BFPs keeping same contractual output of 3800 MW to procurers. Selection of 4000 MW plant with turbine driven BFP would have accounted for higher heat rate which in turn would have required higher coal consumption and higher SO_2 emission for the same contractual output. However, we note that the Petitioner has not explained the rationale for such assertions. Moreover, this Petition has been filed for claim of costs related to installation of FGD system. Any claim of the Petitioner for granting costs for 4150 MW is not subject matter of this Petition. Accordingly, we hold that the calculations for capital expenditure, operating expenditure and auxiliary power consumption shall be done corresponding to installed capacity of 4150 MW, but the Respondents shall be liable to pay the expenses on pro-rata basis corresponding to 4000 MW in terms of PPA.

Issue No.4: What shall be the norms and mechanism for computing the adjustment in tariff corresponding to the additional investment and increase in the operating costs due to the 2015 Notification so as to restore the petitioner to same economic position as if such Change in Law event has not occurred?

57. Article 13.2 of the PPA reads as follows in the instant case:

> ***13.2 Application and Principles for computing impact of Change in Law***
> *While determining the consequence of Change in Law under this Article 13, the Parties shall have due regard to the principle that the purpose of compensating the Party affected by such Change in Law, is to restore through Monthly Tariff Payments, to the extent contemplated in this Article 13, the affected Party to the same economic position as if such Change in Law has not occurred.*
>
> ***a) Construction Period***
>
> *As a result of any Change in Law, the impact of increase/decrease of Capital Cost of the Project in the Tariff shall be governed by the formula given below:*
>
> *For every cumulative increase/decrease of each Rupees Fifty crores (Rs.50 crores) in the Capital Cost over the term of this Agreement, the increase/decrease in Non Escalable Capacity Charges shall be an amount equal to zero point two six seven (0.267%) of the Non Escalable Capacity Charges. Provided that the Seller provides to the Procurers documentary proof of such increase/decrease in Capital Cost for establishing the impact of such Change in Law. In case of Dispute, Article 17 shall apply.*
> *It is clarified that the above mentioned compensation shall be payable to either Party, only with effect from the date on which the total increase/decrease exceeds amount of Rs. Fifty (50) crores.*
>
> ***b) Operation Period***

As a result of Change in Law, the compensation for any increase/decrease in revenues or cost to the Seller shall be determined and effective from such date, as decided by the Central Electricity Regulatory Commission whose decision shall be final and binding on both the Parties, subject to rights of appeal provided under applicable Law.

58. It is observed that clause 13.2(a) of the PPA provides for compensation methodology to be applied to the non-escalable capacity charges if a Change in Law event results in increase in capital cost during the construction period. However, for the Change in Law events which occur during the operation period e.g. the instant change in law event requiring installation of FGD system at the generating station of the petitioner, clause 13.2(b) of the PPA has left it to the Commission to arrive at the compensation for any increase/ decrease in revenues or cost. Also as per Clause 13.2 of the PPA, "*the purpose of compensating the Party affected by such Change in Law, is to restore through Monthly Tariff Payments, to the extent contemplated in this Article 13, the affected Party to the same economic position as if such Change in Law has not occurred"*. Thus, the Petitioner is required to be restituted to the same economic position as if the Change in Law event had not occurred.

59. We note that few other similar petitions have been filed by other generating companies in respect of their generating stations wherein tariff has been determined through the tariff based competitive bidding route under Section 63 of the Act. PPAs in their case also contain similar provisions as clause 13.2(b) of the instant Petition i.e. there is no explicit provision with regard to methodology for compensation for Change in Law events which occur during the operation period. In their case too, the PPAs have left it for the Commission to decide at the compensation for any increase/ decrease in revenues or cost on account of change in law during the operation period. Since the FGD system is required to be installed by all thermal generating stations as per the 2015 Notification, several more such Petitions are likely to be filed by generating companies for determination of compensation on account of change in law during operation period.

Therefore, it would be appropriate to adopt a uniform compensation mechanism in respect of all such generating stations.

60. Accordingly, the Commission vide order dated 23.4.2020 in Petition No. 446/MP/2019, has directed the staff of the Commission to float a staff paper at the earliest on the issue of compensation mechanism and tariff implications on account of the 2015 Notification in case of those thermal power plants where the PPA does not have explicit provision for compensation mechanism during the operation period and the PPA requires the Commission to devise such mechanism, inviting comments from all the stakeholders.

61. The Petitioner has raised issue of its precarious financial position and has referred to ongoing discussions with the Procurers. In our opinion, the issue is not relevant to the present case of installation of FGD system that is a statutory compliance in terms of the 2015 Notification.

62. With regard to prayer (e) of the Petition, the Petitioner may approach this Commission by way of separate petition(s) as and when the norms are notified by MoEF&CC.

63. Petition No. 168/MP/2019 is disposed of in terms of above.

Sd/-
(I.S. Jha)
Member

Sd/-
(P. K. Pujari)
Chairperson

ANNEXURE - 5

COASTAL GUJARAT POWER LIMITED

Request for Qualification

for

Tariff Based Bidding Process for Procurement of Power on Long-Term Basis from Power Station to be setup at Mundra, District Kutch, Gujarat based on Imported Coal

Issued by

Coastal Gujarat Power Limited
(A Subsidiary of Power Finance Corporation Ltd. – A Govt. of India Undertaking)
Chandralok Building, 36 Janpath, New Delhi 110001
Telefax: + 91 11 23351655, + 91 11 2332 3018
e-mail: kkpbhonde@pfc.delhi.nic.in

On behalf of state electricity boards/ electricity distribution companies/ state electricity utilities of Gujarat, Maharashtra, Haryana, Rajasthan, Punjab and Uttar Pradesh

March 31, 2006

1. INTRODUCTION

1.1 Coastal Gujarat Power Limited, a subsidiary of Power Finance Corporation Limited (A Government of India Undertaking), Chandralok Building, 36 Janpath, New Delhi 110001 (hereinafter to be referred to as the "Authorised Representative")on behalf of state electricity boards/ electricity distribution companies /state electricity utilities of Gujarat, Maharashtra, Haryana, Rajasthan, Punjab and Uttar Pradesh, (hereinafter to be referred as the "Procurers"), wishes to invite Bids for purchase of power on a long-term basis.

1.2 For the purpose of this document the:

1.2.1 Lead Procurer will be defined as the Procurer designated by the Procurers to undertake the purchase of power on their behalf.

1.2.2 SPV will be defined as a separate legal company established under the Indian laws by the Distribution Licensees to purchase the power on long term basis.

1.2.3 Authorized Representative is defined as Coastal Gujarat Power Limited, the body corporate designated by the Procurers to carry out the whole Bid process for the selection of the Bidder, on their behalf.

1.2.4 Authorized Person is defined as Coastal Gujarat Power Limited, the person designated by the Procurers or the Authorized Representative to represent the Procurers in dealings with the Bidder or the Bidding Consortium.. The person shall be authorized to perform all tasks such as providing information, responding to enquiry, issuing clarifications, calling pre-Bid conference, issue advertisements for RFQ and RFP, coordination with the participating Distribution Licensees etc.

1.3 The objective of this Bidding process is to identify Bidders for supply of minimum 3600 MW and maximum 4400 MW of power for a period of 25 years as may be defined in the RFP. The successful Bidder shall enter into a Power Purchase Agreement (PPA) as detailed out in the Model PPA forming part of this document. Further any update/amendment/supplementary details about the Bidding process, the Project and the PPA shall be provided in the RFP document in accordance with Guidelines for Determination of Tariff by Bidding Process, after obtaining approval of the appropriate regulatory commission, if such approval is required under law.

1.4 Brief introduction of the Procurers, the purpose of procurement of power and summary of the financial capability of the Procurers:

- Last three years available annual Audited accounts are inciuded as Annexure 1
- Last three years Aggregate Technical and Commercial Losses are included as Annexure 1
- Details Regarding existing tariff structure, consumer base etc are included as Annexure 1 and also available on the websites of the Procurers and the concerned regulatory commissions
- Business Forecast shall be provided at the RFP stage

1.5 Procurers have authorized the Authorized Representative to carry out the whole bid process on their behalf. The minutes of the meeting in this regard are enclosed as Annexure 3.

1.6 Accordingly, the Procurers seek to select competent, experienced and capable party or a consortium of parties (hereinafter referred to as "Bidders") who have the necessary technical competence, experience and financial strength for supply of power on a long-term basis. The Procurers invite responses from companies either as sole Bidder or in the form of a consortium for supply of power.

1.7 Project includes establishment, operation and maintenance of 4000 MW power plant based on imported coal for its life-cycle. The site is located in Special Economic Zone at south of village Tundawad, Taluka Mundra, district Kutch in the coastal area of the state of Gujarat. The project site is located 1.5 km from sea and 22 km away from Mundra Port. The nearest Railway Station is Adipur, which is about 70 km and nearest Airport is Bhuj which is about 60 km from the proposed site. The tentative latitude and longitude of the proposed site are 22°48' and 69° 31' respectively.

Power Finance Corporation Limited (a Government of India Undertaking) has incorporated a company under the name Coastal Gujarat Power Limited. Coastal Gujarat Power Limited shall complete the following tasks prior to issue of letter of intent to the successful bidder:

1. Site identification and land acquisitioned required for the project
2. Obtaining environment clearance
3. Tying up water linkage

1.8 The Procurers will transfer the project site to Coastal Gujarat Power Limited to implement the project after signing and as per the terms of PPA at a price to be indicated in the RFP. The responsibility of the Resettlement & Rehabilitation lies with the Procurers.

1.9 All Bidders are required to submit information in accordance with the guidelines set forth in this Bid document. Bidders should provide information sought herein in order to satisfactorily establish their competence and suitability for executing the project.

1.10 The contracted power shall be sold only to the Procurers as per the terms and conditions of a Power Purchase Agreement (PPA). The Model PPA is attached in Annexure 6. Such Model PPA may be modified in accordance with Guidelines for Determination of Tariff by Bidding Process. The Procurers would retain dispatch rights over the contracted capacity of the generating station, during the term of the PPA, which has been allocated to it by the selected Bidder and Coastal Gujarat Power Limited.

1.11 The responses to RFQ shall be valid for not less than six (6) months from the last date of submission.

1.12 Brief information on the coal block shall be provided at the RFP stage/Not applicable for Mundra

2. INFORMATION AND INSTRUCTION TO BIDDERS

2.1 *Qualifying Criteria*

2.1.1 The terms used in this document have the same meaning as defined in the Model PPA provided as Annexure 6 of this document.

2.1.2 Bidders should have adequate technical experience and adequate financial capability to execute the project.

2.1.3 The Bidder must fulfill following minimum financial requirements:

i. **Internal Resource Generation:** Equal to at least Rs. 1200 Crore or equivalent US$ computed as cumulative internal resources generated during last five years business operations;

ii. **Networth:** Rs. 1000 Crore or equivalent US$; The above computation shall be derived from any of the past three years annual accounts.

iii. **Annual Turnover:** Rs. 2400 Crore or equivalent US$. The above computation shall be derived from any of the past three years annual accounts.

Above financial requirements shall be defined and computed in following manner by the Bidder:

- **Internal Resource Generation**

=	Profit After Tax (PAT)
Add:	Depreciation and Amortization
Add:	any other non cash expenditure
Subtract:	Loan repayments, dividends and increase in working capital margin

- **Networth**

=	Equity share capital
Add:	Reserves
Subtract:	Revaluation Reserves
Subtract:	Intangible Assets
Subtract:	Miscellaneous Expenditures to the extent not written off and carry forward losses

- **Annual Turnover:** Annual Gross Revenue Earned by the Bidder

(Note: The US$-Indian Rupee Exchange rate shall be considered as the corresponding TT buying rate specified by the State Bank of India seven days before the last date of submission for the Bidders as stated in the RFQ document.)

2.1.4 The Bidder must meet technical requirement of having experience of developing projects (not necessarily in the power sector) in the last 10 years whose aggregate capital costs must not be less than Rs. 3000 Crore. Out of these projects, the capital cost of at least one project should be equivalent or more than Rs. 500 Crores. For this purpose, capital expenditure on projects that have been completed at least 7 (seven) days before the RfQ submission date shall be considered.

2.1.5 Bidders shall furnish documentary evidence duly certified by qualified auditors in support of their financial capability and technical experience as defined in 2.1.3 and 2.1.4 respectively.

2.1.6 The Bidder shall submit a comfort letter from a fuel supplier for fuel supply for the entire term of the PPA at the time of submission of proposal in response to the RFP.

2.2 *Purchase of power by the Procurers*

2.2.1 Procurers plans to procure power to the extent of 4000 MW (plus/minus 10%). The power shall be delivered at the generator switchyard bus-bar. The Normative Availability required to be met by the Bidder, over and above which incentives shall be paid, shall be 80%. The Normative Availability should align to the Minimum Off-take Guarantee of the Procurers.

2.3 *Collection of RFQ document*

2.3.1 The Bidders can collect the RFQ document in person against payment of non-refundable payment of Rs. 30,000/- or US$ 700/- in the form of a Demand Draft payable at New Delhi in favor of "Power Finance Corporation Limited". The Draft should be submitted to Chief Executive, Coastal Gujarat Power Limited (a Subsidiary of Power Finance Corporation Limited – a Government of India Undertaking), Chandralok Building, 36 Janpath, New Delhi 110001 and the RFQ document can be collected accordingly. The RFQ document will be available for sale on all working days from March 31, 2006 to May 12, 2006 between 10.00 hrs and 16.30 hrs. The RFQ document can also be downloaded from PFC website http://www.pfcindia.com. However, in such case the interested parties can submit responses to RFQ only on submission of document fee of Rs. 30,000/- or US$ 700/- as mentioned above along with the RFQ proposal.

2.4 *Information Required*

2.4.1 The information in response to this RFQ will be submitted by the Bidder as per the Annexures attached in this document. The information to be submitted for this volume is specified in Chapter 4 (Formats of Application) of this document

2.4.2 Strict adherence to the formats wherever specified, is required. Wherever, information has been sought in specified formats, the Bidder shall refrain from referring to brochures/ pamphlets. Non-adherence to formats and/ or submission of incomplete information may be grounds for declaring the Bid non-responsive. Each format has to be duly signed and sealed by the Bidder.

2.4.3 The Bidder should note that:

a) If the Bidder deliberately gives wrong information in its response to RFQ in order to create circumstances for the acceptance of its Bid, the Authorised Representative and Procurers reserve the right to reject such Bid and/ or cancel the award, if made.
b) Responses submitted by the Bidder shall become the property of the Authorised Representative and Procurers and the Authorised

ANNEXURE 6

Model Power Purchase Agreement

Enclosed herewith is the Model Power Purchase Agreement. The PPA has the terms and conditions under which the Procurer would purchase power

Name of the Distribution Licensee/Authorized Representative

Model Power Purchase Agreement

for

Tariff Based Bidding Process for Procurement of Power on Long Term Basis from Power Station to be setup at Mundra, District Kutch, Gujarat based on Imported Coal

[Name of Distribution Licensee 1]
("Procurer 1")
and

[Name of Distribution Licensee 2]
("Procurer 2")
and

Coastal Gujarat Power Limited
("Seller")

Issued by

Coastal Gujarat Power Limited
(A Subsidiary of Power Finance Corporation Ltd. – A Govt. of India Undertaking)
Chandralok Building, 36 Janpath, New Delhi 110001
Telefax: + 91 11 23351655, + 91 11 2332 3018
e-mail: kkpbhonde@pfc.delhi.nic.in

On behalf of state electricity boards/ electricity distribution companies/ state electricity utilities of Gujarat, Maharashtra, Haryana, Rajasthan, Punjab and Uttar Pradesh

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This Agreement is made the [ ] day of [ ] 20[ ]

Between

(1) **[Insert Name of Distribution licensee],** (the "Procurer1")

(2) **[Insert Name of Distribution licensee],** (the "Procurer2")

(3) **[Insert Name of the Generating Company],** (the "Seller")

(The "Procurer1" and "Procurer2" are collectively referred to as the "Procurers"[1] or individually as a "Procurer" and each of the "Procurer1", "Procurer2" and "Seller" are individually referred to as "Party" and collectively to as the "Parties")

Whereas:

A. The Procurers has identified the project for the generation and supply of electricity to the Procurers, namely, the location of the project/fuel to be used/generation linked with captive mines/land to be allocated by the Procurer and other details as set out in the Schedule 1. The Procurer takes the responsibility of Rehabilitation and Resettlement.

B. The Procurers have completed the detailed study in respect of Techno Economic Feasibility of the project and have obtained all initial consents required for the project including but not limited to clearance of the State Pollution Control Board and Ministry of Environment and Forest, Forest clearance, approval of the Central Electricity Authority in case of hydro generation project, water availability and its confirmation from the State Irrigation Department, evacuation of lines for the bulk power transmission from the location of the generating station to the Delivery Point including the additional transmission linkage for connecting the plant to the Central Transmission Utility bus.

C. The Procurers are in a position to give the vacant possession of the land for the construction of the generation project and also transfer of other consents in favour of Bidder who may be selected in a competitive Bidding process for construction and commissioning of the project and also for generation and sale of electricity from the project.

[1] Procurer can be one, two or more. The existing draft of the PPA is for two Procurers.

D. The Procurers have initiated a competitive Bidding process for vesting in a selected Bidder of the above facilities related to the generating project including the detailed project report prepared by the Procurer along with all initial consents, fuel linkages[2] to a Bidder selected in the process as per the Bidding guidelines notified by the Central Government.

E. The Seller has been one of the Bidders to participate in the competitive Bidding process for the above project and has offered to construct the project for a generating capacity of [ ] MW and sale and supply of electricity in bulk there from to the Procurers.

F. Based on the most competitive Bidding terms and conditions offered by the Seller, the Procurer have selected the Seller for vesting of the land and facilities mentioned in Schedule 1 and for construction of the project and to generate and supply electricity in bulk to the Procurer to the extent of [ ] MW capacity in aggregate on the terms and conditions contained in the Bid documents.

G. As envisaged in the Bidding documents, the parties have to sign this Power Purchase Agreement setting out the terms and conditions for the construction of the project and for sale of generation capacity and supply of electricity by the Seller to the Procurer.

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:

[2] Procurer has an option for providing fuel linkage and hence in case the same is not provided for the same should be deleted from here

4 ARTCLE 4 DEVELOPMENT OF THE PROJECT

4.1 *The Seller's obligation to build, own and operate the Power Station*

4.1.1 Subject to the terms and conditions of this Agreement, the Seller undertakes to be responsible at Seller's costs and risks for:

a) obtaining and maintaining in full force and effect any Consents required by it pursuant to this Agreement and Indian law;

b) executing the Project in a timely manner so as to enable each of the Units and the Power Station as a whole to be Commissioned no later than its Scheduled Commercial Operations Date and such that as much of the Contracted Capacity as can be made available through the use of Prudent Utility Practices will be made available reliably to meet the Procurers' scheduling and dispatch requirements throughout the Operating Period of the Power Station;

c) owning the Power Station throughout the term of this Agreement free and clear of encumbrances except those expressly permitted by Article 0;

d) procure the requirements of electricity at the Power Station (including construction, commissioning and start-up power) to meet in a timely manner all formalities for getting such a supply of electricity; and

e) fulfilling all other obligations undertaken by him under this Agreement.

4.2 *Procurers' obligation*

Subject to the terms and conditions of this Agreement, the Procurers:

a) shall be responsible for procuring the Interconnection and Transmission Facilities[14] to enable the Power Station to be connected to the Grid System not later than the Scheduled Connection Date;

b) endeavour its best (without any legal obligation) to assist the Seller in procuring the electricity required as per Article 4.1 (d); and

c) using all reasonable endeavours to facilitate the commissioning and testing of the Units and after commissioning of the Power Station, of the Power Station as a whole that are within their power to do.

d) The Procurer shall make available the facilities mentioned in Schedule 1 to the Seller relating to generation project. The Seller shall pay to the Procurer for the land made available, the Declared Price of Land.

[14] This obligation may also be of the Seller if the same is being specified in the RFP

4.3 *Purchase and sale of Available Capacity and Electrical Output*

4.3.1 Subject to the terms and conditions of this Agreement, the Seller undertakes to sell to the Procurers, and Procurers undertake to pay the Tariff for all of the Available Capacity and Electrical Output of the Power Station throughout its Operating Periods.

4.3.2 The Seller shall sell all the Available Capacity, unless otherwise instructed, of the Power Station to each Procurer in proportion of each Procurers allocated Capacity pursuant to Dispatch Instructions given by each of such Procurers.

4.4 *Right to Electrical Output*

4.4.1 Subject to the provisions of Article 0, the entire capacity of the project and all units in the project shall at all times be for the exclusive benefit of the Procurers and the Seller shall not grant to any third party or allow any third party to obtain any entitlement to the Available Capacity and Electrical Output.

4.4.2 Notwithstanding the foregoing, the Seller shall be permitted to sell power amounting to a part of the Available Capacity of the Power Station to third parties if:

(a) there is a part of Available Capacity which is not Dispatched by the Procurer, ordinarily entitled to receive such part; and

(b) there is prior written consent by the Procurer ordinarily entitled to receive such part; and

(c) such part has first been offered to the other Procurer who was not ordinarily entitled to receive such part and he has chosen to waive or not exercise his first right to receive such part of the Available Capacity or his first right to nominate a third Party to receive such Available Capacity, within one (1) day of being so offered the opportunity to receive such part.

4.4.3 If the Procurers do not avail generation up to the declared capacity by the Seller, as mentioned in Article 0, the same energy can be sold to the third party by the Seller, and the sale realization in excess of Energy Charges[15], shall be equally shared with the Procurers and among Procurers in the ratio of their Allocated Capacity. During this period the Seller will also continue to receive the capacity charges from the Procurers. The sale under Unscheduled Interchange shall not be considered as sale to third party.

[15] As defined in Schedule 7

ANNEXURE - 6

THE GAZETTE OF INDIA
EXTRAORDINARY
[PART II-SEC. 3(ii)]
MINISTRY OF POWER

NOTIFICATION

New Delhi,
29th March, 1994.

S.O. 266(E) :- In exercise of the power conferred by sub-section (2) of section 43A, sub-section (1) section 68 and sub-section (3) of section 75A of the Electricity (Supply) Act, 1948 (54 of 1948), the Central Government, after consultation with the Central Electricity Authority, hereby makes the following amendments to the notification of the Government of India in the erstwhile Ministry of Power and Non-conventional Energy Sources,
Department of Power, No.S.O.93(E), dated the 23rd January, 1992, namely:-

In the said notification-

(a) for the words, figures and letters "statement of accounts commencing on 1st April, 1992", the words, figures and letters "statement of accounts commencing on 1st April, 1994" shall be substituted;

(b) for the schedule, the following schedule shall be substituted, namely-

SCHEDULE

Description of Assets	**Existing**		**Revised**	
	Fair life (years)	Depreciation (Straight line)	Fair life (years)	Depreciation (Straight line)
(1)	(2)	(3)	(4)	(5)
A. Land owned under full title	Infinity	--	Infinity	--
B. Land held under lease a) for investment in the land	The period of lease or the period remaining unexpired on the assignment of the	--	The period of lease or the period remaining unexpired on the assignment of the	--

	lease		lease	
b) for cost of clearing site	The period of lease remaining unexpired at the date of clearing the site	--	The period of lease remaining unexpired at the date of clearing the site	--
C. Assets Purchased New: a. Plant and machinery in generating stations including plant foundations:-				
i) Hydro-electric	35	3.40	35	3.40
ii) Steam electric	25	5.06	25	7.84
NHRS & Waste Heat Recovery Boilers/Plants				
iii) Diesel-electric and gas plant	15	8.24	15	8.24
b. Cooling towers and circulating water systems	25	5.06	25	7.84
c. Hydraulic works forming part of Hydro-electric system including:-				
i) Dams, Spillways weirs, canals, reinforced concrete Flumes and syphons	50	1.95	50	1.95
ii) Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and other hydraulic works.	35	3.40	35	3.40

d. Building & civil engineering works of permanent character, not mentioned above:-				
i) Offices & showrooms	50	1.95	50	3.02
ii) Containing thermo electric generating plant	25	5.06	25	7.84
iii) Containing Hydro Electric generating plant	35	3.40	35	3.40
iv) Temporary erection such as wooden structures	5	21.55	5	33.40
v) Roads other than kutcha roads	50	1.95	50	3.02
vi) Others	50	1.95	50	3.02
e. Transformers, transformer (Kiosk) sub-station equipment & other fixed apparatus (including plant foundations)				
i) Transformers (including foundations) having a rating of 100 kilo volt amperes and over	25	5.06	25	7.81
ii) Others	25	5.06	25	7.84
f. Switchgear including cable connections	25	5.06	25	7.84
g. Lightning arrestors:				
i) Station type	25	5.06	25	7.84
ii) Pole type	15	8.24	15	12.77
iii) Synchronous condensor	35	3.40	35	5.27

h. Batteries	5	21.55	5	33.40
i) Underground Cable including joint boxes and disconnected boxes	35	3.40	25	5.27
ii) Cable duct system	50	1.95	50	3.02
i. Overhead lines including supports:				
i) Lines on fabricated steel operating at nominal voltages higher than 66 KV.	35	3.40	35	5.27
ii) Lines on steel supports operating at nominal voltages higher than 13.2 kilovolts but not exceeding 66 kilovolts	25	5.06	25	7.84
iii) Lines on steel or reinforced concrete supports	25	5.06	25	7.84
iv) Lines on treated wood supports	25	5.06	25	7.84
j. Meters	15	8.24	15	12.77
k. Self propelled vehicles	5	21.55	5	33.40
l. Air conditioning plants:				
i) Static	15	8.24	15	12.77
ii) Portable	5	21.55	5	33.40
m.				

i) Office furniture and fittings	15	8.24	15	12.77
ii) Office equipments	15	8.24	15	12.77
iii) Internal wiring including fittings and apparatus	15	8.24	15	12.77
iv) Street light fittings	15	8.24	15	12.77
o. Apparatus let on hire				
i) Other than motors	5	21.55	5	33.40
ii) Motors	15	8.24	15	12.77
p. Communication equipment:				
i) Radio and high frequency carrier system	15	8.24	15	12.77
ii) Telephone lines and telephones	15	8.24	15	12.77
q. Assets purchased second hand and assets not otherwise provided for in the Schedule	Such reasonable period as the competent Government determines in each case having regard to the nature, age and condition of the assets at the time of its acquisition by the owner".			

Sd/-
[F.No.6/1/Tariff/93-94]
SETHUMADHAVAN, Jt.Secy.

ANNEXURE - 7

Overview of the Model Power Purchase Agreement

Private investment to play a key role

To meet the infrastructure deficit, the Twelfth Five Year Plan envisages renewed thrust on investment in infrastructure, with greater participation fro the private sector. Of the projected investment in infrastructure, about 29 pe cent is envisaged in the power sector, of which about 47 per cent is expecte from the private sector. Bulk of the private investment in power sector will be in the generation segment.

A comprehensive framework is a pre-requisite for PPP in electricity generation

Power projects have been witnessing a significant interest from both domestic a well as foreign investors following the policy initiatives taken by th Government of India. However, the actual inflow of investment has been slowe than expected, and future prospects would depend on adoption of comprehensive policy and regulatory framework necessary for addressing th complexities of Public Private Partnerships (PPP) while balancing the interests o Utilities and investors. To this end, a precise policy and regulatory framework is being spelt out in this Model Power Purchase Agreement (MPPA).

The framework contained in the MPPA addresses the issues which are important for investors as well as for limited recourse financing of debt. These issues include mitigation and unbundling of risks; allocation of risks and rewards; symmetry of obligations between the principal parties; precision and predictability of costs and obligations; reduction of transaction costs; force majeure; and termination. It also addresses other important concerns such as consumer protection, independent monitoring and dispute resolution.

The MPPA provides the basis for optimal utilisation of resources on the one hand and adoption of international best practices on the other. The objective is to secure value for public money while providing reliable and cost-effective electricity to the consumers.

Elements of financial viability

Need to reduce capital costs

The three critical elements that determine the financial viability of generatio projects are the concession period, fuel costs and capital costs. The concessio period for a generation project should be fixed keeping in view the expected lif of the generating plant. It could be fixed for a period of about 30 years, including the construction period, with a provision for extension of 15 years at the option of either the Concessionaire or the Utility. Yet another extension of upto 15 years can be undertaken if both the parties so agree. This timeframe should enable a robust project structure. So far as the Fuel Charge is concerned, the MPPA makes it a pass through, subject to appropriate safeguards, which would address a major risk faced by power producers due to uncertainty relating to fuel prices over the medium and long term. Since two of the three parameters stated above would be virtually pre-determined, capital cost is the variable that will determine the financial viability of a Power Station. Adoption of cost-effective

specifications would, therefore, be essential for reducing capital costs that would ensure a competitive Fixed Charge.

Fixed Charge

Fixed Charge to be competitive

The Utility shall pay to the Concessionaire a Fixed Charge, determined throug competitive bidding, for availability of the Power Station. The Fixed Charg determined for each accounting year shall be revised annually to reflect 30 pe cent of the variation in a composite index comprising WPI and CPI. Sinc repayment of debt would be substantially neutral to inflation, the said indexation of 30 per cent is considered adequate. A higher level of indexation is not favoured, as that would impose an unjustified burden on the consumers. Such higher indexation would also add to uncertainties in the projections relating to returns on investment. Further, an annual reduction of 2 per cent in Fixed Charge is being stipulated so that the benefit of a depreciated asset is passed on to the consumers.

Fuel Charge

Fuel Charge to be a pass through

Fuel Charge is the amount payable by the Utility to the Concessionaire for th fuel utilised in generation of electricity. Since the risk of variation in fuel pric cannot normally be managed by the Concessionaire, it must be passed on to th Utility, which, in turn, will have to reflect it in the distribution tariff. Since pas through of Fuel Charge affords full protection to the Concessionaire again potential losses on account of a rise in fuel prices, it follows that the benefit of reduced or concessional fuel prices cannot be retained by the Concessionaire. As a result, Fuel Charge cannot be a profit centre for the Concessionaire and the principles for determination of Fuel Charge must ensure that costs are recovered on the basis of actuals, assuming that the Concessionaire would function with the efficiency expected of a prudent and diligent operator.

The framework contained in the MPPA provides alternative formulations for determination of fuel costs depending on the source and pricing of fuel supplies. While coal supplies from Coal India will carry a regulated price, other supplies would have to be procured either from captive mines or from the open market. Each category of supply is, therefore, covered through respective formulations.

In case where fuel is to be procured from captive mines to be allocated by or on behalf of the Utility as a part of the Power Station, the cost of fuel may be fixed upfront with reference to the price charged by Coal India. Assuming a comparatively higher level of efficiency, the fuel cost payable to the Concessionaire may be fixed between say, 75 and 100 per cent of the Coal India price prevailing at the time of bidding, with appropriate indexation over the concession period.

Where captive mines have been allocated independently, a similar formulation, as indicated in the foregoing paragraph, may be adopted with an added option of allowing the bidders to quote an even lower fuel cost which may be further limited to the costs determined by the Appropriate Commission.

When imported fuel is to be used, reliance should be placed on pre-selected coal indices used widely in international supplies of coal, but always subject to the actual cost incurred by the Concessionaire. However, if bids are invited from producers having captive mines abroad, a ceiling equivalent to upto 90 per cent of the price of Fuel computed with reference to a pre-specified coal index could be prescribed with appropriate indexation over the concession period. In all cases of imported fuel, the foreign exchange risk would have to be borne by the Utility as the Concessionaire would have no means to hedge such risk on a long-term basis.

Owing to some uncertainty in the prospects, extent and nature of coal supply by Coal India Limited, the provisions relating to coal to be procured through linkage from Coal India have been kept in square brackets as they may need further deliberations.

Station Heat Rate

Incentive for improved Station Heat Rate

Conversion of fuel into electricity shall be computed on the basis of the Statio Heat Rate (SHR) which must conform to pre-determined specifications. As th fuel charge would be a pass through, adhering to the prescribed SHR would b necessary in order to safeguard the interests of the Utility. The MPPA als provides for incentives in the form of an enhanced Fixed Charge if th Concessionaire is able to improve on the pre-specified Station Heat Rat Incentivising an improved SHR would be a signal for achieving greate efficiency in the interest of saving fuel.

Fuel Supply Agreement

FSA to be a condition precedent

As a condition precedent, the Concessionaire shall execute a Fuel Supply Agreement (FSA) containing the key elements specified in the MPPA, thereby aligning the principal provisions of these two contracts. The FSA shall provide the requisite assurance to the Utility for supply of fuel sufficient to generate a pre-determined quantum of electricity.

Additional Fuel Supply

In the event of inadequate fuel supply under a Fuel Supply Agreement (FSA), the Concessionaire shall make best efforts to identify additional sources of fuel supply to meet such fuel shortage. The Concessionaire shall notify the Utility of the landed cost of such additional fuel and shall demonstrate that it will be procured at the best prices available. If the proposed landed cost is acceptable to the Utility and the Appropriate Commission, the Concessionaire shall procure such additional fuel for the agreed price and quantity.

Minimum Fuel Stock

The Concessionaire shall maintain a minimum stock of fuel, which is sufficient for production of electricity and supply thereof to the Utility for a continuous period of 10 days. In the event of fuel shortage, an amount equal to 70 per cent of the Fixed Charge shall be payable in respect of the non-availability arising out

of such fuel shortage. In other words, the Concessionaire's risk of fuel supply will be mitigated to the extent of 70 per cent.

Concessional Fuel

Pre-emptive rights on Concessional Fuel

Fuel which is procured by the Concessionaire through any form of concessional preferential or captive allocation or sale by a Governmental Instrumentality shal be deemed as Concessional Fuel and earmarked for the benefit of the Utility This will not include any fuel which is procured on the basis of marke determined prices. If any Concessional Fuel, which is surplus to the requirement of the Utility, is utilised for production of electricity for sale to other buyers, the Concessionaire shall, in lieu of the use of such Concessional Fuel, pay to the Utility for each unit of electricity sold, a revenue share equal to the higher of: (a) Fixed Charge, and (b) 30 per cent of the gross sale revenue accrued from such buyers.

Availability and Despatch of Power Station

Fixed Charge to be paid for Availability of Power Station

The Concessionaire shall operate the Power Station such that it is available fo generation to the extent of at least 90 per cent of the Installed Capacity whic shall be deemed to be the Normative Availability for each accounting year. An shortfall in the Normative Availability will attract penalties. The Concessionair shall declare the availability of the Power Station at frequent intervals and the Utility shall be free to direct the Concessionaire to produce and despatch electricity in accordance with the despatch instructions given by it from time to time. Payment of Fixed Charge shall be computed on the basis of availability of the Power Station while the Fuel Charge shall be payable only for the electricity actually produced and despatched.

Penalties for mis-declaration

Normally, the Power Station shall be deemed as available to the full extent. I the event of any defect or deficiency, the Concessionaire must declare the actu availability so that its Fixed Charge is computed accordingly. The MPP stipulates stiff penalties in case of mis-declaration by the Concessionaire.

Dedicated Capacity

Dedicated Capacity for the Utility

Eighty per cent of the Installed Capacity of the Power Station (85 per cent case of UMPPs or where fuel is procured from captive mines) shall at all tim be dedicated for production and supply of electricity to the Utility and shall utilized only in accordance with the instructions of the Utility. In the event su capacity is not utilised on account of shortage of fuel, the Concessionaire will be free to procure fuel from the market and sell the electricity to third parties in order to recover its Fixed Charge. In the event any Dedicated Capacity remains idle, the Utility shall pay to the Concessionaire 70 per cent of the Fixed Charge as explained above. This entire arrangement would help mitigate the risk of the Concessionaire on account of the current fuel shortage as well as a possible backing down of the Power Station due to high costs of additional fuel supply. Since idle capacity would hurt the Concessionaire as well as the Utility, it is expected that both parties will have sufficient incentive to ensure optimum utilization of the Dedicated Capacity.

Open Capacity

Open Capacity for market sales

Twenty per cent of the Installed Capacity (15 per cent in case of UMPPs where fuel is procured from captive mines) shall be available to t Concessionaire for production of electricity and supply thereof to any buyer the terms determined mutually between the Concessionaire and such buyer. Su buyers may include bulk consumers within the supply area of the Utility. Th would not only facilitate the development of a power market, but also enable t Concessionaire to procure fuel at market prices and produce electricity for sale bulk consumers at unregulated prices. Such an arrangement will help improve the financial viability of the Power Station, enhance power production and promote competition in generation and supply of electricity.

Additional Capacity

Additional capacity for improving viability

The Concessionaire may, with prior consent of the Utility and in accordance wi applicable laws, create additional capacity in accordance with the provisions the agreement. Eighty per cent of the additional capacity shall be deemed to Dedicated Capacity and the balance shall be Open Capacity. The Concessionaire may also set up additional capacity based on fuel supplies to be procured at market rates and sell its production to other buyers at mutually determined tariffs, provided it pays the specified revenue share to the Utility.

Technical parameters

Technical parameters for level of service

Unlike the normal practice of focusing on construction specifications, th technical parameters proposed in the MPPA are based mainly on outp specifications, as these have a direct bearing on the level of power generatic Only the core requirements of design, construction, operation and maintenan of the generation system have been specified, leaving enough room for the Concessionaire to innovate and add value. In sum, the framework focuses on the 'what' rather than the 'how' in relation to the production and supply of power by the Concessionaire. This would also provide the requisite flexibility to the Concessionaire to innovate and optimise on designs in a way normally denied under conventional input-based procurement specifications.

Performance standards

Performance standards to be enforced

The efficiency of the Concessionaire would normally be reflected in the qual and reliability of power supply. The MPPA, therefore, identifies the k performance indicators relating to operation of the generation system and stipulates penalties for failure to achieve the requisite levels of performance. In particular, the Concessionaire shall be required to ensure the availability of Installed Capacity at pre-determined normative levels, which will make sufficient allowance for scheduled maintenance.

For monitoring the key performance indicators, monthly status reports and periodic inspections of the Independent Engineer have been prescribed. The Concessionaire is also required to maintain the requisite ISO certification for the Power Station.

Selection of Concessionaire

Selection of the Concessionaire will be based on a two-stage process competitive bidding. All project parameters such as the concession perio technical parameters and performance standards are to be clearly stated upfro Based on these terms, the short-listed bidders will be required to specify their financial offer in terms of a unit Fixed Charge, without any qualifications. In some cases, the financial offer may also have to include the Fuel Charge. The bidder who seeks the lowest unit charge should win the contract. The financial offer for the unit charge shall be made only for the initial year and the actual tariff payable to the Concessionaire will be revised annually based on pre-determined indexation.

Competitive bidding on Fixed Charge will be the norm

Risk allocation

As an underlying principle, risks have been allocated to the parties that are be suited to manage them. Project risks have, therefore, been assigned to the priva sector to the extent it is capable of managing them. These risks have also be mitigated to the extent possible. The transfer of these risks and responsibilities to the private sector would increase the scope of innovation leading to efficiencies in costs and services.

Risk allocation and mitigation are critical

The commercial and technical risks relating to construction, operation ar maintenance are being allocated to the Concessionaire, as it would be best suit to manage them. On the other hand, all direct and indirect political risks a being assigned to the Utility.

Commercial risks to be borne by Concessionaire

Financial Close

Unlike other agreements for private infrastructure projects which neither define a time-frame for achieving financial close, nor specify the penal consequences fo failure to do so, the MPPA stipulates a time limit of 180 days for achievin financial close (extendable for upto 185 days on payment of a penalty), failing which the bid security shall be forfeited. By prevalent standards, this is a tight schedule, which is achievable only if all the parameters are well defined and the requisite preparatory work has been undertaken.

Financial close to be time bound

The MPPA represents the comprehensive framework necessary for enablin financial close within the stipulated period. Adherence to such time schedule will usher in a significant reduction in costs besides ensuring timely provision o the needed infrastructure. This approach would also address the typical proble of infrastructure projects not achieving financial close for long periods.

Fulfillment of condtions precedent

Construction of the Power Station

Handing over possession of 80 percent of the land required for construction o power station and obtaining of environmental clearances are being proposed a conditions precedent to be satisfied by the Utility before financial clos Execution of a Fuel Supply Agreement and procurement of applicable permi

Scope of the Project to be precise

have been proposed as conditions precedent to be satisfied by the Concessionaire. The Utility would provide reasonable support and assistance to the Concessionaire in procuring the FSA and applicable permits. Damages have been prescribed for delay in fulfilling the conditions precedent by the Utility as well as the Concessionaire.

The MPPA also defines the scope of the project with a fair degree of precision in order to enable the Concessionaire to determine its costs and obligations. Additional works may be specified by the Utility but only within a pre-determined limit, provided the entire cost thereof is borne by the Utility. Project Milestones have also been incorporated in the MPPA.

Tests prior to commissioning

Before commencing the commercial operation of the generation system, t Concessionaire will be required to subject it to specified tests for ensuri compliance with the specifications relating to safety and quality of supply. T option of phased completion has also been provided.

Operation and maintenance

Service quality and safety must be ensured

Operation and maintenance of the Power Station is proposed to be governed b strict standards with a view to ensuring a high level of reliability and availability. Any violations of these standards would attract stiff penalties. In sum, operational performance would be the most important test of service delivery.

The MPPA provides for an elaborate and dynamic mechanism to evaluate and upgrade the safety requirements on a continuing basis in conformity with Good Industry Practice. It includes safety certification by the designated Electrical Inspector prior to COD and provides for reviews at regular intervals by qualified experts.

Right of substitution

Lenders will have the right of substitution

The project assets may not constitute adequate security for lenders. It is project revenue streams that constitute the mainstay of their security. Lenc would, therefore, require assignment and substitution rights so that concession can be transferred to another company in the event of failure of the Concessionaire to operate the project successfully. The MPPA accordingly provides for such substitution rights.

Consortium of Utilities

will be protected against political actions

In case the Power Station is procured by more than one Utility, the individual Utilities, acting as a consortium, will execute the Utilities Consortium Agreement, through which they would sub-divide and allocate the installed capacity among themselves and also agree to bear individual, joint and several rights, obligations and liabilities.

Each individual Utility shall have the right to offer, transfer or assign, in whole or in part, its allocated capacity to any participating Utility or other distribution licensee. In the event an individual Utility commits a default specified in the

PPA, it shall either substitute itself by a participating Utility or other distribution licensee, or make the specified termination payment to the Concessionaire.

Force majeure

The MPPA contains the requisite provisions for dealing with force majeure events. In particular, it affords protection to the Concessionaire against political actions that may have a material adverse effect on the project.

Termination

Pre-determined termination payments should provide predictability

In the event of termination, the MPPA provides for a compulsory buy-out by t Utility, as neither the Concessionaire nor the lenders can use the Power Stati on their own for recovering their investments. This arrangement also provic the requisite protection of public resources like fuel, land and water which wou revert to the Utility in the event of termination.

Termination payments have been quantified precisely as compared to the complex formulations in most concession agreements relating to infrastructure projects. Political force majeure and defaults by the Utility would qualify for adequate compensatory payments to the Concessionaire and will thus guard against any discriminatory or arbitrary action by the Utility. Further, the project debt would be fully protected by the Utility in the event of termination, except for three situations, namely, (a) when termination occurs as a result of default by the Concessionaire, 90 per cent of the debt will be protected, (b) in the event of non-political force majeure such as Act of God (normally covered by insurance), 90 per cent of the debt not covered by insurance will be protected, and (c) when termination occurs on account of Concessionaire Default during construction period, 90 per cent of the debt in excess of 40 per cent of Total Project Cost will be paid subject to certain conditions.

Upon expiry of the specified concession period, the Concessionaire would be entitled to a termination payment which will be a pre-determined multiple of monthly Fixed Charge. However, either Party would have the right to seek an extension of 15 years in the concession period and in such an event, no termination payment shall be due and payable after expiry of the extended period.

Monitoring and supervision

Monitoring through an Independent Engineer

Day-to-day interaction between the Utility and the Concessionaire has been k to the bare minimum by following a 'hands-off' approach, and the Utility shall entitled to intervene only in the event of a material default. Checks and balan have, however, been provided for ensuring full accountability of the Concessionaire.

Monitoring and supervision of construction, operation and maintenance is proposed to be undertaken through an Independent Engineer (a qualified firm) that will be selected by the Utility through a transparent process. Its

independence would provide added comfort to all stakeholders, besides improving the efficiency of project implementation.

Selection of auditors

The MPPA provides for a transparent procedure to ensure selection of well reputed statutory auditors, as they would play a critical role in ensuring financia discipline. As a safeguard, the MPPA also provides for appointment of additional or concurrent auditors.

To provide enhanced security to the lenders and greater stability to the project operations, all financial inflows and outflows of the project are proposed to be routed through an escrow account.

Revenue shortfall loan

By way of comfort to the lenders, loan assistance from the Utility has been stipulated for supporting debt service obligations in the event of a revenue shortfall resulting from political force majeure or default by the Utility.

Specifications & Standards

Output specifications to be emphasised

The accountability for providing a safe and reliable Power Station ultimate rests with the Government and the MPPA therefore refers to Specification a Standards that the Concessionaire must conform to. These specifications re mainly on the extant rules and regulations applicable to power stations. These rules, by reference, form an integral part of the Power Purchase Agreement for a specific project and shall be binding on the Concessionaire. The MPPA stipulates that only the basic requirements of design and construction shall be laid down in the PPA with reference to the Grid Code and applicable laws, and greater emphasis shall be placed on specifying the output specifications that have a direct bearing on the reliability and quality of power supply.

Land acquisition

Land would have to be acquired by the Utility as the Concessionaire may face serious difficulties in acquiring land on its own. The Utility will have the option of indicating the lump-sum cost that it would recover from the Concessionaire on this account. This amount may even be a token sum as the ownership of land will rest with the Utility and the Concessionaire will only be a licensee. In case the Utility proposes to set up a Power Station in another State, it may require the Concessionaire to procure land on its own.

The Concessionaire may, upon expiry of the Concession Period by efflux of time, require the Utility to transfer the possession and title of the Site and Project Assets, excluding any captive coal mines or right to the Concessional Fuel, for a specified period.

To provide greater comfort and security to the lenders, the Utility and the Concessionaire may jointly execute a mortgage deed in favour of the Senior Lenders for and in respect of the Site and Project Assets excluding any captive coal mines or right to the Concessional Fuel.

Miscellaneous

The MPPA addresses other important issues such as dispute resolutio suspension of rights, change in law, insurance, defects liability, indemnit redressal of public grievances and disclosure of project documents. incorporates the best practices that would enable a fair and transpare framework for private participation.

An effective dispute resolution mechanism is critical

Conclusion

Together with the Schedules, the proposed contractual framework addresses the issues that are likely to arise in financing of generation projects on DBFOT basis. The proposed policy and regulatory framework contained in the MPPA is critical for attracting private investment with the concomitant efficiencies and lower costs, necessary for accelerating growth and making electricity affordable.



Public Private Partnership

in

Generation of Electricity

MODEL POWER SUPPLY AGREEMENT (DBFOO)

Ministry of Power

Government of India

ARTICLE 34

CHANGE IN LAW

34.1 Increase in costs

If as a result of Change in Law, the Supplier suffers an increase in costs or reduction in net after-tax return or other financial burden for and in respect of Contracted Capacity, the aggregate financial effect of which exceeds the higher of Rs. 1 crore (Rupees one crore)[38] and 0.1% (zero point one per cent) of the Capacity Charge in any Accounting Year, the Supplier may so notify the Utility and propose amendments to this Agreement so as to place the Supplier in the same financial position as it would have enjoyed had there been no such Change in Law resulting in increased costs, reduction in return or other financial burden as aforesaid. Upon notice by the Supplier, the Parties shall meet, as soon as reasonably practicable but no later than 30 (thirty) days from the date of notice, and either agree on amendments to this Agreement or on any other mutually agreed arrangement:

Provided that if no agreement is reached within 90 (ninety) days of the aforesaid notice, the Supplier may by notice require the Utility to pay an amount that would place the Supplier in the same financial position that it would have enjoyed had there been no such Change in Law, and within 15 (fifteen) days of receipt of such notice, along with particulars thereof, the Utility shall pay the amount specified therein; provided that if the Utility shall dispute such claim of the Supplier, the same shall be settled in accordance with the Dispute Resolution Procedure. For the avoidance of doubt, it is agreed that this Clause 34.1 shall be restricted to changes in law directly affecting the Supplier's costs of performing its obligations under this Agreement.

34.2 Reduction in costs

If as a result of Change in Law, the Supplier benefits from a reduction in costs or increase in net after-tax return or other financial gains for and in respect of Contracted Capacity, the aggregate financial effect of which exceeds the higher of Rs. 1 crore (Rupees one crore) and 0.1% (zero point one per cent) of the Capacity Charge in any Accounting Year, the Utility may so notify the Supplier and propose amendments to this Agreement so as to place the Supplier in the same financial position as it would have enjoyed had there been no such Change in Law resulting in decreased costs, increase in return or other financial gains as aforesaid. Upon notice by the Utility, the Parties shall meet, as soon as reasonably practicable but no later than 30 (thirty) days from the date of notice, and either agree on such amendments to this Agreement or on any other mutually agreed arrangement:

Provided that if no agreement is reached within 90 (ninety) days of the aforesaid notice, the Utility may by notice require the Supplier to pay an amount that would place the Supplier in the same financial position that it would have enjoyed had

[38] This amount may, in the discretion of the Utility, be suitably increased, but in no case exceeding an amount of Rs. 50 lakh for every Rs.500 cr. of the estimated Total Project Cost. A similar modification should also be made in Clause 34.2.

there been no such Change in Law, and within 15 (fifteen) days of receipt of such notice, along with particulars thereof, the Supplier shall pay the amount specified therein to the Utility; provided that if the Supplier shall dispute such claim of the Utility, the same shall be settled in accordance with the Dispute Resolution Procedure. For the avoidance of doubt, it is agreed that this Clause 34.2 shall be restricted to changes in law directly affecting the Supplier's costs of performing its obligations under this Agreement.

34.3 Protection of NPV

Pursuant to the provisions of Clauses 34.1 and 34.2 and for the purposes of placing the Supplier in the same financial position as it would have enjoyed had there been no Change in Law affecting the costs, returns or other financial burden or gains, the Parties shall rely on the Financial Model to establish a net present value (the "**NPV**") of the net cash flow and make necessary adjustments in costs, revenues, compensation or other relevant parameters, as the case may be, to procure that the NPV of the net cash flow is the same as it would have been if no Change in Law had occurred. For the avoidance of doubt, the Parties expressly agree that for determination of NPV, the discount rate to be used shall be equal to the weighted average rate of interest at which the Supplier has raised the Debt Due under its Financing Agreements.

34.4 Restriction on cash compensation

The Parties acknowledge and agree that the demand for cash compensation under this Article 34 shall be restricted to the effect of Change in Law during the respective Accounting Year and shall be made at any time after commencement of such year, but no later than one year from the close of such Accounting Year. Any demand for cash compensation payable for and in respect of any subsequent Accounting Year shall be made after the commencement of the Accounting Year to which the demand pertains, but no later than 2 (two) years from the close of such Accounting Year.

34.5 No claim in the event of recovery from Buyers

Notwithstanding anything to the contrary contained in this Agreement, the Utility shall not in any manner be liable to reimburse to the Supplier any sums on account of a Change in Law if the same are recoverable from the Buyers.

ANNEXURE - 9

NPV Computation for Cash Flow Impact of Depreciation on ECS Installation

	Case 1: ECS Life 25 Years (in Rs. For every Rs. 100 Capital Cost)	Case 2: ECS Life 15 Years ((in Rs. For every Rs. 100 Capital Cost)
A. Capital Cost (Rs.)	100	100
B. Equity (Rs.)	30	30
C. Loan (Rs.)	70	70
D. Loan tenure (Yrs)	12	12
E. Annual Repayment (Rs.)	5.83	5.83
F. Life for Depreciation (Yrs)	25	15
G. Depreciation Rate (%)	3.60%	6.00%
H. Residual Value (%)	10.00%	10.00%
I. Allowable Depreciation(%)	90.00%	90.00%
J. Interest/Discount rate (%)	9%	9%

	Cash Flow (CF) Impact of Change in Law (CIL)				NPV as per Draft Order (DO)				NPV as per Proposal			Cash Flow (CF) Impact of Change in Law (CIL)				NPV as per Draft Order (DO)				NPV as per Proposal		
Year (n)	Ccn = Dep	Repayment	Rcn (Revenue Shortfall/ surplus)	CF Impact	DO Compn	Differential CF (DCF)	Discount Factor	NPV	Compensation	DCF	NPV	Ccn = Dep	Repayment	Rcn (Revenue Shortfall/surplus)	CF Impact	DO Compn	Differential CF (DCF)	Discount Factor	NPV	Compensation	DCF	NPV
a	b	c=C/D upto n=D	d=Max(c-b,0)upto n=D else sumuptoD(d) /(F-D)	e=b+d	f=I/F	g=f-e	h=1/(1+J)^a	i=g*h	j=e	k=j*h	l=j*k	b	c=C/D upto n=D	d=Max(c-b,0)upto n=D else sumuptoD(d)/ (F-D)	e=b+d	f=I/F	g=f-e	h=1/(1+J)^a	i=g*h	j=e	k=j*h	l=j*k
1	3.60	5.83	2.23	5.83	3.60	-2.23	0.92	-2.05	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.92	-2.20	6.00	0.00	0
2	3.60	5.83	2.23	5.83	3.60	-2.23	0.84	-1.88	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.84	-2.02	6.00	0.00	0
3	3.60	5.83	2.23	5.83	3.60	-2.23	0.77	-1.72	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.77	-1.85	6.00	0.00	0
4	3.60	5.83	2.23	5.83	3.60	-2.23	0.71	-1.58	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.71	-1.70	6.00	0.00	0
5	3.60	5.83	2.23	5.83	3.60	-2.23	0.65	-1.45	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.65	-1.56	6.00	0.00	0
6	3.60	5.83	2.23	5.83	3.60	-2.23	0.60	-1.33	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.60	-1.43	6.00	0.00	0
7	3.60	5.83	2.23	5.83	3.60	-2.23	0.55	-1.22	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.55	-1.31	6.00	0.00	0
8	3.60	5.83	2.23	5.83	3.60	-2.23	0.50	-1.12	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.50	-1.20	6.00	0.00	0
9	3.60	5.83	2.23	5.83	3.60	-2.23	0.46	-1.03	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.46	-1.11	6.00	0.00	0
10	3.60	5.83	2.23	5.83	3.60	-2.23	0.42	-0.94	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.42	-1.01	6.00	0.00	0
11	3.60	5.83	2.23	5.83	3.60	-2.23	0.39	-0.87	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.39	-0.93	6.00	0.00	0
12	3.60	5.83	2.23	5.83	3.60	-2.23	0.36	-0.79	5.83	0.00	0	6.00	5.83	0.00	6.00	3.60	-2.40	0.36	-0.85	6.00	0.00	0
13	3.60	0.00	-2.06	1.54	3.60	2.06	0.33	0.67	1.54	0.00	0	6.00	0.00	0.00	6.00	3.60	-2.40	0.33	-0.78	6.00	0.00	0
14	3.60	0.00	-2.06	1.54	3.60	2.06	0.30	0.62	1.54	0.00	0	6.00	0.00	0.00	6.00	3.60	-2.40	0.30	-0.72	6.00	0.00	0
15	3.60	0.00	-2.06	1.54	3.60	2.06	0.27	0.57	1.54	0.00	0	6.00	0.00	0.00	6.00	3.60	-2.40	0.27	-0.66	6.00	0.00	0
16	3.60	0.00	-2.06	1.54	3.60	2.06	0.25	0.52	1.54	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
17	3.60	0.00	-2.06	1.54	3.60	2.06	0.23	0.48	1.54	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
18	3.60	0.00	-2.06	1.54	3.60	2.06	0.21	0.44	1.54	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
19	3.60	0.00	-2.06	1.54	3.60	2.06	0.19	0.40	1.54	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
20	3.60	0.00	-2.06	1.54	3.60	2.06	0.18	0.37	1.54	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
21	3.60	0.00	-2.06	1.54	3.60	2.06	0.16	0.34	1.54	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
22	3.60	0.00	-2.06	1.54	3.60	2.06	0.15	0.31	1.54	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
23	3.60	0.00	-2.06	1.54	3.60	2.06	0.14	0.28	1.54	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
24	3.60	0.00	-2.06	1.54	3.60	2.06	0.13	0.26	1.54	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
25	3.60	0.00	-2.06	1.54	3.60	2.06	0.12	0.24	1.54	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Total	90.00	70.00	0.00	90.00	90.00	0.00	9.82	**-10.50**	90.00	0.00	**0.00**	90.00	70.00	0.00	90.00	54.00	-36.00	8.06	**-19.35**	90.00	0.00	**0.00**

ANNEXURE - 10

NPV Computation for Cash Flow Impact of Cost of Capital on ECS Installation

	Case 1: ECS Life 25 Years (in Rs. For every Rs. 100 Capital Cost)	Case 2: ECS Life 15 Years ((in Rs. For every Rs. 100 Capital Cost)
A. Capital Cost (Rs.)	100	100
B. Equity (Rs.)	30	30
C. Loan (Rs.)	70	70
D. Loan tenure (Yrs)	12	12
E. Annual Repayment (Rs.)	5.83	5.83
F. Life for Depreciation (Yrs)	25	15
G. Depreciation Rate (%)	3.60%	6.00%
H. Residual Value (%)	10.00%	10.00%
I. Allowable Depreciation(%)	90.00%	90.00%
J. Interest/Discount rate (%)	9.00%	9.00%
K. Post-tax Cost of Equity (%)	15.50%	15.50%
L. Income Tax Rate (%)	17.47%	17.47%
M. Pre-tax Cost of Equity (%)	18.78%	18.78%

	Cash Flow (CF) Impact of Change in Law (CIL)				NPV as per Draft Order (DO)				NPV as per Proposal			Cash Flow (CF) Impact of Change in Law (CIL)				NPV as per Draft Order (DO)				NPV as per Proposal		
Year (n)	NFA	CoE @ 18.78% pre-tax	CoD @ 9%	CF Impact	DO Compn	Differential CF (DCF)	Discount Factor	NPV	Compensation	DCF	NPV	NFA	CoE @ 18.78% pre-tax	CoD @ 9%	CF Impact	DO Compn	Differential CF (DCF)	Discount Factor	NPV	Compensation	DCF	NPV
a	b	c=B*M	d=(C-D*(n-1) upto D whereafter 0	e=c+d	f=b*M	g=f-e	h=1/(1+J)^a	i=g*h	j=e	k=j*h	l=j*k	b	c=B*M	d=(C-D*(n-1) upto D whereafter 0	e=c+d	f=b*M	g=f-e	h=1/(1+J)^a	i=g*h	j=e	k=j*h	l=j*k
1	100.00	5.63	6.30	11.93	9.00	-2.93	0.92	-2.69	11.93	0.00	0	100.00	5.63	6.30	11.93	9.00	-2.93	0.92	-2.69	11.93	0.00	0
2	96.40	5.63	5.78	11.41	8.68	-2.73	0.84	-2.30	11.41	0.00	0	94.00	5.63	5.78	11.41	8.46	-2.95	0.84	-2.48	11.41	0.00	0
3	92.80	5.63	5.25	10.88	8.35	-2.53	0.77	-1.96	10.88	0.00	0	88.00	5.63	5.25	10.88	7.92	-2.96	0.77	-2.29	10.88	0.00	0
4	89.20	5.63	4.73	10.36	8.03	-2.33	0.71	-1.65	10.36	0.00	0	82.00	5.63	4.73	10.36	7.38	-2.98	0.71	-2.11	10.36	0.00	0
5	85.60	5.63	4.20	9.83	7.70	-2.13	0.65	-1.38	9.83	0.00	0	76.00	5.63	4.20	9.83	6.84	-2.99	0.65	-1.95	9.83	0.00	0
6	82.00	5.63	3.68	9.31	7.38	-1.93	0.60	-1.15	9.31	0.00	0	70.00	5.63	3.68	9.31	6.30	-3.01	0.60	-1.79	9.31	0.00	0
7	78.40	5.63	3.15	8.78	7.06	-1.73	0.55	-0.95	8.78	0.00	0	64.00	5.63	3.15	8.78	5.76	-3.02	0.55	-1.65	8.78	0.00	0
8	74.80	5.63	2.63	8.26	6.73	-1.53	0.50	-0.77	8.26	0.00	0	58.00	5.63	2.63	8.26	5.22	-3.04	0.50	-1.53	8.26	0.00	0
9	71.20	5.63	2.10	7.73	6.41	-1.33	0.46	-0.61	7.73	0.00	0	52.00	5.63	2.10	7.73	4.68	-3.05	0.46	-1.41	7.73	0.00	0
10	67.60	5.63	1.58	7.21	6.08	-1.13	0.42	-0.48	7.21	0.00	0	46.00	5.63	1.58	7.21	4.14	-3.07	0.42	-1.30	7.21	0.00	0
11	64.00	5.63	1.05	6.68	5.76	-0.92	0.39	-0.36	6.68	0.00	0	40.00	5.63	1.05	6.68	3.60	-3.08	0.39	-1.20	6.68	0.00	0
12	60.40	5.63	0.53	6.16	5.44	-0.72	0.36	-0.26	6.16	0.00	0	34.00	5.63	0.53	6.16	3.06	-3.10	0.36	-1.10	6.16	0.00	0
13	56.80	5.63	0.00	5.63	5.11	-0.52	0.33	-0.17	5.63	0.00	0	28.00	5.63	0.00	5.63	2.52	-3.11	0.33	-1.02	5.63	0.00	0
14	53.20	5.63	0.00	5.63	4.79	-0.85	0.30	-0.25	5.63	0.00	0	22.00	5.63	0.00	5.63	1.98	-3.65	0.30	-1.09	5.63	0.00	0
15	49.60	5.63	0.00	5.63	4.46	-1.17	0.27	-0.32	5.63	0.00	0	16.00	5.63	0.00	5.63	1.44	-4.19	0.27	-1.15	5.63	0.00	0
16	46.00	5.63	0.00	5.63	4.14	-1.49	0.25	-0.38	5.63	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
17	42.40	5.63	0.00	5.63	3.82	-1.82	0.23	-0.42	5.63	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
18	38.80	5.63	0.00	5.63	3.49	-2.14	0.21	-0.45	5.63	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
19	35.20	5.63	0.00	5.63	3.17	-2.47	0.19	-0.48	5.63	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
20	31.60	5.63	0.00	5.63	2.84	-2.79	0.18	-0.50	5.63	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
21	28.00	5.63	0.00	5.63	2.52	-3.11	0.16	-0.51	5.63	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
22	24.40	5.63	0.00	5.63	2.20	-3.44	0.15	-0.52	5.63	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
23	20.80	5.63	0.00	5.63	1.87	-3.76	0.14	-0.52	5.63	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
24	17.20	5.63	0.00	5.63	1.55	-4.09	0.13	-0.52	5.63	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
25	13.60	5.63	0.00	5.63	1.22	-4.41	0.12	-0.51	5.63	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Total		140.86	40.95	181.81	127.80	-54.01	9.82	**-20.09**	181.81	0.00	**0.00**		84.52	40.95	125.47	78.30	-47.17	8.06	**-24.76**	125.47	0.00	**0.00**

ANNEXURE - 11

CHAPTER 4

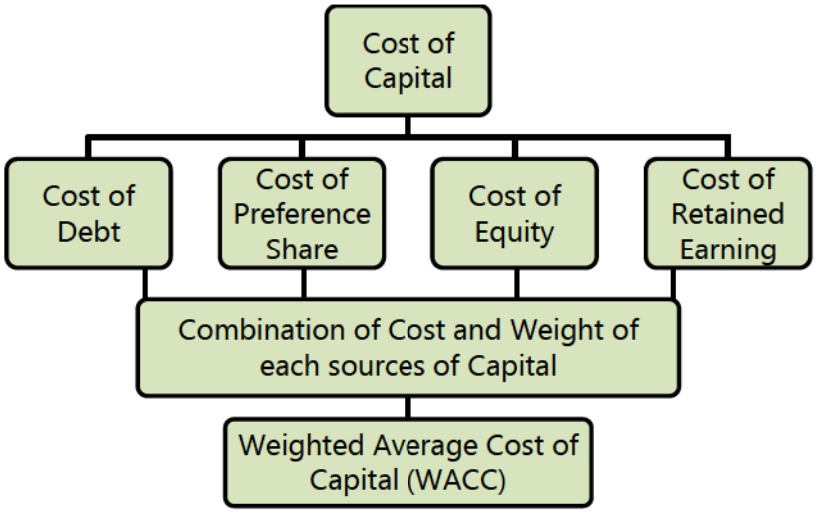
COST OF CAPITAL



LEARNING OUTCOMES

- Discuss the need and sources of finance to a business entity.
- Discuss the meaning of cost of capital for raising fund from different sources of finance.
- Measure cost of individual components of capital
- Calculate weighted cost of capital and marginal cost of capital, Effective Interest rate.

CHAPTER OVERVIEW



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4.7 COST OF EQUITY SHARE CAPITAL

Just like any other source of finance, cost of equity is expectation of equity shareholders. We know that value is performance divided by expectations. If we know value and performance, then we can calculate expectation as a balancing figure.

Here performance means the amount paid by the company to investors, like interest, dividend, redemption price etc. In case of debentures and preference shares amount of interest or dividend is fixed but in case of equity shares it is uncertain.

Therefore, there is no single method for calculation of cost of equity.

1) If dividend is expected to be constant then **dividend price approach** should be used.

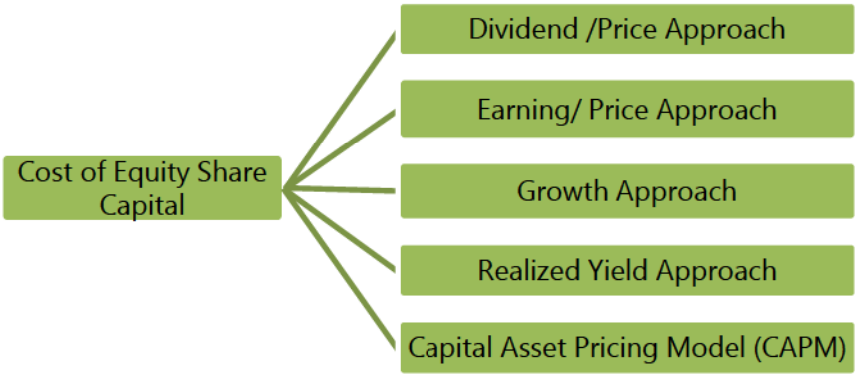
2) If earning per share is expected to be constant then **earning price approach** should be used.

3) If dividend and earning are expected to grow at a constant rate then **growth approach**, which is also named as **Gordon's model** should be used.

4) If it is difficult to forecast future then **realised yield approach** should be used, which looks into past.

5) All the above methods calculate cost of equity as a balancing figure. While the cost of equity or expectation of investors is dependent on risk. Higher the risk higher the expectations and vice versa. **Capital asset pricing model (CAPM)** calculates cost of equity based on risk.

Different methods are employed to compute the cost of equity share capital.



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4.7.1 Dividend Price Approach

This is also known as Dividend Valuation Model. This model makes an assumption that the dividend per share is expected to remain constant forever. Here, cost of equity capital is computed by dividing the expected dividend by market price per share as follows:

$$\text{Cost of Equity } (K_e) = \frac{D}{P_0}$$

Where,

K_e = Cost of equity

D = Expected dividend (also written as D_1)

P_0 = Market price of equity (ex- dividend)

4.7.2 Earnings/ Price Approach

The advocates of this approach co-relate the earnings of the company with the market price of its share. Accordingly, the cost of equity share capital would be based upon the expected rate of earnings of a company. The argument is that each investor expects a certain amount of earnings, whether distributed or not from the company in whose shares he invests. Thus, if an investor expects that the company in which he is going to subscribe for shares should have at least a 20% rate of earning, the cost of equity share capital can be construed on this basis. Suppose the company is expected to earn 30% the investor will be prepared to pay ₹ 150 $\left(\frac{30}{20} \times 100\right)$ for each share of ₹ 100.

Earnings/ Price Approach:

$$\text{Cost of Equity } (K_e) = \frac{E}{P}$$

Where,

E = Current earnings per share

P = Market share price

This approach assumes that earning per share will remain constant forever. The Earning Price Approach is similar to the dividend price approach; only it seeks to nullify the effect of changes in the dividend policy.

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4.7.3 Growth Approach or Gordon's Model

As per this approach the rate of dividend growth remains constant. Where earnings, dividends and equity share price all grow at the same rate, the cost of equity capital may be computed as follows:

$$\text{Cost of Equity } (K_e) = \frac{D_1}{P_0} + g$$

Where,

D_1 = $[D_0 (1+ g)]$ i.e. next expected dividend

P_0 = Current Market price per share

g = Constant Growth Rate of Dividend.

In case of newly issued equity shares where floatation cost is incurred, the cost of equity share with an estimation of constant dividend growth is calculated as below:

$$\text{Cost of Equity } (K_e) = \frac{D_1}{P_0 - F} + g$$

Where, F = Flotation cost per share

ILLUSTRATION 9

A company has paid dividend of ₹ 1 per share (of face value of ₹ 10 each) last year and it is expected to grow @ 10% next year. CALCULATE the cost of equity if the market price of share is ₹ 55.

SOLUTION

$$K_e = \frac{D_1}{P_0} + g = \frac{₹1(1+0.1)}{₹55} + 0.1 = 0.12 = 12\%$$

Dividend Discount Model with variable growth rate is explained in chapter 9 i.e. Dividend Decisions

Estimation of Growth Rate

The calculation of 'g' (the growth rate) is an important factor in calculating cost of equity share capital. Generally, two methods are used to determine the growth rate, which are discussed below:

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(i) Average Method

It is calculated as below:

$$\text{Current Dividend } (D_0) = D_n(1+g)^n$$

or

$$\text{Growth rate} = \sqrt[n]{\frac{D_0}{D_n}} - 1$$

Where,

D_0 = Current dividend,

D_n = Dividend in n years ago

Growth rate can also be found as follows:

Step-I: Divide D_0 by D_n, find out the result, then refer the FVIF table,

Step-II: Find out the result found at Step-I in corresponding year's row

Step-III: See the interest rate for the corresponding column. This is the growth rate.

Example - 4: The current dividend (D_0) is ₹16.10 and the dividend 5 year ago was ₹10. The growth rate in the dividend can found out as follows:

Step-I: Divide D_0 by D_n i.e. ₹16.10 ÷ ₹10 = 1.61

Step-II: Find out the result found at Step-I i.e. 1.61 in corresponding year's row i.e. 5^{th} year

Step-III: See the interest rate for the corresponding column which is 10%. Therefore, growth rate (g) is 10%.

(ii) Gordon's Growth Model

Unlike the Average method, Gordon's growth model attempts to derive a future growth rate. As per this model increase in the level of investment will give rise to an increase in future dividends. This model takes Earnings retention rate (b) and rate of return on investments (r) into account to estimate the future growth rate.

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It can be calculated as below:

$$\text{Growth (g)} = b \times r$$

Where,

r = rate of return on fund invested

b = earnings retention ratio/ rate*

*Proportion of earnings available to equity shareholders which is not distributed as dividend

(This Model is discussed in detail in chapter 9 i.e. Dividend Decisions)

4.7.4 Realized Yield Approach

According to this approach, the average rate of return realized in the past few years is historically regarded as 'expected return' in the future. It computes cost of equity based on the past records of dividends actually realised by the equity shareholders. Though, this approach provides a single mechanism of calculating cost of equity, it has unrealistic assumptions like risks faced by the company remain same; the shareholders continue to expect the same rate of return; and the reinvestment opportunity cost (rate) of the shareholders is same as the realised yield. If the earnings do not remain stable, this method is not practical.

ILLUSTRATION 10

Mr. Mehra had purchased a share of Alpha Limited for ₹ 1,000. He received dividend for a period of five years at the rate of 10 percent. At the end of the fifth year, he sold the share of Alpha Limited for ₹ 1,128. You are required to COMPUTE the cost of equity as per realised yield approach.

SOLUTION

We know that as per the realised yield approach, cost of equity is equal to the realised rate of return. Therefore, it is important to compute the internal rate of return by trial and error method. This realised rate of return is the discount rate which equates the present value of the dividends received in the past five years plus the present value of sale price of ₹ 1,128 to the purchase price of ₹1,000. The discount rate which equalises these two is 12 percent approximately. Let us look at the table given for a better understanding:

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Year	Dividend (₹)	Sale Proceeds (₹)	Discount Factor @ 12%	Present Value (₹)
1	100	-	0.893	89.3
2	100	-	0.797	79.7
3	100	-	0.712	71.2
4	100	-	0.636	63.6
5	100	-	0.567	56.7
6	Beginning	1,128	0.567	639.576
				1,000.076

We find that the purchase price of Alpha limited's share was ₹ 1,000 and the present value of the past five years of dividends plus the present value of the sale price at the discount rate of 12 per cent is ₹1,000.076. Therefore, the realised rate of return may be taken as 12 percent. This 12 percent is the cost of equity.

ILLUSTRATION 11

CALCULATE the cost of equity from the following data using realized yield approach:

Year	***1***	***2***	***3***	***4***	***5***
Dividend per share	*1.00*	*1.00*	*1.20*	*1.25*	*1.15*
Price per share (at the beginning)	*9.00*	*9.75*	*11.50*	*11.00*	*10.60*

SOLUTION

In this question we will first calculate yield for last 4 years and then calculate it geometric mean as follows:

$$1+Y_1=\frac{D_1+P_1}{P_0}=\frac{1+9.75}{9}=1.1944$$

$$1+Y_2=\frac{D_2+P_2}{P_1}=\frac{1+11.50}{9.75}=1.2821$$

$$1+Y_3=\frac{D_3+P_3}{P_2}=\frac{1.2+11}{11.5}=1.0609$$

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$$1+Y_4=\frac{D_4+P_4}{P_3}=\frac{1.25+10.60}{11}=1.0772$$

Geometric mean:

$K_e=[(1+Y_1)\times(1+Y_2)\times.....(1+Y_n)]^{1/n}-1$

$K_e=[1.1944\times1.2821\times1.0609\times1.0772]^{1/4}-1=0.15=15\%$

Note: to calculate power ¼ simply press square root switch, two times on your calculator.

4.7.5 Capital Asset Pricing Model (CAPM) Approach

CAPM model describes the risk-return trade-off for securities. It describes the linear relationship between risk and return for securities.

The risks, to which a security is exposed, can be classified into two groups:

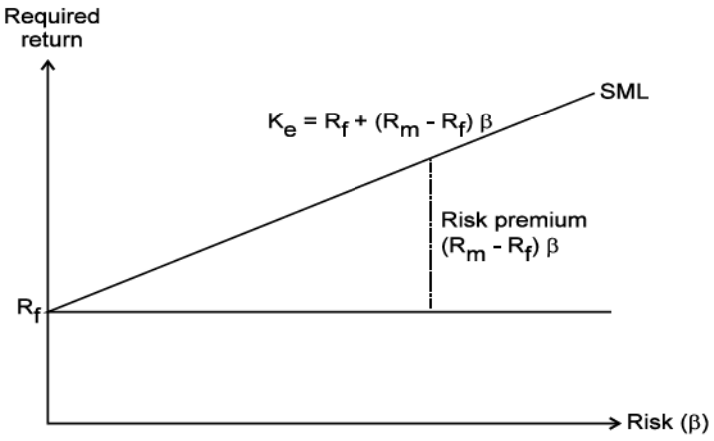
(i) **Unsystematic Risk:** This is also called company specific risk as the risk is related with the company's performance. This type of risk can be reduced or eliminated by diversification of the securities portfolio. This is also known as diversifiable risk.

(ii) **Systematic Risk:** It is the macro-economic or market specific risk under which a company operates. This type of risk cannot be eliminated by the diversification hence, it is non-diversifiable. The examples are inflation, Government policy, interest rate etc.

As diversifiable risk can be eliminated by an investor through diversification, the non-diversifiable risk is the risk which cannot be eliminated; therefore, a business should be concerned as per CAPM method, solely with non-diversifiable risk.

The non-diversifiable risks are assessed in terms of beta coefficient (b or β) through fitting regression equation between return of a security and the return on a market portfolio.

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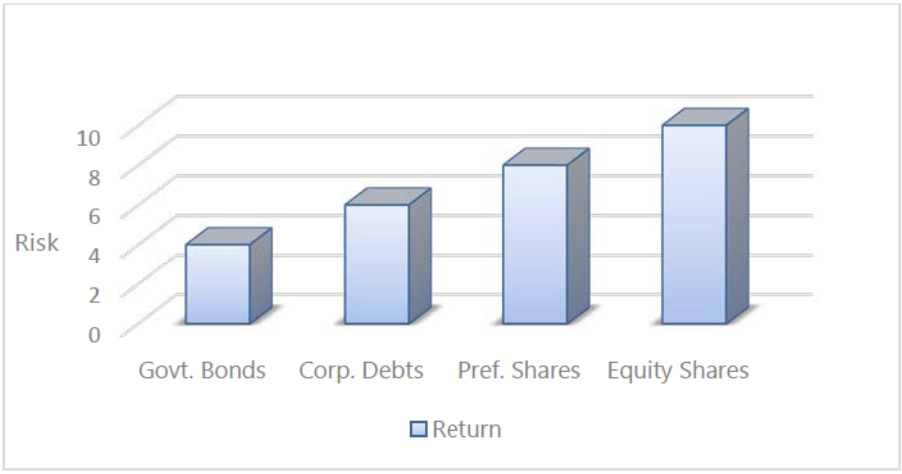
Cost of Equity under CAPM

Thus, the cost of equity capital can be calculated under this approach as:

Cost of Equity (K_e) = R_f + ß (R_m – R_f)

Where,

K_e	=	Cost of equity capital
R_f	=	Risk free rate of return
ß	=	Beta coefficient
R_m	=	Rate of return on market portfolio
(R_m – R_f)	=	Market risk premium



Risk Return relationship of various securities

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Therefore, Required rate of return = Risk free rate + Risk premium

- The idea behind CAPM is that investors need to be compensated in two ways- time value of money and risk.
- The time value of money is represented by the risk-free rate in the formula and compensates the investors for placing money in any investment over a period of time.
- The other half of the formula represents risk and calculates the amount of compensation the investor needs for taking on additional risk. This is calculated by taking a risk measure (beta) which compares the returns of the asset to the market over a period of time and compares it to the market premium.

The CAPM says that the expected return of a security or a portfolio equals the rate on a risk-free security plus a risk premium. If this expected return does not meet or beat the required return, then the investment should not be undertaken.

The shortcomings of this approach are:

(a) Estimation of betas with historical data is unrealistic; and

(b) Market imperfections may lead investors to unsystematic risk.

Despite these shortcomings, the CAPM is useful in calculating cost of equity, even when the firm is suffering losses.

The basic factor behind determining the cost of equity share capital is to measure the expectation of investors from the equity shares of that particular company. Therefore, the whole question of determining the cost of equity shares hinges upon the factors which go into the expectations of particular group of investors in a company of a particular risk class.

ILLUSTRATION 12

CALCULATE the cost of equity capital of H Ltd., whose risk-free rate of return equals 10%. The firm's beta equals 1.75 and the return on the market portfolio equals to 15%.

SOLUTION

$K_e = R_f + ß (R_m - R_f)$

$K_e = 0.10 + 1.75 (0.15 - 0.10)$

$= 0.10 + 1.75 (0.05) = 0.1875$ or 18.75%

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INTERMEDIATE : PAPER - 8

COST ACCOUNTING AND FINANCIAL MANAGEMENT

INTERMEDIATE

STUDY NOTES

The Institute of Cost Accountants of India
CMA Bhawan, 12, Sudder Street, Kolkata - 700 016

Study Note - 6

COST OF CAPITAL & CAPITAL STRUCTURE



This Study Note includes

6.1 Cost of Capital
6.2 Capital Structure
6.3 Dividend policy

6.1 COST OF CAPITAl

INTRODUCTION:

The Cost of Capital is the most important and controversial area in Financial Management. Capital Budgeting decisions have a major impact on the firm, and Cost of Capital is used as a criterion to evaluate the capital Budgeting decisions i.e., whether to accept or reject a project. Knowledge about cost of capital, and how it is influenced by financial leverage, is useful in making capital structure decisions. The cost of capital is the most important concept in financial decision making. The chief objective of measuring the cost of capital is its use as a decision criterion in capital budgeting.

Definition: According to professor I.M.Pandy "Cost of Capital is th discount rate used in evaluating the desirability of the investment project. The cost of capital is the minimum rate of return required for investment project. The cost of capital is the minimum rate of return which will maintain the market value per share at its current level. If the firm earns more than the cost of capital, the market value per share is expected to increase. In other words, it is the rate that suppliers of funds expect to get. It is determined by the cost of the various sources of finance. It is also referred to as the weighted average cost of capital or composite / combined cost of capital.

James C. Van Horne: The cost of Capital is "a cut-off rate for the allocation of capital to investments of projects. It is the rate of return on a project that will leave unchanged the market price of the stock".

Soloman Ezra: "Cost of Capital is the minimum required rate of earinings or the cut-off rate of capital expenditure".

It is clear from the above definitions that the cast of capital is that minimum rate of return which a firm is expected to earn on its investments so that the market value of its share is maintained. We can also conclude from the above definitions that there are three basic aspects of the concept of cost of capital:

(i) Not a cost as such: In fact the cost of capital is not a cost as such, it is the rate of return that a firm requires to earn from its projects.

(ii) It is the minimum rate of return: A firm's cost of capital is that minimum rate of return which will at least maintain the market value of the share.

(iii) It comprises three components:

$K=r_o+b+f$

Where, k = Cost of Capital;

r_o= Return at zero risk level:

b = Premium for business risk, which refers to the variability in operating profit (EBIT) due to change in sales.

f = Premium for financial risk which is related to the pattern of capital structure.

Importance of Cost of Capital

The Cost of Capital is very important in Financial Management and plays a crucial role in the following areas:

(i) Capital budgeting decisions: The cost of capital is used for discounting cash flows under Net Present Value method for investment proposals. So, it is very useful in capital budgeting decisions.

(ii) Capital structure decisions: An optimal capital is that structure at which the value of the firm is maximum and cost of capital is the lowest. So, cost of capital is crucial in designing optimal capital structure.

(iii) Evaluation of final Performance: Cost of capital is used to evaluate the financial performance of top management. The actual profitabily is compared with the actual cost of capital of funds and if profit is greater than the cost of capital the performance nay be said to be satisfactory.

(iv) Other financial decisions: Cost of capital is also useful in making such other financial decisions as dividend policy, capitalization of profits, making the rights issue, etc.

Classification of Cost of Capital:

Cost of Capital can be classified as follows:

(i) Historical Cost and Future Cost: Historical costs are book costs relating to the past, while future costs are estimated costs act as guide for estimation of future costs.

(ii) Specific Costs and Composite Costs: Specific cost is the cost of a specific source of capital, while composite cost is combined cost of various sources of capital. Composite cost, also known as the weighted average cost of capital, should be considered in capital and capital budgeting decisions.

(iii) Explicit and Implicit Cost: Explicit cost of any source of finance is the discount rate which equates the present value of cash inflows with the present value of cash outflows. It is the internal rate of return and is calculated with the following formula;

$$I_o = \frac{C_1}{(I+K)^1} + \frac{C_2}{(I+K)^2} + \ldots\ldots + \frac{C_n}{(I+K)^n}$$

I_o = Net cash inflow received at zero of time

C = Cash outflows in the period concerned

K = Explicit cost of capital

N = Duration of time period

Implicit cost also known as the opportunity cost is the of the opportunity foregone in order to take up a particular project. For example, the implicit cast of retained earings is the rate of return available to shareholders by investing the funds elsewhere.

(iv) Average Cost and Marginal Cost: An average cost is the combined cost or weighted average cost of various sources of capital. Marginal cost refers to the average cost of new or additional funds required by a firm. It is the marginal cost which should be taken into consideration in investment decisions.

Computation of Cost of Capital:

Computation of cost capital of a firm involves the following steps:

I. Computation of cost of specific sources of a capital, viz., debt, preference capital, equity and retained earnings, and

II. Computation of weighted average cost of capital.

I. Computation of specific sources of capital

Cost of Debt (k_d)

Debt may be perpetual or redeemable debt. Moreover, it may be issued at par, at premium or discount. The computation of cost debt in each care is explained below.

Perpetual / Irredeemable debt:

It is the rate of return which the lenders expect. A firm may issue perpetual bonds or it may have a policy of having a fixed amount of debt in the capital structure. In the case, when the old debt is repaid, it would be replaced by a new debt of same amount. In such a case debt is regarded as perceptual debt. The bonds of debentures can be issued at par, (face value), discount (below face value) and premium (more than the face value). Thus, cost of perpetual debt is equal to the rate of return expected by the lenders. It is the coupon rate of interest which is adjusted for tax effect.

Cost of perpetual debt can be determined as before tax cost of debt and after tax cost of debt. Symbolically:

$$= \frac{Interest}{Sale\ price\ of\ debenture\ of\ bond\ (p)}$$

After tax cost of debt (K_d) = $\frac{I}{P}$ (1 – t)

I – Interest payment

P - Sale price of bond or debenture

t – Tax rate

Cost of Redeemable debt:

While calculating the cost of redeemable debt, it is necessary to consider the repayment of the principal in addition to interest payments. The cost of redeemable debt can be calculated by suing the following formula.

After – tax cost of debt, $K_d = \frac{I(1-t)+\frac{(F-5)}{n}}{\frac{(F+5)}{2}}$

Where

I = Annual Interest charges

t = Tax rate

n = Number of years

F = Redeemable value of the debt at the time of maturity.

S = Net sale proceeds from the issue of debt (face value – expenses)

Cost of Preference Capital (K_p)

The computation of cost of preference shares is conceptually difficult when compared to the cost of debt. Preference share holders have a preference regarding the payment of dividend as well as return of principal amount over the ordinary shares. Preference capital carries a fixed rate of dividend.

Preference dividend is an appropriation of earnings after the payment of taxes. Therefore, there is no need to make any adjustment for taxes while determining the cost of preference shares (Kp).

Perpetual Preference Capital:

$$K_P = \frac{D-(1+dt)}{NS}$$

Where

D = Preference dividend

dt = Dividend tax

NS = Net Sale proceeds i.e., Issue Price – Flotation Cost.

Redeemable preference shares: It is calculated with the following formula:

$$K_P = \frac{D(1+dt)+\frac{RV-NS}{n}}{\frac{RV+NS}{2}} \times 100$$

Where, K_p = Cost of preference capital

D = Annual preference dividend

RV = Maturity value of preference shares

NS = Net proceeds of preference shares

N = Number of years to maturity

Cost of Equity Capital

The cost of Equity Capital is most difficult to compute. Some people argue that the equity capital is cost free as the Company is not legally bound to pay the dividends to Equity shareholders. But this is not true. Shareholders will invest their funds with the expectation of dividends. The market value of Equity Share depends in the dividends expected by shareholders. Thus the required rate of return which equates the present value of the expected dividends with the market value of Equity share is the cost of Equity Capital. The cost of Equity Capital may be expressed as the minimum rate of return that must be earned on New Equity Share Capital financed investment in order to keep the earnings available to the existing Equity shareholders of the firm unchanged.

It may be computed in the following 4 methods.

a) Dividend method (no growth model):

As stated above, the market price per share depends on the dividends expected by the Equity Shareholders.

Formula:

$$P_0 = \frac{D_1}{(1+K_e)} + \frac{D_2}{(1+K_e)^2} + \ldots\ldots\ldots\ldots + \frac{D_n}{(1+K_e)^n}$$

Or

$$K_e = \frac{D_1}{NS}$$

Where

K_e = Cost of Equity

D = Dividend

NS = Net Sale Proceeds i.e., Issue Price – Flotation Cost

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legislature here, while investing the city with the authority to determine it, in each instance, has carefully circumscribed the power by limiting its exercise within a definitely restricted area. The city may take less than this area, but cannot take more.

The decree of the state court is

Affirmed.

BLUEFIELD WATER WORKS & IMPROVEMENT COMPANY *v.* PUBLIC SERVICE COMMISSION OF THE STATE OF WEST VIRGINIA ET AL.

ERROR TO THE SUPREME COURT OF APPEALS OF THE STATE OF WEST VIRGINIA.

No. 256. Argued January 22, 1923.—Decided June 11, 1923.

1. A judgment of the highest court of a State which upholds an order of a state commission fixing the rates of a public utility company over the objection that the rates are confiscatory and the order hence violative of the Fourteenth Amendment, is reviewable here, on the constitutional question, by writ of error. P. 683.
2. In estimating the value of the property of a public utility corporation, as a basis for rate regulation, evidence of present reproduction costs, less depreciation, must be given consideration. P. 689. *Southwestern Bell Telephone Co.* v. *Public Service Commission, ante,* 276.
3. A public utility corporation, challenging as confiscatory rates imposed by a state commission, is entitled, under the due process clause of the Fourteenth Amendment, to the independent judgment of the court as to both law and facts. *Id.*
4. Rates which are not sufficient to yield a reasonable return on the value of the property used, at the time it is being used to render the service of the utility to the public, are unjust, unreasonable and confiscatory; and their enforcement deprives the public utility company of its property, in violation of the Fourteenth Amendment. P. 690.
5. A public utility is entitled to such rates as will permit it to earn a return on the value of the property it employs for the convenience of the public equal to that generally being made at the same time, and in the same region of the country, on investments

in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. P. 692.

6. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management, to maintain its credit, and enable it to raise the money necessary for the proper discharge of its public duties. *Id.*

7. A rate of return may be reasonable at one time, and become too high or too low by changes affecting opportunities for investment, the money market, and business conditions generally. *Id.*

8. In this case, 6% was inadequate to constitute just compensation. P. 695.

89 W. Va. 736, reversed.

ERROR to a judgment of the Supreme Court of Appeals of West Virginia, sustaining an order of a state commission fixing water rates, in a suit brought by the plaintiff in error to set the order aside.

Mr. Alfred G. Fox, with whom *Mr. Joseph M. Sanders* was on the briefs, for plaintiff in error.

Mr. Russell S. Ritz for defendants in error.

The judgment of the Supreme Court of Appeals of West Virginia herein does not declare valid any statute of the State or any authority exercised under the State, which is repugnant to the Constitution, treaties, or laws of the United States.

The most that can be claimed is that the Commission, acting under lawful authority in reaching the conclusion from a disputed state of facts, found and fixed the value of plaintiff's property for rate making purposes at an amount less than some other tribunal may have fixed and determined from a like state of facts. A judgment based upon such a state of facts does not raise such a federal question as gives a right of review from this Court to the highest court of the State by a writ of error.

The Public Service Commission and the Supreme Court of Appeals acted under valid state authority. The authority or law under which these respective tribunals exercised jurisdiction not being repugnant to any federal law, what conclusions they may have reached from a given state of facts which furnishes the basis for the judgment complained of herein, does not present a question subject to be reviewed by writ of error. Such questions can be reviewed only on petition for a writ of certiorari. *Zucht* v. *King,* 260 U. S. 174; *Stadelman* v. *Miner,* 246 U. S. 544; *Philadelphia & Reading Coal Co.* v. *Gilbert,* 245 U. S. 162; *Ireland* v. *Woods,* 246 U. S. 323.

It is not here contended that a public utility is not entitled to a fair return upon the fair and reasonable value of all of its plant and property then used and useful in the public service, but we submit that the fair and reasonable value of a public utility's plant and property is not to be ascertained by adopting only one method of valuation to the exclusion of all other known methods and elements of value. A valuation of a public utility, such as would be fair to the public as well as the utility, should take into consideration the original cost or investment in the utility; the market value of its stocks or bonds, if any; the probable earning capacity of the property; the various rates it has received and the rate it is receiving; the amounts necessary to meet operating expenses; the ability of the utility to adequately perform the public service; the history of the operations of the utility; and perhaps other elements; and after taking all of these into consideration, fix a value that will be fair both to the public and to the utility. *Smyth* v. *Ames,* 169 U. S. 466; *San Diego Land & Town Co.* v. *Jasper,* 189 U. S. 439; *San Diego Land & Town Co.* v. *National City,* 174 U. S. 739; *Knoxville* v. *Knoxville Water Co.,* 212 U. S. 1; *Des Moines Gas Co.* v. *Des Moines,* 238 U. S. 153; *Willcox* v. *Consolidated Gas Co.,* 212 U. S. 19.

If by taking one element or method of value a conclusion is reached which is out of all proportion with a conclusion that may be reached by taking other methods, then that measure or method should be adopted which will, after taking into consideration all of the elements of value, make a fair and reasonable value on the utility's property, used and useful in the public service.

The reproduction theory of public utility valuation has been usually resorted to by the public to safeguard itself against values of public utilities, based upon inflated and watered stock investments, purporting to represent original cost. Practically all, if not all, of the decisions of this Court, in which this theory of valuation was even considered, were cases of this character; and even in them this Court has never held that the reproduction new theory at present prices was an exclusive method by which public utility values are to be determined. *Smyth* v. *Ames, supra;* Whitten, Valuation Public Service Corporations, c. V, p. 82, et seq.; 2 Wyman, Public Service Corporations, c. 32; *Coal & Coke Ry. Co.* v. *Conley,* 67 W. Va. 129; *Minnesota Rate Cases,* 230 U. S. 352.

If determining public utility values for rate-making purposes is to be accomplished by using the reproduction new theory at present prices, to the exclusion of every other element and method of values, then it may well be seen to what uncertain, as well as unfair, consequences it may lead. If the market is abnormally low and a valuation on this theory is made at such a time, without taking into consideration past costs or other elements of value, it would be manifestly unfair to the utility. Likewise, if this theory of valuation is used at a time of abnormally high prices in the market, such as was produced by the World War, and all other methods and elements of values are excluded, then it would be most unfair to the public, who would be expected to pay rates

of return upon such unfair value so reached. *Potomac Electric Power Co.* v. *Public Utilities Comm.*, 276 Fed. 330; *New York Pub. Serv. Comm.* No. 5, P. U. R. 930; *Newton* v. *Consolidated Gas Co.*, 258 U. S. 165.

MR. JUSTICE BUTLER delivered the opinion of the Court.

Plaintiff in error is a corporation furnishing water to the city of Bluefield, West Virginia, and its inhabitants. September 27, 1920, the Public Service Commission of the State being authorized by statute to fix just and reasonable rates, made its order prescribing rates. In accordance with the laws of the State (§ 16, c. 15–0, Code of West Virginia) the company instituted proceedings in the Supreme Court of Appeals to suspend and set aside the order. The petition alleges that the order is repugnant to the Fourteenth Amendment, and deprives the company of its property without just compensation and without due process of law and denies it equal protection of the laws. A final judgment was entered denying the company relief and dismissing its petition. The case is here on writ of error.

1. The city moves to dismiss the writ of error for the reason, as it asserts, that there was not drawn in question the validity of a statute or an authority exercised under the State, on the ground of repugnancy to the Federal Constitution.

The validity of the order prescribing the rates was directly challenged on constitutional grounds, and it was held valid by the highest court of the State. The prescribing of rates is a legislative act. The commission is an instrumentality of the State, exercising delegated powers. Its order is of the same force as would be a like enactment by the legislature. If, as alleged, the prescribed rates are confiscatory, the order is void. Plaintiff in error is entitled to bring the case here on writ of error and to have that question decided by this Court. The motion to dismiss will be denied. See *Oklahoma Natural Gas Co.* v.

Russell, 261 U. S. 290, and cases cited; also *Ohio Valley Water Co.* v. *Ben Avon Borough,* 253 U. S. 287.

2. The commission fixed $460,000 as the amount on which the company is entitled to a return. It found that under existing rates, assuming some increase of business, gross earnings for 1921 would be $80,000 and operating expenses $53,000, leaving $27,000, the equivalent of 5.87 per cent., or 3.87 per cent. after deducting 2 per cent. allowed for depreciation. It held existing rates insufficient to the extent of $10,000. Its order allowed the company to add 16 per cent. to all bills, excepting those for public and private fire protection. The total of the bills so to be increased amounted to $64,000. That is, 80 per cent. of the revenue was authorized to be increased 16 per cent., equal to an increase of 12.8 per cent. on the total,—amounting to $10,240.

As to value. The company claims that the value of the property is greatly in excess of $460,000. Reference to the evidence is necessary. There was submitted to the commission evidence of value which it summarized substantially as follows:

a. Estimate by company's engineer on basis of reproduction new, less depreciation, at prewar prices.....	$624,548.00
b. Estimate by company's engineer on basis of reproduction new, less depreciation, at 1920 prices.....	$1,194,663.00
c. Testimony of company's engineer fixing present fair value for rate making purposes.....	$900,000.00
d. Estimate by commission's engineer on basis of reproduction new, less depreciation at 1915 prices, plus additions since December 31, 1915, at actual cost, excluding Bluefield Valley Water Works, water rights and going value	$397,964.38

e. Report of commission's statistician showing investment cost less depreciation	$365, 445. 13
f. Commission's valuation, as fixed in Case No. 368 ($360,000) plus gross additions to capital since made ($92,520.53)	$452, 520. 53

It was shown that the prices prevailing in 1920 were nearly double those in 1915 and prewar time. The company did not claim value as high as its estimate of cost of construction in 1920. Its valuation engineer testified that in his opinion the value of the property was $900,000,—a figure between the cost of construction in 1920, less depreciation, and the cost of construction in 1915 and before the war, less depreciation.

The commission's application of the evidence may be stated briefly as follows:

As to "a", supra. The commission deducted $204,000 from the estimate (details printed in the margin),[1] leaving approximately $421,000 which it contrasted with the estimate of its own engineer, $397,964.38 (see *"d", supra*). It found that there should be included $25,000 for the Bluefield Valley Water Works plant in Virginia, 10 per cent. for going value, and $10,000 for working capital. If these be added to $421,000 there results $500,600. This may be compared with the commission's final figure, $460,000.

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[1] Difference in depreciation allowed $49,000
Preliminary organization and development cost 14,500
Bluefield Valley Water Works Plant 25,000
Water rights 50,000
Excess overhead costs 39,000
Paving over mains 28,500

[*sic*] $204,000

As to "b" and "c", supra. These were given no weight by the commission in arriving at its final figure, $460,000. It said:

"Applicant's plant was originally constructed more than twenty years ago, and has been added to from time to time as the progress and development of the community required. For this reason, it would be unfair to its consumers to use as a basis for present fair value the abnormal prices prevailing during the recent war period, but when, as in this case, a part of the plant has been constructed or added to during that period, in fairness to the applicant, consideration must be given to the cost of such expenditures made to meet the demands of the public."

As to "d", supra. The commission taking $400,000 (round figures) added $25,000 for Bluefield Valley Water Works plant in Virginia, 10 per cent. for going value, and $10,000 for working capital, making $477,500. This may be compared with its final figure, $460,000.

As to "e", supra. The commission on the report of its statistician found gross investment to be $500,402.53. Its engineer applying the straight line method found 19 per cent. depreciation. It applied 81 per cent. to gross investment and added 10 per cent. for going value and $10,000 for working capital, producing $455,500.[2] This may be compared with its final figure, $460,000.

As to "f", supra. It is necessary briefly to explain how this figure, $452,520.53, was arrived at. Case No. 368 was a proceeding initiated by the application of the company for higher rates, April 24, 1915. The commission made a valuation as of January 1, 1915. There were presented two estimates of reproduction cost less depreciation, one by a valuation engineer engaged by the com-

[2] As to "e". $365,445.13 represents investment cost less depreciation. The gross investment was found to be $500,402.53, indicating a deduction on account of depreciation of $134,957.40, about 27 per cent. as against 19 per cent. found by the commission's engineer.

pany and the other by a valuation engineer engaged by the city, both "using the same method." An inventory made by the company's engineer was accepted as correct by the city and by the commission. The method "was that generally employed by courts and commissions in arriving at the value of public utility properties under this method", and in both estimates "five year average unit prices" were applied. The estimate of the company's engineer was $540,000 and of the city's engineer, $392,000. The principal differences as given by the commission are shown in the margin.[3] The commission disregarded both estimates and arrived at $360,000. It held that the best basis of valuation was the net investment, i. e., the total cost of the property less depreciation. It said: "The books of the company show a total gross investment since its organization, of $407,882.00, and that there has been charged off for depreciation from year to year the total sum of $83,445.00, leaving a net investment of $324,427.00. . . . From an examination of the books . . . it appears that the records of the company have been remarkably well kept and preserved. It, therefore, seems that when a plant is developed under these conditions the net investment which of course means the total gross investment less depreciation is the very best basis of valuation for rate making purposes and that the other methods above referred to should

	Company engineer.	City engineer.
[3] 1. Preliminary cost	$14,455	$1,000
2. Water rights	50,000	Nothing.
3. Cutting pavements over mains	27,744	233
4. Pipe lines from gravity springs	22,072	15,442
5. Laying cast iron street mains	19,252	15,212
6. Reproducing Ada Springs	18,558	13,027
7. Superintendence and Engineering	20,515	13,621
8. General contingent cost	16,415	5,448
	$189,011	$63,983

be used only when it is impossible to arrive at the true investment. Therefore, after making due allowance for capital necessary for the conduct of the business and considering the plant as a going concern, it is the opinion of the commission that the fair value for the purpose of determining reasonable and just rates in this case of the property of the applicant company, used by it in the public service of supplying water to the City of Bluefield and its citizens, is the sum of $360,000.00, which sum is hereby fixed and determined by the Commission to be the fair present value for the said purpose of determining the reasonable and just rates in this case."

In its report in No. 368, the commission did not indicate the amounts respectively allowed for going value or working capital. If 10 per cent. be added for the former, and $10,000 for the latter (as fixed by the commission in the present case) there is produced $366,870, to be compared with $360,000, found by the commission in its valuation as of January 1, 1915. To this it added $92,520.53 expended since, producing $452,520.53. This may be compared with its final figure, $460,000.

The State Supreme Court of Appeals holds that the valuing of the property of a public utility corporation and prescribing rates are purely legislative acts not subject to judicial review except in so far as may be necessary to determine whether such rates are void on constitutional or other grounds; and that findings of fact by the commission based on evidence to support them will not be reviewed by the court. *Bluefield* v. *Water Works Co.*, 81 W. Va. 201, 204; *Coal and Coke Co.* v. *Public Service Commission*, 84 W. Va. 662, 678; *Charleston* v. *Public Service Commission*, 86 W. Va. 536.

In this case (89 W. Va. 736) it said (p. 738):

"From the written opinion of the commission we find that it ascertained the value of the petitioner's property for rate making [then quoting the commission] 'after

maturely and carefully considering the various methods presented for the ascertainment of fair value and giving such weight as seems proper to every element involved and all the facts and circumstances disclosed by the record.'"

The record clearly shows that the commission in arriving at its final figure did not accord proper, if any, weight to the greatly enhanced costs of construction in 1920 over those prevailing about 1915 and before the war, as established by uncontradicted evidence; and the company's detailed estimated cost of reproduction new, less depreciation, at 1920 prices, appears to have been wholly disregarded. This was erroneous. *Missouri ex rel. Southwestern Bell Telephone Co.* v. *Public Service Commission, ante,* 276. Plaintiff in error is entitled under the due process clause of the Fourteenth Amendment to the independent judgment of the court as to both law and facts. *Ohio Valley Water Co.* v. *Ben Avon Borough,* 253 U. S. 287, 289, and cases cited.

We quote further from the court's opinion (pp. 739, 740):

"In our opinion the commission was justified by the law and by the facts in finding as a basis for rate making the sum of $460,000.00 . . . In our case of *Coal & Coke Ry. Co.* v. *Conley,* 67 W. Va. 129, it is said: 'It seems to be generally held that, in the absence of peculiar and extraordinary conditions, such as a more costly plant than the public service of the community requires, or the erection of a plant at an actual, though extravagant, cost, or the purchase of one at an exorbitant or inflated price, the actual amount of money invested is to be taken as the basis, and upon this a return must be allowed equivalent to that which is ordinarily received in the locality in which the business is done, upon capital invested in similar enterprises. In addition to this, consideration must be given to the nature of the investment, a higher rate

being regarded as justified by the risk incident to a hazardous investment.' .

"That the original cost considered in connection with the history and growth of the utility and the value of the services rendered constitute the principal elements to be considered in connection with rate making, seems to be supported by nearly all the authorities."

The question in the case is whether the rates prescribed in the commission's order are confiscatory and therefore beyond legislative power. Rates which are not sufficient to yield a reasonable return on the value of the property used at the time it is being used to render the service are unjust, unreasonable and confiscatory, and their enforcement deprives the public utility company of its property in violation of the Fourteenth Amendment. This is so well settled by numerous decisions of this Court that citation of the cases is scarcely necessary. "What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience." *Smyth* v. *Ames,* (1898) 169 U. S. 466, 547.

"There must be a fair return upon the reasonable value of the property at the time it is being used for the public. . . .

"And we concur with the court below in holding that the value of the property is to be determined as of the time when the inquiry is made regarding the rates. If the property, which legally enters into the consideration of the question of rates, has increased in value since it was acquired, the company is entitled to the benefit of such increase." *Willcox* v. *Consolidated Gas Co.,* (1909) 212 U. S. 19, 41, 52.

"The ascertainment of that value is not controlled by artificial rules. It is not a matter of formulas, but there must be a reasonable judgment having its basis in a proper consideration of all relevant facts." *Minnesota Rate Cases,* (1913) 230 U. S. 352, 434.

"And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property." *Smyth* v. *Ames, supra,* 546, 547.

". . . . The making of a just return for the use of the property involves the recognition of its fair value if it be more than its cost. The property is held in private ownership and it is that property, and not the original cost of it, of which the owner may not be deprived without due process of law." *Minnesota Rate Cases, supra,* 454.

In *Missouri ex rel. Southwestern Bell Telephone Co.* v. *Public Service Commission, supra,* applying the principles of the cases above cited and others, this Court said:

"Obviously, the Commission undertook to value the property without according any weight to the greatly enhanced costs of material, labor, supplies, etc., over those prevailing in 1913, 1914 and 1916. As matter of common knowledge, these increases were large. Competent witnesses estimated them as 45 to 50 per centum . . . It is impossible to ascertain what will amount to a fair return upon properties devoted to public service without giving consideration to the cost of labor, supplies, etc., at the time the investigation is made. An honest and intelligent forecast of probable future values made upon a view of all the relevant circumstances, is essential. If the highly important element of present costs is wholly disregarded such a forecast becomes impossible. Estimates for to-morrow cannot ignore prices of today."

It is clear that the court also failed to give proper consideration to the higher cost of construction in 1920 over that in 1915 and before the war, and failed to give weight to cost of reproduction less depreciation on the basis of 1920 prices, or to the testimony of the company's valuation engineer, based on present and past costs of construction, that the property in his opinion, was worth $900,000. The final figure, $460,000, was arrived at substantially on the basis of actual cost less depreciation plus ten per cent. for going value and $10,000 for working capital. This resulted in a valuation considerably and materially less than would have been reached by a fair and just consideration of all the facts. The valuation cannot be sustained. Other objections to the valuation need not be considered.

3. *Rate of return.* The state commission found that the company's net annual income should be approximately $37,000, in order to enable it to earn 8 per cent. for return and depreciation upon the value of its property as fixed by it. Deducting 2 per cent. for depreciation, there remains 6 per cent. on $460,000, amounting to $27,600 for return. This was approved by the state court.

The company contends that the rate of return is too low and confiscatory. What annual rate will constitute just compensation depends upon many circumstances and must be determined by the exercise of a fair and enlightened judgment, having regard to all relevant facts. A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in

highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally.

In 1909, this Court, in *Willcox* v. *Consolidated Gas Co.,* 212 U. S. 19, 48–50, held that the question whether a rate yields such a return as not to be confiscatory depends upon circumstances, locality and risk, and that no proper rate can be established for all cases; and that, under the circumstances of that case, 6 per cent. was a fair return on the value of the property employed in supplying gas to the City of New York, and that a rate yielding that return was not confiscatory. In that case the investment was held to be safe, returns certain and risk reduced almost to a minimum—as nearly a safe and secure investment as could be imagined in regard to any private manufacturing enterprise.

In 1912, in *Cedar Rapids Gas Light Co.* v. *Cedar Rapids,* 223 U. S. 655, 670, this Court declined to reverse the state court where the value of the plant considerably exceeded its cost, and the estimated return was over 6 per cent.

In 1915, in *Des Moines Gas Co.* v. *Des Moines,* 238 U. S. 153, 172, this Court declined to reverse the United States District Court in refusing an injunction upon the conclusion reached that a return of 6 per cent. per annum upon the value would not be confiscatory.

In 1919, this Court in *Lincoln Gas Co.* v. *Lincoln,* 250 U. S. 256, 268, declined on the facts of that case to approve a finding that no rate yielding as much as 6 per

cent. on the invested capital could be regarded as confiscatory. Speaking for the Court, Mr. Justice Pitney said:

"It is a matter of common knowledge that, owing principally to the world war, the costs of labor and supplies of every kind have greatly advanced since the ordinance was adopted, and largely since this cause was last heard in the court below. And it is equally well known that annual returns upon capital and enterprise the world over have materially increased, so that what would have been a proper rate of return for capital invested in gas plants and similar public utilities a few years ago furnishes no safe criterion for the present or for the future."

In 1921, in *Brush Electric Co.* v. *Galveston,* the United States District Court held 8 per cent. a fair rate of return.[4]

In January, 1923, in *Minneapolis* v. *Rand,* the Circuit Court of Appeals of the Eighth Circuit (285 Fed. 818, 830) sustained, as against the attack of the city on the ground that it was excessive, 7½ per cent., found by a special master and approved by the District Court as a fair and reasonable return on the capital investment—the value of the property.

Investors take into account the result of past operations, especially in recent years, when determining the terms upon which they will invest in such an undertaking. Low, uncertain or irregular income makes for low prices for the securities of the utility and higher rates of interest to be demanded by investors. The fact that the company may not insist as a matter of constitutional right that past losses be made up by rates to be applied in the present and future tends to weaken credit, and the fact that the utility is protected against being compelled to serve for confiscatory rates tends to support it. In

[4] This case was affirmed by this Court, June 4, 1923, *ante,* 443.

this case the record shows that the rate of return has been low through a long period up to the time of the inquiry by the commission here involved. For example, the average rate of return on the total cost of the property from 1895 to 1915, inclusive, was less than 5 per cent.; from 1911 to 1915, inclusive, about 4.4 per cent., without allowance for depreciation. In 1919 the net operating income was approximately $24,700, leaving $15,500, approximately, or 3.4 per cent. on $460,000 fixed by the commission, after deducting 2 per cent. for depreciation. In 1920, the net operating income was approximately $25,465, leaving $16,265 for return, after allowing for depreciation. Under the facts and circumstances indicated by the record, we think that a rate of return of 6 per cent. upon the value of the property is substantially too low to constitute just compensation for the use of the property employed to render the service.

The judgment of the Supreme Court of Appeals of West Virginia is reversed.

MR. JUSTICE BRANDEIS concurs in the judgment of reversal for the reasons stated by him in *Missouri ex rel. Southwestern Bell Telephone Co.* v. *Public Service Commission of Missouri, supra.*

CITY NATIONAL BANK OF EL PASO, TEXAS, *v.* EL PASO & NORTHEASTERN RAILROAD COMPANY ET AL.

CERTIORARI TO THE COURT OF CIVIL APPEALS, EIGHTH SUPREME JUDICIAL DISTRICT, OF THE STATE OF TEXAS.

No. 309. Argued March 12, 1923.—Decided June 11, 1923.

Where a bank was accustomed, through an agent, to make interstate shipments of cattle to another bank in care of a commission company, sending its drafts on the commission company for the pur-