CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 245/MP/2012

Coram:
Dr. Pramod Deo, Chairperson
Shri V. S. Verma, Member,
Shri M. Deena Dayalan, Member

Date of Hearing: 16.05.2013
Date of Order : 08.06.2013

In the matter of:
Petition under Section 79(1)(c) of the Electricity Act, 2003 read with Part 7 of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010

And in the matter of:

Essar Steel India Limited **…Petitioner**

Versus

1. Western Regional Load Despatch Centre,Mumbai
2. Gujarat State Load Despatch Centre, Vadodara
3. Power Grid Corporation of India Limited, Gurgaon
4. Gujarat Urja Vikas Nigam Limited, Vadodara
5. Government of Goa, Panjim
6. Daman & Diu, OIDC Corporate Office, Daman
7. Maharashtra State Load Despatch Centre, Navi Mumbai
8. MP State Load Despatch Centre, Jabalpur
9. Chhattisgarh State Load Despatch Centre, Raipur
10. UT of Dadra Nagar and Haveli Secretariat, Silvassa
11. Dakshin Gujarat Vij Company Limited, Surat
12. Central Electricity Authority, New Delhi
13. Uttar Gujarat Vij Company Limited, Gujarat
14. Gujarat Energy Transmission Corporation Limited, Gujarat **…Respondents**

Parties Present:

1. Shri Amit Kapoor, Advocate for the petitioner
2. Shri M. G. Ramachandran, Advocate for SLDC Gujarat
3. Shri S. R. Narsimhan, NLDC
4. Ms. Jyoti Prasad, NLDC
5. Shri S. S. Barpanda, NLDC

6. Shri P. Pentayya, WRLDC
7. Ms. S. Usha, WRLDC
8. Shri Y. K. Sehgal, CTU/PGCIL
9. Ms. Manju Gupta, CTU/PGCIL
10. Shri P. J. Jani, GUVNL
11. Ms. Venu Prapper, GETCO-SLDC

ORDER

The petitioner, Essar Steel India Limited (ESIL) has a steel manufacturing facility at Hazira in Gujarat with a capacity of 10 million tonnes per annum. The steel plant has six Electric Arc Furnaces of 100 MW to 120 MW capacity each and seven smaller size Ladle Furnace of 15 MW to 20 MW capacity each. The total power requirement of the petitioner is up to 850 MW average power and 1050 MW peak power. To meet its power requirement, the petitioner is procuring power from its sister concern, Essar Power Madhya Pradesh Limited (EPMPL) located in Madhya Pradesh and has entered into a power purchase agreement for sale and purchase of 700 MW power. Further, EPMPL has been granted Long Term Open Access for supply of power to ESIL by Central Transmission Utility. The petitioner has also been granted connectivity by Central Transmission Utility subject to the condition that the petitioner would be connected to the inter-State transmission system through a radial mode and would have to get itself disconnected from the State Transmission Utility of Gujarat. The petitioner approached Western Regional Load Despatch Centre vide its letter dated 12.10.2012 requesting for (a) transfer of load control area jurisdiction of ESIL from SLDC Gujarat to WRLDC, Mumbai; (b) grant of status of a regional entity for the purpose of using Open Access power; and (c) for treating ESIL as direct UI pool member. WRLDC in its response

dated 18.10.2012 has not acceded to the request of the petitioner for the reasons that (a) there is no provision in the Grid Code which provides for transfer of load control area from the SLDC to RLDC; (b) WRLDC would schedule ESIL power under LTOA through Gujarat treating it as an embedded entity of Gujarat; and (c) it would be better to approach this Commission since the case involved interpretation of regulations. Aggrieved by the response of WRLDC, the petitioner has filed the present petition with the following prayers:

"(a) Allow the present petition and direct WRLDC to transfer the load control area jurisdiction of ESIL from SLDC, Gujarat to WRLDC, Mumbai;

(b) Grant ESIL the status of a regional entity under the Grid Code for the purpose of scheduling of power and unscheduled interchange accounting;

(c) Lay down guidelines for addressing such situations in future and/or;

(d) Pass any other order(s) or direction(s) as the Commission may deem fit and proper in the circumstances of the case."

2. After hearing the learned counsel for the petitioner and Gujarat SLDC, and representative of POSOCO on 27.11.2012, the Commission admitted the petition and directed the petitioner to implead the constituents of the Western Region, Central Electricity Authority (CEA) and Western Regional Power Committee. The petitioner impleaded the respondent Nos. 4 to 14 vide its affidavit dated 14.10.2012 and served the copies of the petition on the respondents. Replies have been received from Western Regional load Despatch Centre (WRLDC), Gujarat State Load Despatch Centre

(Gujarat SLDC), Dakshin Gujarat Vij Company Ltd (DGVCL) and Gujarat Urja Vikas Nigam Limited (GUVNL) and the petitioner has filed rejoinders to the replies.

Facts of the Case

3. The facts of the case are briefly capitulated as under:

(a) EPMPL, the sister concern of the petitioner has developed a 1200 MW (2X 600) thermal power station at Mahan, District : Sidhi in the State of Madhya Pradesh. EPMPL had applied for long-term open access ("LTOA") from CTU for supply of 400 MW power to Madhya Pradesh and 700 MW power to the petitioner's plant at Hazira in Gujarat. At the 27th meeting of the Standing Committee on Power System Planning in Western Region held at Indore on 30.7.2007, Gujarat Energy Transmission Corporation Limited (GETCO) informed that interconnection to the petitioner's plant is standalone i.e. on a radial mode and the plant shall not be connected to 220 kV network at any point. In the said meeting, LTOA was agreed to be granted to EPMPL with effect from the commissioning of the following network:

(i) Connectivity to be provided by the Project Developer:

(a) Mahan-WRPS near Sipat 400 kV D/C (triple conductor)

(b) Gandhar (NTPC)- Hazira 400 kV D/C (twin conductor)

(c) 400/220 s/s at Essar Steel Hazira (s/s capacity to be decided by developer)

(ii) Regional System to be provided by PGCIL (or by any other agency if so decided)

(d)765/400 kV, 3x1500 MVA WRPS near Sipat

(e)765/400 kV, 3x1500 MVA WRPS Wardhwa substation

(f)Charging of Seoni-Wardha 2xS/C line at 400 kV level

LTOA for 1100 MW was granted by the CTU to EPMPL vide its letter dated 24.11.2008.

(b) Essar Power Transmission Company Limited (EPTCL) approached this Commission for grant of transmission licence for the transmission systems mentioned at para a (i) above. This Commission vide order dated 8.4.2008 in Petition No. 157/2007 granted transmission licence to EPTCL for development and operation of the following transmission systems:

Sr No.	Transmission Lines	Approximate length (km)
(i)	400 kV D/C (triple conductor) transmission line from Mahan to Sipat Pooling sub-station	315
(ii)	LILO of existing 400 kV S/C Vindhyachal – Korba transmission line of Powergrid at Mahan	20
(iii)	400 kV D/C (twin conductor) transmission line from Gandhar NTPC switchyard to Hazira	97
	Sub-stations	
(iv)	3x500 MVA 400/220 kV sub-station at Hazira	
(v)	2x50 MVAR line reactors at Sipat pooling sub-station	
(vi)	2x50 MVAR line reactors at Mahan	
(vii)	1x80 MVAR, 420 kV switchable bus reactor at Mahan TPS along with its associated 400 kV bay	
(viii)	2 Nos. 400 kV line bays at Sipat pooling sub-station	
(ix)	2 Nos. 400 kV line bays at Gandhar (NTPC) switchyard	
(x)	4 Nos. 400 kV line bay at Mahan TPS	

(c) In the 10th meeting of Western Region constituents held on 6.12.2008 regarding LTOA applications, the issue of sharing of regional transmission charges

corresponding to the various IPPs capacity including the EPMPL's TPS at Mahan was deliberated in detail and it was decided that where the generation projects are not having any other drawal arrangement through the STU network except the dedicated transmission system from the generation switchyard connecting the entire capacity to the grid, the applicants for long term open access are required to share the respective regional transmission charges corresponding to gross project capacity. Accordingly, CTU informed EPMPL vide its letter dated 23.12.2008 that since there is no drawl arrangement at the TPS of EPMPL at Mahan at STU level except the proposed Mahan TPS-WR Pooling Station near Sipat 400 kV line, EPMPL needs to share the Western Regional transmission charges corresponding to 1200 MW capacity. EPMPL was requested to undertake signing of BPTA for sharing of WR transmission charges corresponding to 1200 MW capacity. The earlier intimation of LTOA for 1100 MW vide letter dated 24.11.2008 was withdrawn and substituted by a revised intimation for LTOA vide letter dated 23.12.2008. In the LTOA, the following were clearly mentioned:

> "Note: Interconnection at Hazira (Essar Steel) with WR grid shall be on standalone basis i.e. on radial mode and shall not be directly or indirectly connected to 220 kV network of GETCO."

Pursuant to the above LTOA, EPMPL signed the BPTA with PGCIL on 7.1.2009.

(d) PGCIL vide its letter dated 29.7.2009 wrote to EPMPL that as per the information received from GETCO, the proposed 400/220 kV Essar Hazira (Steel) sub-station was planned to be connected to M/s. Bhander Power through 220 kV lines which in turn was already connected to GETCO network. PGCIL informed

that since the new arrangement is against the conditions of the grant of LTOA for power transfer to Essar Hazira (Steel). EPMPL should ensure and confirm that the connectivity of Essar-Hazira substation was on standalone basis with WR grid and would have no connection with GETCO network.

(e) The petitioner vide letter dated 17.2.2012 submitted its application to PGCIL for grant of connectivity to the ISTS. PGCIL in its letter dated 21.2.2012 directed the petitioner to submit the order granting open access to the petitioner by the Gujarat State Electricity Regulatory Commission. On 5.4.2012, the petitioner submitted the additional information to PGCIL. On 20.4.2012 PGCIL granted connectivity to the petitioner. A Tripartite Connection Agreement was executed on 25.5.2012 between PGCIL, ESIL and EPTCL in accordance with the Connectivity Regulations of the Commission.

(f) The petitioner vide letter dated 9.7.2012 submitted the certificate for change of name from Essar Steel Ltd. to Essar Steel India Ltd. to PGCIL. On 1.8.2012, PGCIL granted a modified LTOA changing the name of drawee utility from Essar Steel Ltd. to Essar Steel India Ltd (ESIL). On 17.8.2012, a Transmission Service Agreement was executed between ESIL and PGCIL.

(g) On 12.10.2012, ESIL wrote to WRLDC seeking transfer of the load control area of ESIL form SLDC, Gujarat to WRLDC, Mumbai; for grant of the status of regional entity to ESIL for the purpose of using open access power; and for

treating ESIL as a direct UI pool member of WRLDC as ESIL is a user and bulk consumer under the Grid Code.

(h) WRLDC in its letter dated 18.12.2012 has responded by saying that there is no provision in the Grid Code for change of load control area from SLDC to RLDC or vice versa and ESIL's drawal of power from EPMPL by way of LTOA shall be scheduled by WRLDC by treating ESIL as an embedded entity of Gujarat. WRLDC further advised ESIL to approach this Commission for seeking guidance since the issue involved interpretation of the regulations of the Commission. Aggrieved by the said communication, the petitioner has filed the present petition.

Submission of the petitioner

4. The petitioner had made the following submission in support of its prayers:-

(a) Refuting the contention of WRLDC that there is no prescribed procedure for transfer of a load control area from the jurisdiction of SLDC to RLDC, the petitioner has relied upon the definition of the term 'bulk consumer', 'regional entity' and 'user' as defined in the Grid Code and has submitted that the petitioner satisfies the conditions of a bulk consumer, a regional entity and a user. The petitioner has further relied upon clause 6.4 (22) and 6.4 (25) of the Grid Code to contend that the RLDC is responsible for computation of the actual net injection/drawal of the regional entity. Accordingly, the prayer of the petitioner is covered under the provisions of clause 6.4 of the Grid Code. Moreover, clause 6.4 (3) provides that there can be exception to the procedure as provided under clause

6.4 (1) and (2) for the reason of operational expediency subject to the approval of the Commission.

(b) The Commission has the power to regulate inter-State transmission of electricity under Section 79(1)(c) of the Act. In this connection, reliance has been placed on some judgments of the Hon'ble Supreme Court in support of the petitioner's contention that the Commission's "power to regulate" is very wide and the Commission can grant appropriate relief to the petitioner. The petitioner has further sought relaxation of the provisions in terms of Regulation 6.3(3) read with clause 4 of part 7 of the Grid Code to provide that WRLDC shall exercise control area jurisdiction over the petitioner.

(c) ESIL is a beneficiary in accordance with the Central Electricity Regulatory Commission (Unscheduled Interchange charges and related matters) Regulations, 2009 as it is purchasing electricity from EPMPL which is a generating company. Moreover, ESIL has an average demand ranging from 750 MW (average) to 1050 MW (peak load) which is greater than some of the regional entities like Goa. Therefore, RLDC who is responsible for UI accounting of regional entity should also undertake the UI accounting of ESIL.

Reply of WRLDC

5. POSOCO (WRLDC) in its reply filed by affidavit dated 27.12.2012 has submitted as under:

(a) “Control Area” has been defined in the Grid Code as “an electrical system bounded by interconnections (the lines), metering and telemetry which controls its generation and/load to maintain its interchange schedule with other control areas whenever required to do so and contributes to frequency regulation of the synchronously operating system”. Entities like State Utilities and Inter-State Generating Stations satisfy the criteria laid down in the definition of “control area” in the Grid Code for being designated as control area, whereas bulk consumers cannot contribute to frequency regulations and do not satisfy the said criteria.

(b) Section 28(3)(a) of the Electricity Act, 2003 (2003 Act) provides that the “Regional Load Despatch Centre shall be responsible for optimum scheduling and dispatch of electricity within the region, in accordance with the contracts entered into with the licensees or the generating companies operating in the region”. A bulk consumer is neither a licensee nor a generating company, and accordingly, the Grid Code does not deliberately deal with the jurisdiction issue of bulk consumers.

(c) Though the Approved Procedure issued under the Central Electricity Regulatory Commission (Grant of Connectivity, Long-term access, Medium Term Open access and related matters) Regulations, 2009 (Connectivity Regulations) allows bulk consumers with a load of 100 MW and above to get connected directly to ISTS by applying for connectivity to CTU, mere connectivity to ISTS does not automatically entitle an entity to come under control area jurisdiction of RLDC.

(d) As per Section 42 of the 2003 Act, the State Commissions have been mandated to introduce open access for consumers. Therefore, unlike a generator where either the Central Commission or a State Commission can have jurisdiction, an open access consumer always remains within the jurisdiction of a State Commission which is also in line with proviso to Section 86(1)(a) of the 2003 Act.

(e) "Area of supply" has been defined in the 2003 Act to mean "the area within which a distribution licensee is authorized by his licence to supply electricity". Further a "consumer" has been defined as "any person who is supplied with electricity for his own use by a licensee or the Government or by any other person engaged in the business of supplying electricity to the public under this Act or any other law for the time being in force……..." Moreover, as per the provisions of the 2003 Act and Electricity Rules, the petitioner as a bulk consumer is required to pay cross subsidy charge determined by the State Commission irrespective of the fact that it is connected to ISTS.

(f) WRLDC has refuted the submission of the petitioner that ESIL will be fully isolated from the State grid and has submitted that even if a bulk consumer is connected only to the ISTS, it can remain within the jurisdiction of the concerned State. Withdrawal by the bulk consumer at the ISTS connectivity point can be considered as drawl of the State concerned by the RLDC and RPC and the State in turn would carry out scheduling and energy accounting of such bulk consumer entities. A number of generating stations connected to ISTS have drawn their start-up power from ISTS as HT consumers of the respective State.

(g) The petitioner is not a beneficiary under the Central Electricity Regulatory Commission (Unscheduled Interchange Charges and related matters) Regulations, 2009 (UI Regulations). Clause 2(1)(d) of the UI Regulations defines a 'beneficiary' as a 'person purchasing electricity generated from a generating station' and clause 2 (1) (f) of the said Regulations defines 'generating stations' to mean a generating station whose tariff is determined by the Commission under Clause 62(1)(a) of the 2003 Act and would apply to supply of electricity to a distribution licensee. Since the petitioner is not a distribution licensee but a consumer, it does not fall within the definition of beneficiary under clause 2(1)(d) of the UI Regulations.

(h) The fact that demand of ESIL is ranging from 750 MW to 1050 MW which is greater than some of the regional entities does not make the petitioner a regional entity. For becoming a regional entity under clause 2 (1)(kkk) of the Grid Code, the petitioner has to fall within the control area of RLDC and its accounting and metering of energy needs to be done by RLDC. The petitioner cannot be considered as a regional entity as it does not fall within the jurisdiction of WRLDC nor WRLDC carries out the metering and energy accounting of the petitioner. Consequently, the petitioner is outside the purview of clauses 6.4.(22) and 6.4.(25) of the Grid Code.

(i) The petitioner has erroneously relied upon the provisions of Part 7 of the Grid Code for exercise of its inherent power by the Commission as no special or compelling circumstances arise for exercise of such power.

(j) Apart from Control area Jurisdiction, WRLDC has also flagged some generic issues like mixed entities, fragmented control area, universal service obligations, merchant loads etc. for consideration by the Commission before deciding the issue of control area jurisdiction since the decision in the present case has the possibility of a large number of bulk consumers seeking connectivity to the ISTS.

6 The petitioner in its rejoinder dated 11.1.2013 has submitted as under:

(a) ESIL has undertaken expansion project and after the expansion of steel plant to 10 Million tons per annum capacity, the power requirement of ESIL load requirement will be 750 MW Avg./6570 MU's/Year against which connectivity through State Transmission Utility (STU) can be availed to a maximum of 300 MW due to Transmission Line constraints. Hence, ESIL has no option but to disconnect from STU and connect to ISTS on a radial mode. Further, ESIL has been granted Long Term Open Access for 700 MW by CTU on the conditions that ESIL will have to be connected to CTU system on a radially isolated mode.

(b) The petitioner has refuted the contention of WRLDC that ESIL cannot contribute to frequency regulation. It has been submitted that the definition of “control area” in the Grid Code refers to an entity having "generation and/or load" and which can contribute to "frequency regulations" and control area can comprise of an entity either having generation or load and it is not necessary for the said entity to have both generation and load. ESIL currently has a captive generation capacity of 505 MW and is planning to enhance the same further by 270 MW to 775 MW. Therefore, unlike an inter-State Generating System (ISGS) which has

only generation, ESIL has both generation as well as bulk load of 6x100MW Arc furnaces to effectively contribute to frequency regulation of synchronously operating system. The petitioner has argued that if an ISGS, which has only generation capacity, can be a part of control area, there is no reason why ESIL cannot be a part of control area.

(c) Under Section 29(1) of the 2003 Act, RLDCs are statutorily empowered to issue directions and exercise supervision and control for ensuring stability of grid operation and for achieving maximum economy and efficiency in the operation of the power system in the region under its control. Section 29(2) provides that every licensee, generating company, generating station, sub-station and any other person connected with the operation of the power system shall comply with the directions of RLDC. Under section 29(6), if the generating company or licensee or any other person fails to comply with the directions of RLDC, it shall be liable for penalty. In the light of the above provisions, the petitioner has submitted that ESIL would be covered under “any other person connected with the operation of the power system” and RLDC is sufficiently empowered to address any grid indiscipline and maintain safety of the system.

(d) Regulation 5.4.2 of the Grid Code dealing with the issue of demand management provides that a bulk consumer being a ‘user’ as defined in Regulation 2(ggg) of the Grid Code is obliged to formulate contingency procedure and make arrangements that will enable demand disconnection to take place. ESIL has a bulk load of six Ultra High Power Electric Arc Furnaces (6x100 MW), a 505 MW gas based Combined Cycle Power Plant and 2x135 MW upcoming multi

fuel fired generating stations. In the event of emergency when frequency regulation is required, ESIL can reduce load and increase generation to contribute to frequency regulation. The petitioner has submitted that from an average load of 500-600 MW, ESIL can reduce its load to 200-300 MW within 15 minutes of receiving instructions, thereby contributing to reduction of 300-400 MW of load. The petitioner has further submitted that ESIL has established a Central Command Centre at Essar House for monitoring and controlling the steel facilities. The Central Command Centre has a Dedicated Energy Management System (Integrated Object Network) which is capable of (i) accurate metering of the entire complex (generation and load); (ii) dependable demand monitoring and control; (iii) fault event recoding and trending; (iv) time synchronized data availability; (v) report generation; and (vi) load shedding. The petitioner has submitted that ESIL fulfils the conditions for being part of a control area under Regulation 2(r) of the Grid Code.

(e) Section 28(3)(a) of the Act provides that RLDC shall "be responsible for optimum scheduling and despatch of electricity within a State, in accordance with the contracts entered into with the licensees or the generating companies operating in that State;". RLDC is responsible for scheduling of power from an ISGS irrespective of the person to whom the power is being supplied i.e., whether to a bulk consumer, a trading licensee or a distribution licensee. The petitioner has entered into a contract for supply of power with a generating company i.e. EPMPL which is an ISGS and therefore, scheduling of power from EPMPL for supply to the petitioner will be done by WRLDC.

(f) The petitioner has also refuted the generic points of concern raised by WRLDC.

Replies of other Respondents

7. Gujarat State Load Despatch Centre (Gujarat SLDC) in its affidavit dated 15.1.2013 has submitted as under:

(a) ESIL should completely isolate from the State network not only the ESIL facilities but also the existing bus bar connecting ESIL facilities to Essar Power 515 MW generating station. The entire 515 MW generating station will thereafter be connected to the Ichhapur-Sachin 220 kV transmission network of GETCO and scheduling of power generated at the 515 MW generating station falling to the share of ESIL or Essar Group of Companies shall be as per the transmission capacity available on the GETCO network with the existing priority of GUVNL and the distribution companies in the State for the long term open access to the extent of their share in the 515 MW power plant.

(b) As a result of the isolation of ESIL completely from the State Grid, ESIL will not be under the control of SLDC Gujarat in regard to any of the aspects of scheduling, dispatch, drawl of electricity, measures to be taken for in case of high frequency or low frequency, under drawl or over drawl, backing down or non-supply of electricity during emergency and implementation of UI Mechanism, energy accounting and settlement of Ul and other charges. All these aspects will have to be controlled by WRLDC alone. ESIL will have to be treated as a regional entity independent of the State of Gujarat and in the same manner as in other

State entities like Goa, Daman, Maharashtra, Madhya Pradesh etc. SLDC of Gujarat will have no responsibility whatsoever in dealing with ESIL or any aspect of variation in the drawl of power by ESIL should have any implication whatsoever to the dealing of the State of Gujarat with the regional entities.

(c) After transfer of control area to WRLDC, ESIL cannot be called an embedded customer of the State of Gujarat. For all intents and purposes, ESIL is completely a separate bulk consumer to be dealt as an independent State entity and not as a part of Gujarat. In other words, ESIL should be deemed as an identified independent State for the purpose of scheduling, dispatch, energy accounting, control of frequency etc. Having isolated from the Gujarat Network, there should not be any implication of ESIL drawal of power on Gujarat or Gujarat entities.

(d) Section 28(3) of the 2003 Act cannot be interpreted in a manner that WRLDC has nothing to do with the bulk consumers. The provisions of section 28(3)(a) regarding “optimum scheduling and dispatch of electricity within the region in accordance with the contracts entered into with the licensees or generating companies within the region” does not mean that the contract has to be between two licensees or between a generating company and a licensee. Section 28(3)(a) requires that one of the contracting parties should be a licensee or a generating company and the other contracted party could be a bulk consumer. In the present case, the contract entered into by ESIL as a bulk consumer with the generating companies, namely, Essar Power limited or Essar Power Madhya Pradesh Limited are duly covered under the scope of section 28(3)(a) of 2003 Act.

(e) Regulation 6.4 of the Grid Code provides for the demarcation of responsibility between RLDC and SLDC. The demarcation of responsibilities has to be seen with reference to the generating station and not with reference to the consuming unit. The generating station connected to STU Network will be generally under the control of SLDC. The generating station connected only to ISTS will be under the control of WRLDC. In the present case, the 515 MW generating station of Essar Power will undoubtedly be under the control of SLDC being connected to the STU Network. The scheduling of Essar Power Madhya Pradesh Limited may be done by WRLDC being connected to the CTU Network. The demarcation of responsibility under Clause 6.4 cannot be interpreted to mean that RLDC will have no control even in regard to the bulk consumer who is isolated from the State Network and is connected only to the Inter-State network of the CTU.

(f) Even assuming that there is absence of a proper procedure to deal with an entity within the geographical area of the State connected directly to the Inter-State Transmission Network and isolated from the State Network, the same cannot be a ground to hold that WRLDC will not exercise control. Regulation 6.4 of the Grid Code which deals with the demarcation of responsibilities has to be read subject to Sections 28 and 32 etc of the 2003 Act. It has been submitted that absence of regulations does not take away the power of an authority to exercise control. In this connection, reliance has been placed on the judgements of the Hon'ble supreme Court in U.P. State Electricity board, Lucknow v. City Board, mussoorie {(1985) 2 SCC 16}, the Mysore State Road Transportation Corporation V.

Gopinath Gundachar {AIR 1968 SC 464} and Surinder singh V. Central Government & Others {AIR 1986 SC 2166}.

8. Gujarat Urja Vikas Nigam Limited (GUVNL) in its affidavit dated 18.1.2013 and supplementary affidavit dated 1.4.2013 has submitted as under:

(a) GUVNL is the bulk purchaser of electricity through the PPA from Essar Power Ltd. from its 515 MW power station. The contracted capacity of GUVNL under the PPA is 300 MW and the balance 215 MW is supplied by Essar Power Ltd. to its group companies. Accordingly, the capacity of 515 MW has been apportioned between GUVNL and Essar group in the ratio of 58% and 42%. GUVNL has a long term open access for evacuation of 300 MW power through the existing transmission network of GETCO connected to the Essar power plant in between Ichhapore and Sachin substations. GUVNL's priority should not be affected in any manner by reason of the scheme now proposed by the petitioner whereby the entire power of 215 MW will have to be evacuated through Ichhapore-Sachin network of GETCO. Whenever a generating station or any of its units is required to be operated at the technical minimum capacity of generation, such minimum capacity shall be allocated to GUVNL and the petitioner in the proportion of 58:42.

(b) Before implementing the scheme as proposed by the petitioner, Essar Power and its group companies namely, ESIL and Bhander Power Ltd. should confirm that the transfer of load control area jurisdiction shall not adversely affect GUVNL rights under the PPA. Moreover, this company should also pay all the amounts outstanding to GUVNL. In addition, the petitioner should be required to

pay the cross subsidy surcharge and other charges related to DGVCL for consumption of electricity sourced from Essar Power and EPMPL as per the applicable provisions of the 2003 Act.

(c) Appropriate arrangement should be finalized between ESIL and WRLDC/WRPC to ensure that any dues from ESIL is recoverable from the UI payment receivable by ESIL from WR UI pool account. WRLDC shall also regulate the power drawal by ESIL akin to the regulation of the drawal by beneficiary State from ISGS in case of payment default by ESIL to GUVNL.

(d) ESIL may be considered as a separate entity for the purpose of scheduling of power, UI mechanism and energy accounting consequent to the facilities of ESIL being connected through a radial line to the CTU network in Jhanor and with no other connection either to the State Grid of Gujarat or to the Distribution system in the area of DGVCL. This is imperative because in case the drawal by ESIL from the CTU network is treated as drawal by Gujarat, any overdrawal by ESIL shall get reflected under the composite drawal of Gujarat and over-drawal beyond prescribed limits by ESIL shall be treated as violation of limits of overdrawal volume by Gujarat under the UI Regulations. Similar is the case with any under-drawal by ESIL and likelihood of exceeding under drawal limits by Gujarat with related consequence. It has been submitted that the connected load of ESIL being a steel plant having characteristics of huge variations in drawal including spike drawal, Gujarat cannot be considered as accountable for such variations in drawal by the petitioner and for any consequential technical/financial/commercial implications.

9. Dakshin Gujarat Vij Company Limited (DGVCL) in its affidavits dated 17.1.2013 and 15.4.2013 has submitted as under:

(a) DGVCL is one of the distribution licensees in the State of Gujarat and the petitioner is located in the area of operation of DGVCL with a contracted capacity of 44.5 MVA with DGVCL. There is an outstanding due of Rs.2118.44 crore out of the total amount of Rs.2331 crore raised by DGVCL on the petitioner as penalty for the violation of the condition No.22 of the MoM dated 1.2.2010 which needs to be paid by the petitioner before seeking surrender of contract demand DGVCL and connection to the CTU network for taking supply from third parties.

(b) The petitioner is required to install an electricity meter at 400 kV sub-station at Jhanor, i.e. the sending end of the CTU inter-connection network of the radial line in accordance with applicable rules. The petitioner being in the area of operation of DGVCL, is also required to pay cross subsidy surcharge to DGVCL for the supply taken by the petitioner from the third parties as recorded at the meter at the CTU inter-connection network.

(c) There is no proceedings regarding penalty pending before the Appellate Tribunal for Electricity and the only proceeding is pending before Chief Electrical Inspector. It has been submitted that unless all claims raised by DGVCL are settled by ESIL, there is no question of giving No Objection by DGVCL. As regards the installation of meters, it has been submitted that since Essar Power Transmission's system will intervene between the CTU system and ESIL's system,

meters can be installed at the 220 kV side of the sub-station for the purpose of measuring the cross subsidy and calculation of surcharge thereon.

10. The petitioner in its rejoinder has submitted as under:

(a) In reply to DGVCL's submission regarding penalty, it has been clarified that the proceeding is pending before the Appellate Authority i.e. Chief Electrical Inspector. The petitioner has given an undertaking to abide by the final outcome of the legal proceedings vis-à-vis the disputed claim of DGVCL in accordance with law.

(b) As regards the metering arrangement, it has been submitted that connectivity granted by PGCIL to ESIL is at Hazira end and therefore, it would be preferable to conduct energy recording for cross subsidy surcharge at gantry of 220 kV ESIL sub-station after ICT and connecting lines of 220 kV are installed. Since the power received at the gantry will include captive power as well as power sourced from bilateral and/or IEX/PTC, the cross subsidy can be calculated on net off basis.

(c) As regards the concern of GUVNL regarding priority of evacuation of power from Essar Power Ltd (EPOL), it has been submitted that ESIL will disconnect from STU at the bus bar and will not have any direct connectivity with EPOL. If ESIL wants to take power from EPOL, it will seek open access from WRLDC and it will be the prerogative of respective Load Despatch Centre to priorities power either to GETCO or to ESIL as the case may be at the time of open access application.

(d) The petitioner has confirmed that transfer of load control area jurisdiction shall in no way adversely affect GUVNL's right under its PPA with EPOL. The petitioner has further confirmed to pay cross subsidy surcharge and other related charges to the distribution companies in terms of the applicable rules and regulations. It has been submitted that any disputed claim by GUVNL on ESIL shall be subject to the grievance redressal mechanisms under the applicable law. If the prayer of the petitioner to be treated as a regional entity is accepted, the petitioner shall be subject to the rules and regulations for settlement of disputes between regional entities.

Submissions during the hearing

11. The matter was heard at length on 17.1.2013. Learned counsel for the petitioner, learned senior Counsel for WRLDC and learned counsel for Gujarat SLDC and GUVNL and DGVCL reiterated their position as given in the written pleadings which are not repeated for the sake of brevity. In brief, learned counsel for the petitioner submitted that the petitioner qualifies on all the parameters to be designated as a user, a bulk consumer and a regional entity and falls within the control area jurisdiction of RLDC. Learned counsel submitted that in Regulation 6.4.2 of the Grid Code, the words used are "generation and/or load" and therefore, load is a determining factor for deciding control area jurisdiction of RLDC. Learned counsel further submitted that a bulk consumer can come under the control area jurisdiction of RLDC in terms of the provisions of section 28(3)(a) of the 2003 Act which requires RLDC to undertake scheduling and dispatch in accordance with the contract with the licensees or generating companies operating within the region. Since the petitioner has a contract

with EPMPL for supply of power, it comes under the jurisdiction of RLDC. Even otherwise, the Commission has plenary power under section 79(1)(c) of the Act to regulate inter-State transmission of electricity and has the discretion under Regulation 6.4.3 of the Grid Code to treat the petitioner as a regional entity so as to be under the control area jurisdiction of WRLDC.

Learned counsel for Gujarat SLDC submitted that after shifting of connectivity of the petitioner from SLDC Gujarat to WRLDC, the petitioner shall cease to be an embedded customer of Gujarat for all intent and purposes and it will be treated as a regional entity independent of the State of Gujarat in the matter of scheduling, dispatch, energy accounting, UI mechanisms, backing down instructions etc. Learned counsel reiterated that the petitioner and its group companies namely, Essar Power Limited and Bhander Power Limited would be required to clear the outstanding dues before no objection is issued by DGVCL.

Learned senior counsel for WRLDC submitted that since a bulk consumer is neither a generating station nor a licensee, its power cannot be scheduled by RLDC in terms of section 28(3)(a) of the 2003 Act. Learned senior counsel further submitted that the petitioner is not a regional entity as its metering and energy accounting is not done at the regional level and it is not within the control area jurisdiction of WRLDC. Since the control area under the Grid Code has to contribute to frequency regulations of the synchronously operating system, it will be difficult for a bulk consumer to do, particularly so in case of the petitioner where load is of fluctuating nature. The situation will get aggravated if the generating unit from which power is drawn by the petitioner trips and schedule is revised as per Regulation 6.5.19 of the Grid code.

CEO, POSOCO submitted that there is lack of clarity regarding the connectivity of bulk consumers to the ISTS. Certain generic issues including control area jurisdiction of the load has been flagged by WRLDC which need to be addressed by the Commission for handling similar situations in future by the RLDCs. CEO POSOCO further submitted that if the request of the petitioner is agreed to, it will open the floodgate for hundreds of consumers to seek connectivity to ISTS and grid operation will be difficult.

12. We had directed CTU and CEA to file their considered views in the matter. CTU vide its affidavit dated 13.3.2013 has submitted its views on the control area of the petitioner in the following terms:

> "(iv) Regarding the control area of Essar Steel, we agree with the views submitted by POSOCO that if a large no. of such consumers are connected to ISTS and all of them are scheduled by RLDC, it would be a very complex exercise to regulate their variation w.r.t demand, unscheduled interchange and frequency regulations etc. SLDC has various generation plants and loads under its jurisdiction. Thus, it is in a better position to regulate the variations in the demand of a consumer as compared to RLDC."

CEA vide its letter dated 17.4.2013 has conveyed its views on the issue of control area jurisdiction over the petitioner as under:

> "(a) It has been noted that the CERC Regulations on Connectivity specifically **allow** connectivity of bulk consumers of 100 MW and above to the Inter State Transmission System.
>
> (b) At various places in the Indian Electricity Grid Code (IEGC) (Clauses 5.4.2, 6.4.6, 6.4.7) also, it is mentioned that bulk consumers can be controlled by the respective RLDC for the purpose of grid security. In some places the word 'User' has been used, which also includes Bulk Consumer, in accordance with the definitions in the IEGC.
>
> (c) There is already an example of a bulk consumer connected directly to the ISTS , i.e. Northern Railways in the Northern Region, with a load of only 100 MW, **a** Regional Entity which is scheduled by NRLDC.

(d) The CEA is of the view that by virtue of ESSAR Steel being connected directly to the ISTS only, its scheduling, metering and energy accounting would necessarily have to be done by the RLDC."

13. As one of the members of the Commission demitted office before issue of the order in this petition, the matter was listed for hearing on 16.5.2013. Learned counsel for the petitioner and Gujarat SLDC and the representative of POSOCO submitted that since the parties have already made their submissions, there is no requirement for further submissions and the Commission may issue the order based on the written pleadings and the oral submissions of the parties during the hearing on 17.1.2013. Accordingly we proceed to dispose of the matter through the present order.

Analysis and Decision

14. We have considered the pleadings and submission of the parties. The petitioner has approached the Commission by way of the present petition seeking transfer of load control area jurisdiction over ESIL from SLDC Gujarat to WRLDC, for grant of the status of regional entity to ESIL for the purpose of scheduling of power and UI accounting, and for guidelines for addressing such situations in future. CEO, POSOCO and WRLDC have expressed their reservation and apprehension about the implication of the transfer of control area from SLDC to WRLDC and have sought clarity in the matter. Gujarat SLDC, GUVNL and DGVCL have as such no objections to the transfer of the control area but have raised certain commercial and operational issues to be addressed. After considering the facts of the case and the pleadings and submissions of the parties, the following issues arise for our consideration:

(a) What are the provisions in the Act, the Electricity Rules and the Regulations of the Commission with regard to the control area jurisdiction of RLDC vis-à-vis SLDC?

(b) Whether the petitioner shall be under the jurisdiction of RLDC or SLDC?

(c) The generic issues raised by POSOCO/WRLDC with regard to the transfer of control area jurisdiction of load under RLDC.

(d) The commercial and operational issues raised by Gujarat SLDC, GUVNL and DGVCL.

(e) Relief to be granted to the petitioner?

These issues have been dealt with in the succeeding paragraphs.

A. Legal Provisions with regard to control area jurisdiction of RLDC and SLDC

15. Section 25 of the 2003 Act provides that the Central Government may make a region-wise demarcation of the country for the efficient, economical and integrated transmission and supply of electricity and in particular to facilitate voluntary inter-connections and coordination of facilities for the inter-State, regional and inter regional generation and transmission of electricity. Section 26 of the 2003 Act provides that the Central Government may establish a centre at the National level for optimum scheduling and despatch electricity among the Regional Load Despatch Centres. Section 27 of the 2003 Act provides that the Central Government shall establish a centre for each region to be known as the Regional Load Despatch Centre having territorial jurisdiction as determined by the Central Government in accordance with Section 25 for the purpose of

exercising the powers and discharge of functions under this part., Section 28(3) of the 2003 Act provides for the functions of the Regional Load Despatch Centre as under:

> "(3) The Regional Load Despatch Centre shall –
>
> (a) be responsible for optimum scheduling and despatch of electricity within the region, in accordance with the contracts entered into with the licensees or the generating companies operating in the region;
>
> (b) monitor grid operations;
>
> (c) keep accounts of quantity of electricity transmitted through the regional grid;
>
> (d) exercise supervision and control over the inter-State transmission system; and
>
> (e) be responsible for carrying out real time operations for grid control and despatch of electricity within the region through secure and economic operation of the regional grid in accordance with the Grid Standards and the Grid Code."

16. It is thus clear from the above provisions of the 2003 Act that the country has been demarcated into five regions for the purpose of efficient, economical and integrated transmission and supply of electricity and each region has been placed under a Regional Load Despatch Centre for the purpose of ensuring integrated operation of the power system in the concerned region. The functions of the RLDCs are enumerated in Section 28(3) of the Act, which has been extracted above. As per Section 28(3) of 2003 Act, RLDC is responsible for optimum scheduling and despatch of electricity in accordance with the contracts entered into with the licensees or the generating companies operating in the region. WRLDC has argued that for the purpose

of Section 28(3), the entity must be either a licensee or a generating station and since ESIL is neither a licensee nor a generating station, its scheduling and despatch cannot be undertaken by WRLDC. The petitioner in its rejoinder has submitted that WRLDC is reading the provision "contracts entered with the licensees or generating company" as "contracts entered with the licensees and generating company" which is not correct. Gujarat SLDC in its reply has submitted that the provision in section 28(3)(a) does not mean that the contract has to be between two licensees or a generating company and a licensee. It only requires that one of the contracting parties must be either a licensee or a generating company and the other party could be a bulk consumer.

17. We have considered the submission of the parties. In our view, a plain and literal meaning of section 28(3)(a) would reveal that one of the parties to the contract may either be a generating company or a licensee and it does not preclude the bulk consumer to be the other party to the contract. If the scheduling functions of RLDCs under section 28(3)(a) is confined to the generating company or licensee only, then the provisions regarding non-discriminatory open access to consumers by CTU under section 38(2)(d)(ii) and inter-State transmission licensee under section 40(2)(c)(ii) would become redundant. Moreover, Section 29(2) of the Act requires every licensee, generating company, generating station or sub-station and any other person connected with the operation of the power system to comply with the directions of RLDC. Further section 29(6) provides for imposition of penalty by RLDC on any licensee or generating company or "on any other person connected with the operation of the power system" for violation of directions of RLDC. The words "any other person connected with the

operation of the power system" occurring in both sub-sections would necessarily include a consumer or bulk consumer in the absence of anything to the contrary. Unless a consumer including a bulk consumer is scheduled by RLDC, no instruction can be issued under section 29(2) to bulk consumer by RLDC for compliance of its directions nor any penalty can be imposed under section 29(6) of the 2003 Act. In our view, a composite reading of section 28 and 29 of the 2003 Act leaves no doubt in our mind that RLDC is vested with the functions to carry out scheduling and dispatch of electricity in respect of bulk consumer in accordance with its contract with either a generating company or a licensee.

18. RLDC has further argued that as per the provisions of the 2003 Act, consumers are under the jurisdiction of the State Commission in view of provisions of section 42 read with proviso to section 86(1)(a) of the Act and therefore, the scheduling and energy accounting should be carried out by SLDC. The petitioner is a consumer located in the area of supply of DGVCL which is a distribution licensee in the State of Gujarat. Section 42 (1) of the Act provides as under:

> "42. (1) It shall be the duty of a distribution licensee to develop and maintain an efficient, co-ordinated and economical distribution system in his area of supply and to supply electricity in accordance with the provisions contained in this Act."

The term 'area of supply' has been defined in section 2(3) of the 2003 Act as under:

> (3) "area of supply" means the area within which a distribution licensee is authorised by his licence to supply electricity;"

Further, the term 'consumer' has been defined in the 2003 Act as under:

> "(15) "consumer" means any person who is supplied with electricity for his own use by a licensee or the Government or by any other person engaged in the business of supplying electricity to the public under this Act or any other law for the time being in force and

includes any person whose premises are for the time being connected for the purpose of receiving electricity with the works of a licensee, the Government or such other person, as the case may be;"

.

A 'consumer' has been defined as any person who is supplied with electricity for his own use by a licensee or the Government or any other person engaged in supply of electricity under the Act. Under section 10(2) of the 2003 Act, a generating company may supply electricity to a consumer. Section 10(2) is extracted as under:

"(2) A generating company may supply electricity to any licensee in accordance with this Act and the rules and regulations made thereunder and may, subject to the regulations made under sub-section (2) of section 42, supply electricity to any consumer."

From the above, it emerges that a consumer can take electricity from the distribution licensee within whose area of supply it is located or it may take supply from any other person engaged in business of supplying electricity under the Act. A generating company is also engaged in the business of supplying electricity under the Act to a licensee or any consumer. However, supply to any consumer is subject to the regulations by the State Commission under section 42(2) of the 2003 Act. Section 42(4) of the 2003 Act specifically deals with the permission of the State Commission to a consumer to receive supply of electricity from any person other than the distribution licensee of his area of supply. Section 42(4) of the 2003 Act is extracted as under:

(4) Where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the distribution licensee of his area of supply, such consumer shall be liable to pay an additional surcharge on the charges of wheeling, as may be specified by the State Commission, to meet the fixed cost of such distribution licensee arising out of his obligation to supply."

19. From the above provisions of the 2003 Act, it emerges that the distribution licensee has a duty to supply electricity to any person who is located within his area of supply.

However, a consumer can take supply from any other person including a generator on payment of wheeling charges and an additional surcharge as determined by the State Commission. The next question arises whether a consumer can take supply through a transmission licensee other than the network of the distribution licensee in whose area of supply it is located. In the present case, the petitioner is directly connected to CTU network and proposes to take supply of electricity from a generating station without using the network of the distribution licensee. We refer to the definition of the word 'consumer' once again. Consumer also "includes a person whose premises are for the time being **connected with the works of a licensee**……." Further, 'works' has been defined in the Act to "include electric line, and any building, plant, machinery, apparatus and any other thing of whatever description required to **transmit, distribute** or supply electricity to the public and to carry into effect the objects of a licence or sanction granted under this Act or any other law for the time being in force." The definition of the word 'consumer' read with the definition of 'works' clearly establishes that aconsumer could be connected to the works of a transmission licensee as well as a distribution licensee. Section 38 (2)(d) of the Act provides for the following:

> (2) The functions of the Central Transmission Utility shall be –
> **********
> (d) to provide non-discriminatory open access to its transmission system for use by-
> (i) any licensee or generating company on payment of the transmission charges; or
> (ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the Central Commission:
> Provided that such surcharge shall be utilised for the purpose of meeting the requirement of current level cross-subsidy:
> Provided further that such surcharge and cross subsidies shall be progressively reduced 1in the manner as may be specified by the Central Commission:
> Provided also that the manner of payment and utilisation of the surcharge shall be specified by the Central Commission:

With regard to the surcharge under section 38, the Electricity Rules provides as under:

> **"6. The surcharge under section 38 :** The surcharge on transmission charges under section 38, the manner of progressive reduction of such surcharge and the manner of payment and utilization of such surcharge to be specified by the Central Commission under sub-clause (ii) of clause (d) of sub-section (2) of section 38 shall be in accordance with surcharge on the charges for wheeling, the manner of progressive reduction of such surcharge and the manner of payment and utilization of such surcharge as may be specified by the Appropriate Commission of the State in which the consumer is located under sub-section (2) of section 42 of the Act."

From the above provision it emerges that the CTU network can carry the power to a consumer subject to the open access provided by the State Commission under section 42 of the Act and subject to the payment of surcharge as determined by the concerned State Commission in whose area of supply the consumer is located. Similar provision also exists in case of transmission licensee under section 40 of the Act. There is therefore no embargo under the Act and the Electricity Rules which prevents a consumer to take direct supply of electricity from the network of the CTU or from any inter-State transmission licensee. That being the case, there is absolutely no basis to say that a consumer is bound to be connected to the system of a distribution licensee for taking supply directly from a generating company by utilizing the ISTS. When a consumer is directly connected to the ISTS, its scheduling and energy accounting has to be done by the concerned RLDC under section 28(3)(a) of the 2003 Act and such consumer is liable to comply with the directions of the RLDC under section 28(3) of the Act and pay the surcharge specified by the State Commission under section 42 of the 2003 Act.

20. WRLDC has also relied upon proviso to section 86(1)(a) of the Act to contend that a consumer lies within the jurisdiction of the State Commission. The said proviso is extracted as under:

> 86. (1) The State Commission shall discharge the following functions, namely: -
> (a) determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State:
>
> Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;"

It is clear from the above provision that the tariff for retail supply of electricity to a consumer shall not be applicable in a case where the consumer has been granted open access by the State Commission under section 42 of the Act and the consumer shall be liable to pay the surcharge as determined by the State Commission. Therefore, this provision does not support the contention of WRLDC.

21. Next we consider the provisions in the regulations of the Commission, particularly the Connectivity Regulations and the Grid Code with regard to the jurisdiction over bulk consumers. In the Connectivity Regulations, the term "bulk consumer" has been defined in Regulation 2(1)(c) as under:

> "(c) Bulk consumer means in respect of connectivity, any consumer who intends to avail supply of a minimum load of 100 MW from the inter-State transmission system."

The bulk consumer has also been recognised as an applicant for connectivity, long term access and medium term access under Regulation 2(1)(b) of the Connectivity Regulations. The petitioner claims to be a 'bulk consumer', 'a regional entity' and a 'user' under the Grid Code. These terms have been defined in Regulation 2 of the Grid Code as under:

"(i) "Bulk Consumer" means any Consumer who avails supply at voltage of 33 kV or above;"

"(kkk) "Regional Entity" means such persons who are in the RLDC control area and whose metering and energy accounting is done at the regional level;"

"(gggg) "User" means a person such as a Generating Company including Captive Generating Plant or Transmission Licensee (other than the Central Transmission Utility and State Transmission utility) or Distribution Licensee or Bulk Consumer, whose electrical plant is connected to the ISTS at a voltage level 33kV and above;"

The petitioner fulfils the conditions of a bulk consumer and a user as its steel plant is connected to ISTS at a voltage level of more than 33 kV. The petitioner has prayed to be considered as a regional entity as it falls within the control area of RLDC after being disconnected from the State system.

22. "Control Area" has been defined in the Grid Code as under:

"Control Area" means an electrical system bounded by interconnections (tie lines), metering and telemetry which controls its generation and/or load to maintain its interchange schedule with other control areas whenever required to do so and contributes to frequency regulation of the synchronously operating system;"

In the definition of control area, there is reference to "generation and/or load". Thus an entity either having 'generation' or 'load' or 'both generation and load' can be considered as a control area. Regulation 6.4 of the Grid Code provides for demarcation of control area jurisdiction between RLDC and SLDC. The said Regulation is extracted as under:

"6.4 Demarcation of responsibilities:

1. The national interconnected grid is divided into control areas, like Regional ISTS, States, DVC, etc. where the load dispatch centre or system operator of the respective control area controls its generation and/or load to maintain its interchange schedule with other control areas whenever required to do so and contributes to frequency regulation of the synchronously operating system. The Load Despatch Centre of a control area therefore is responsible for coordinating

the scheduling of a generating station, within the control area, real-time monitoring of the station's operation, checking that there is no gaming (gaming is an intentional mis-declaration of a parameter related to commercial mechanism in vogue, in order to make an undue commercial gain) in its availability declaration, or in any other way revision of availability declaration and injection schedule, switching instructions, metering and energy accounting, issuance of UI accounts within the control area, collections/disbursement of UI payments, outage planning, etc. The following clause gives the criteria for demarcation of control area jurisdiction.

2. The following generating stations shall come under the respective Regional ISTS control area and hence the respective RLDC shall coordinate the scheduling of the following generating stations:

a) Central Generating Stations (excluding stations where full Share is allocated to host state),

b) Ultra-Mega power projects

(c) In other cases, the control area shall be decided on the following criteria:
(i) If a generating station is connected only to the ISTS, RLDC shall coordinate the scheduling, except for Central Generating Stations where full Share is allocated to one State.

(ii) If a generating station is connected only to the State transmission network, the SLDC shall coordinate scheduling, except for the case as at (a) above.

(iii) If a generating station is connected both to ISTS and the State network, scheduling and other functions performed by the system operator of a control area will be done by SLDC,, only .if state has more than 50% Share of power ,The role of concerned RLDC, in such a case, shall be limited to consideration of the schedule for inter state exchange of power on account of this ISGS while determining the net drawal schedules of the respective states. If the State has a Share of 50% or less, the scheduling and other functions shall be performed by RLDC.

(iv) In case commissioning of a plant is done in stages the decision regarding scheduling and other functions performed by the system operator of a control area would be taken on the basis of above criteria depending on generating capacity put into commercial operation at that point of time. Therefore it could happen that the plant may be in one control area (i.e. SLDC) at one point of time and another control area (i.e. RLDC) at another point of time. The switch over of control area would be done expeditiously after the change, w.e.f. the next billing period.

3. There may be exceptions with respect to above provisions, for reasons of operational expediency, subject to approval of CERC. Irrespective of the control area the jurisdiction, if a generating station is connected both to the ISTS and the

STU, the load dispatch centre of the control area under whose jurisdiction the generating station falls, shall take into account grid security implication in the control area of the other load dispatch centre

4. For those generating station supplying power to any state other than host state and whose scheduling is not coordinated by RLDC, the role of the concerned RLDC shall be limited to consideration of the schedule for inter-State exchange of power on account of this generating station while determining the net drawal schedules of the respective control area.

5. The Regional grids shall be operated as power pools with decentralized scheduling and despatch, in which the States shall have operational autonomy, and SLDCs shall have the total responsibility for

(i) scheduling/despatching their own generation (including generation of their embedded licensees),

(ii) regulating the demand of its control area,

(iii) scheduling their drawal from the ISGS (within their share in the respective plant's expected capability),

(iv) permitting long term access, medium term and short term open access transactions for embedded generators/consumers, in accordance with the contracts and

(v) regulating the net drawal of their control area from the regional grid in accordance with the respective regulations of the CERC."

23. It is clearly evident from Regulation 6.4.1 that the load dispatch centre or system operator of the respective control area controls its generation and/or load to maintain its interchange schedule with other control areas whenever required to do so and contributes to frequency regulation of the synchronously operating system. The expression "generation and/or load" indicates that load despatch centre, whether RLDC or SLDC, shall have the control over the 'generation' or 'load' or 'generation and load' within its control area. No exception has been made in case of load in so far as RLDC is concerned. Regulation 6.4.2 deals with demarcation of control area jurisdiction between

the RLDC and SLDCs in respect of the generating stations. Regulation 6.4.3 deals with contingency not covered under Regulation 6.4.2 and Regulation 6.4.4 deals with special cases like the merchant plants who sell power outside the State but whose scheduling is not controlled by RLDCs. Regulation 6.4.5 deals with the operational responsibilities of SLDCs. Regulation 6.4.5(ii) talks about the responsibility of SLDC with regard to "regulating the demand within its control area". Absence of a similar provision in respect of RLDC does not mean that RLDC cannot exercise its jurisdiction over consumer load, particularly in view of the provisions in Regulation 6.4.1 that load despatcher or system operator of the respective control area controls its generation and/or load to maintain its interchange schedule with other control areas whenever required to do so and contributes to frequency regulation of the synchronously operating system. In our view, Regulation 6.4.1 of the Grid covers the jurisdiction of RLDC over the bulk consumers which are directly connected to ISTS.

24. The demarcation of responsibilities under Regulation 6.4.2 is based on twin concept of connectivity of the generating station and share of power of State in the generating station. This has been clarified in Statement of Reason to the Grid Code in the following terms:

> *"41.3 RLDCs and NLDC have submitted that Regulations 6.4.2 to 6.4.4 may be modified as under:*
>
> > The geographically fragmentation of Control Areas shall be avoided. Thus a Generating Company having two or more power stations shall not be treated as a single Regional Entity/control area. However Control Areas already in existence shall not be disturbed. A similar treatment would be applicable for control area for drawing power. A drawee control area would be eligible to become Regional Entity/Control Area and come under the direct jurisdiction of **RLDC only if (i) it is directly connected to the ISTS (ii) has long term** access portion of its power from outside the state."

****

"41.11 : The control area jurisdiction has been defined based on twin principles of connectivity with CTU/ STU and percentage share of beneficiaries within and/ or outside the host State."

It is clear from the above that RLDC/NLDC were also in favor of the twin concept of connectivity and share of power to decide the issue of jurisdiction. The present petition by ESIL falls exactly in this category because ESIL is directly connected to ISTS in Gujarat and power to be procured by it under long term access has been contracted from a generating station which is located in another state namely, Madhya Pradesh. We are not in agreement with POSOCO's view expressed during the hearing on 17.1.2013 that connectivity and jurisdiction are different. Although Regulation 6.4.2 of Grid Code relates to the generating station and is silent about drawee entity, the principle under Regulation 6.4.2(c)(i) can be applied to drawee entity.

25. Central Electricity Authority has in its response dated 17.4.2013 cited the precedent case of Northern Railway load which is being scheduled by NRLDC due to its connectivity with ISTS as under:

"(a) There is already an example of a bulk consumer connected directly to the ISTS , i.e. Northern Railways in the Northern Region, with a load of only 100 MW, ***a*** *Regional Entity which is scheduled by NRLDC.*

(b) The CEA is of the view that by virtue of ESSAR Steel being connected directly to the ISTS only, its scheduling, metering and energy accounting would necessarily have to be done by the RLDC."

POSOCO in its letter dated 1.5.2013 addressed to Secretary of the Commission has stated that the views expressed by CEA in its letter dated 17.4.2013 do not appear to be fully in line with Clause 3.8 of the Transmission Planning Criteria Manual 2013 which is applicable with effect from February, 2013. Clause 3.8 of the Transmission Planning Criteria is quoted below:

> "3.8 Normally, the various intra-State entities shall be supplied power through the intra-state network; only under exceptional circumstances, the load serving intra-State entity may be allowed direct inter-connection with ISTS on recommendation of STU provided that such an entity would continue as intra-State entity for the purpose of all jurisdictional matters including energy accounting. Under such situation, this direct interconnection may also be used by the intra-State entity(s)."

The Commission is of the view that the above may be applicable to a load serving entity i.e. the distribution company (and not to a consumer as in the instant case) and/ or when connectivity with ISTS is provided in addition to connectivity with State transmission system. The above criteria will not be applicable in the instant case where only ISTS connectivity is provided. Moreover, CEA has conveyed its considered view in relation to this case vide its letter dated 17.4.2013 despite the provisions in Clause 3.8 of the Transmission Planning Criteria which we are treating as the final view of the Authority.

26. A related question arises whether a bulk consumer connected only with ISTS can be treated as an intra-State entity under the control area of SLDC. POSOCO has argued that ESIL even though connected to ISTS can still continue to be under the jurisdiction of SLDC. The submission of POSOCO is extracted as under:

> "It is humbly submitted that even if a bulk consumer is connected only to ISTS, it can remain within jurisdiction of the concerned State. Withdrawal by the bulk consumer at ISTS connectivity point can be considered as drawal of the state concerned by the RLDC and RPC and the state in turn would carry out scheduling and energy accounting of such bulk consumer entities. It may be relevant to mention here that a number of generating stations connected to ISTS have drawn start-up power from ISTS as HT consumer of the respective state."

However, GUVNL and Gujarat SLDC have submitted that after ESIL's disconnection from the State Transmission System, Gujarat SLDC shall not be responsible for any scheduling and deviation accounting. Gujarat SLDC in its response dated 18.1.2013 has stated as under:

> "The role of various agencies, namely, WRLDC, WRPC, CTU, STU and SLDC are provided in Regulation 2 of the IEGC Regulations. In terms of Clause 2.3.2 if the IEGC System Operation and Control as well as operation of regional Ul pool account etc is within the functions of RLDC. In so far SLDC is concerned, in terms of Section 32 of the Electricity Act read with Clause 2.7 of the IEGC Code, SLDC is responsible for the optimum scheduling and dispatch of electricity within the State. This obviously refers to the entities which are connected to the State Network over which SLDC can exercise the functions of scheduling and dispatch. If the entity is not connected to the State Network, SLDC has no role to play. It cannot in any manner ensure scheduling or dispatch of electricity. Accordingly, all the consequences related to scheduling and dispatch of electricity in regard to an entity not connected to the State Network has to be dealt by RLDC. This includes energy accounting, dealing with energy imbalance dealing with Ul mechanism etc."

As POSOCO has not submitted any instance where an entity connected only to ISTS is being scheduled by SLDC, there appears to be practical difficulty in implementing the suggestion of POSOCO. Firstly, it has already been indicated by Gujarat SLDC that after disconnection of ESIL from GETCO system, Gujarat SLDC shall not be responsible for its scheduling and accounting. Secondly, after disconnection of the petitioner from Gujarat system, Gujarat SLDC cannot perform an important function of "control" of over the drawal by ESIL. As the transmission line to which ESIL is connected belongs to CTU, it cannot issue switching instructions like opening of feeder in case of overdrwal by ESIL etc. Moreover, we cannot appreciate as to why, after disconnection of a load from the State system, a state would consider the drawl by ESIL as state drawl and pay for deviation and then seek compensation from the overdrawing entity, which has the potential of resulting in disputes. The example quoted by

POSOCO for startup power is not relevant to the present case as arrangent for drawal of srart-up power is temporary in nature and the generating stations while drawing startup power as HT consumers are billed for "contacted demand" and do not participate in deviation settlement. POSOCO in the past has taken the stand that its jurisdiction is over ISTS only. If similar analogy is applied, SLDC's jurisdiction will extend to State systems only. In the instant case where an entity is being disconnected from State Transmission system, we are of the view that instead of SLDC, RLDC shall be in a better position for control and supervision of such entity.

27. It is pertinent to mention that as per Gujarat Electricity Regulatory Commission (Terms and Conditions of Intra-State Open Access) Regulations, 2011, long term access is allowed to a consumer to the inter-State transmission system. Regulation 13 of the said regulations is extracted as under:

> **"13. Procedure for Long-Term Access**
> (1) **Involving inter-State transmission system:** Notwithstanding anything contained in clauses (2) and (3) herein below, procedure for inter-State long-term Access shall be as per Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009 or its statutory re-enactments as amended from time to time:
>
> Provided that in respect of a consumer connected to a distribution system seeking inter-State long-term access, the SLDC, before giving its consent to the CTU as required under the Central Commission's Regulations, shall require the consumer to submit the consent of the distribution licensee concerned."

Thus the GERC Regulations permits a consumer to seek long term access to the ISTS, subject to the consent of Gujarat SLDC and the distribution company concerned, in this case DGVCL. Connectivity has been provided by CTU to ESIL after following the due process and Gujarat SLDC and DGVCL have given their consent. Although ESIL is located physically in DGVCL's area, after disconnection from Gujarat Transmission system, the

status of ESIL may not remain strictly as a consumer of DGVCL as its physical asset would not be used for supply of electricity to ESIL. Further, the interest of DGVCL is protected as it will be entitled for cross subsidy surcharge and other surcharge from the petitioner as per the Open Access Regulations of GERC. We do not find that there is any impediment for allowing the request of the petitioner.

B. Control Area Jurisdiction over the petitioner

28. Having coming to the conclusion that the RLDC is permitted under the Grid Code to exercise jurisdiction over a bulk consumer subject to fulfillment of certain conditions, next we proceed to examine the case of the petitioner. It is noticed from the minutes of the 27th meeting of Standing Committee on Power System Planning of Western Region held on 30.7.2007 that M/s Essar Power MP Ltd had sought long term open access for 1100 MW i.e. 700 MW to the petitioner and 400 MW to MP. GETCO had taken a stand in the said meeting that inter-connection to the petitioner shall be on a stand alone basis i.e. on radial mode and shall not be connected to 220 kV network at any point. Accordingly, the LTOA was agreed and LTOA intimation was given by PGCIL's letter dated 18.4.2008. In the intimation, the petitioner has been shown as a drawee utility and point of drawal of power has been indicated as the PGCIL's sub-station at Hazira. Regarding the transmission strengthening requirement (dedicated part), the following has been mentioned:

(d) Transmission strengthening requirement (Dedicated part)	(i) Pooling station (near Sipat)- Mahan TPS 400 kV D/C (triple) (ii) Gandhar (NTPC)- Hazira (Essar Steel) 400 kV D/C Iii0 Establishment of 400/220 kV, 3x500 MVA sub-station at Hazira (Essar Steel)

	M/s Essar Power MP Ltd shall ensure availability of above identified system strengthening scheme at its own cost before commencement of Long-Term Oen Access. Note: Interconnection at Hazira (Essar Steel) with WR grid shall be on stansalone basis, i.e.on radial mode and shall not be directly or indirectly connected to 220 kV network of GETCO.

29. Thus it is apparent from the above that ESIL was given connectivity as drawee entity of EPMPL and this connectivity was subject to its disconnection form Gujarat System (GETCO). There was technical reason for this decision that through GETCO system, it was not possible to draw more than 300 MW and requirement of ESIL was 700 MW. In case both GETCO system and ISTS connectivity were given, then through the load flow study it was evident that GETCO system was getting overloaded as most of power flowed through GETCO system. Hence the decision to disconnect ESIL from GETCO system was made a pre-condition for supply through ISTS in a radial mode. Based on this decision, LTA and connectivity was given on 23.12.2008 to EPMPL with 700 MW to ESIL as drawee entity. That being the case, the petitioner will no more be connected to the State system and will be connected to the ISTS only. Moreover, it is noticed from the letter of WRLDC dated 30.3.2012 regarding charging of 400 kV D/C Gandhar Hazira Transmission line and 400/220 kV GIS sub-station at Hazira that disconnection from the State System has been made a pre-condition for connectivity to the WR system. The relevant paragraphs of the letter are extracted below:

> "1. CTU has granted a LTA of 700MW to ESSAR Power MP Ltd. for transfer of power from its generation plant at MAHAN MP to ESSAR Steel Ltd. at Hazira, Gujrat. As per the LTA granted by CTU to facilitate drawal of 700MW equivalent

power of Hazira through POWERGRID transmission system, it was proposed to establishment 400/220kV, 2*500MVA sub-station at Hazira (Essar Steel) with interconnection with Gandhar (NTPC) through 400 kV D/C developed by Essar Power Ltd. Interconnection at Hazira (Essar Steel) with WR grid shall be on standalone basis, i.e. radial mode and shall not be directly or indirectly connected to 220 kV network of GETCO.

2. At present ESSAR Steel Ltd. is a consumer of DGVCL, Gujarat. You are therefore requested to subject relevant document/no objection certificate from DGVCL, for making the connection of ESSAR Steel Ltd., with WR on standalone basis i.e. radial mode.

3. Control Area jurisdiction of ESSAR Steel Ltd., Hazira shall be in accordance with clause 6.4.2 of Chapter-6 of IEGC-2010. Accordingly load dispatching requirement need to be fulfilled either with SLDC/WRLDC."

It is evident from the above letter that WRLDC itself was of the view that load dispatching requirement need to be fulfilled either with SLDC or with WRLDC. Even WRLDC has insisted on the petitioner to submit relevant no objection certificate from DGVCL for making the connection of ESIL with the WR on radial mode. DGVCL has given commitment to provide No Objection for connection of ESIL with WR on radial basis. Once the petitioner is disconnected from the system of the concerned distribution licensee and is directly connected to the WR system in radial mode, it has no connection with the State System and therefore, it naturally follows that its scheduling and energy accounting is undertaken by WRLDC. It is gathered from the replies of GETCO, DGVCL and GUVNL that there is no objection to the direct connectivity of ESIL with the WR system, except the settlement of commercial issues like clearance of outstanding dues and payment of cross subsidy surcharge for not using the system of DGVCL as determined by the State Commission.

30. The petitioner has sought the status of Regional Entity under the Grid Code. Regional Entity has been defined as “such persons who are in the RLDC control area and whose metering and energy accounting is done at the regional level”. We have come to the conclusion that the petitioner falls within the control area of RLDC and it naturally follows that its metering and energy accounting shall be done at the regional level. In our view, the petitioner shall be considered as a Regional Entity under the Grid Code.

B. Generic Issues raised by the WRLDC

31. WRLDC has raised the following generic issues for consideration of the Commission:

(a) Control Area Jurisdiction issues

(b) Mixed Entities

(c) Fragmented Control area

(d) Universal Service Obligations

(e) Merchant Load

These issues have been dealt with in the succeeding paragraphs.

(a) Control Area Jurisdiction Issues

32. Under the control area jurisdiction issues, WRLDC has submitted the following:

(a) Bulk consumers are within jurisdiction of State Commission. Since RLDCs are under jurisdiction of Central Commission, there may be jurisdictional issues if such entities become regional entities.

(b) As per definition of control area in the Grid Code, it may be difficult for such a bulk consumer, for example a process industry/steel plants etc., to contribute to frequency regulation.

(c) Implementation of items pertaining to Power System Reliability (protection coordination, SPS, defense mechanisms such as UFRs etc.) need to be coordinated also by the concerned LDC.

(d) Hierarchical data flow is maintained for real time data monitoring i.e., ALDC to SLDC to RLDC to NLDC (except some critical RTUs, which report directly). The real time data flow for such entities needs to be coordinated.

(e) Scheduling, accounting and settlement need to be coordinated.

33. As regards the first issue, the petitioner has submitted that it is logically incorrect to connect to CTU and to have control of power flow by State entity, where it is not connected at any location, any voltage level or through any control mechanism or transmission line. In our view, when the petitioner is connected to CTU and is treated as a Regional Entity, it will come under the jurisdiction of WRLDC and any dispute arising on account of the petitioner will be adjudicated by this Commission, as in case of all Regional Entities.

34. As regards the issue of frequency regulation, it has been submitted by POSOCO that entities like State Utilities and Inter-State Generating Stations satisfy the criteria for being designated as a control area, whereas bulk consumers can not contribute to frequency regulation and therefore, do not satisfy the above criteria. The petitioner has replied that ESIL has both bulk load and generation and can contribute to frequency regulation should the need arises. It is clarified that the 2003 Act, Grid Code or any other regulations of Commission do not prohibit any entity to act as a control area merely because it cannot participate in load frequency control. POSOCO has not technically substantiated in its submission as to how a bulk consumer cannot participate in frequency regulation, while a distribution licensee, say Chandigarh which may be a purely load area, can satisfy the conditions for participation in load frequency

regulation. Similarly, it has been clarified by CEA that Northern Railways having a load of 100 MW is directly connected to ISTS and is being scheduled by NRLDC. Further, POSOCO has not clarified what is meant by load frequency regulation whether it is FGMO or RGMO operation i.e. variation of generation based on frequency. In case this is the interpretation, no load area would qualify to be a control area. A load area can participate in load frequency regulation if it follows the instruction of Load Despatch Center to modulate its load depending upon frequency condition. In order to examine this aspect further, 'control area' as defined in Grid Code is extracted below:

> "Control area means electrical system bounded by interconnections (tie lines), metering and telemetry which controls its generation and/or load to maintain its interchange schedule with other control areas whenever required to do so and contributes to frequency regulation of the synchronously operating system."

Hence, to qualify as a control area, the following factors are required to be fulfilled:

	Parameters of control area	Available in present case? (Yes/No)
Characterization	a. Bounded by inter connections (tie lines)	Yes
	b. Metering	Yes
	c. Telemetry	Yes
Functions	d. Control of generation and/ or load	Yes
	e. Maintain Its interchange schedule with other areas.	Yes
	f. Contributes to frequency regulation	–

It is noticed from the above that frequency regulation is one of the factors to qualify as control area. From the facts on record, it emerges that ESIL is not getting connected to the system as an isolated load, but is seeking scheduling as load of EPMPL. Since scheduling of generation station is to be done as regional entity, scheduling of its load

end (ESIL) can also be done as regional entity by RLDC. It is always preferred that the generator and its load remain in the same control area. In addition to this, a dedicated generating station of 505 MW (Bandher) would also be part of this control area. As ESIL's drawal schedule would depend on generation of EPMPL, as a combined entity of generation and load, it can provide load frequency control. It is also possible that ESIL may contribute in frequency regulation by following the instruction of Load Despatch Center. A Steel mill being a continuous process industry may not be able to vary its load strictly with variation in frequency but with a high degree of automation, it can vary its demand in steps as it had the required control and instrumentation alongwith dedicated control center for continuous monitoring. In this regard petitioner has given undertaking in its affidavit dated 1.1.2013 to take the responsibility to ensure load frequency control in the following manner:

> "11. I say that, in response to the issue that if the machine trips, how the steel plant connected to ISTS would suddenly reduce its demands by 500 MW, It is submitted that ESIL has a bulk load of six Ultra High Power Electric Arc Furnaces (6 x 100MW), a 505 MW gas based Combined Cycle Power Plant and 2xl35MW upcoming multi-fuel fired generating stations. In the event of emergency when frequency regulation is required, ESIL can reduce its load and increase generation to contribute to frequency regulation. In fact, as on date, from an average load of 500-600 MW, ESIL can reduce its load to 200-300 MW within 1 to maximum 2 time blocks (15-30 minutes) of receiving instruction i.e., it can efficiently contribute to reduction of 300-400 MW of load. ESIL has also established a Central Command Centre located at Essar house for monitoring and controlling the steel facilities. This Control Command Centre has a Dedicated Energy management System (ION - Integrated object Network) based on smart metering and smart grid architecture which is capable of following:
>
> (a) Accurate metering of the entire complex (generation and load) "
>
> (b) Dependable demand monitoring and control (sliding window demand,Block demand, rolling block demand, thermal, (exponential) demand, predicted demand, instantaneous demand value, peak demand (maximum)and minimum demand).
>
> (c) Fault event recording and trending
>
> (d) Time synchronized data availability

(e) Real time power, flow data
(f) Report generation
(g) Load shedding

12. I say that the DC Arc furnaces are batch production process and steel melting in these furnaces can be regulated or interrupted by varying power requirements or even switching off in case of emergency, ESIL's present philosophy is such that in case if there is drawl beyond given schedule, furnace load is regulated to keep it within limits. In the event of generation failure, then within one or maximum two time blocks of 15 minutes, furnaces can be tripped to bring down the load substantially depending upon the requirements.

13. I say that in order to meet any exigency of grid collapse and tripping of its captive generating station of 500 MW, ESIL has a black start facility of 30 MW gas based combined cycle plant which can be used in the eventuality of grid failure. This facility of black start has been used in the past to restore power plant and give emergency power to steel plant till grid is restored.

14. I say that ESIL has heavily invested on latest technology to capture and process real time power flow in its system. It has a state of art Central Command Centre for real time power monitoring, load management and coordination. In case of mismatch, control action is taken both manually and automatically which includes tripping of large loads (greater than 100 MW) furnaces in the present case, without affecting safety of steel plant operations, A singled page diagram demonstrating that how load shedding will be effectuated in case of Generator outage or Grid disturbance is annexed herewith and marked as **Annexure A-I."**

Annexure- A-I submitted by the petitioner describing the schematics for the load shedding scheme in case of generator outage has been examined. It is observed that it gives details of both manual and automatic control in case of contingency. If required, RLDC may like to satisfy itself about the effectiveness of the above system and suggest suitable operational protocol to the petitioner to make this system more responsive for safer grid operation. The petitioner is directed to provide necessary arrangements for this purpose at its own cost.

35. As regards the coordination for the system protection scheme, it is noticed from the submission of the petitioner as extracted in para 38 above that protection scheme to take care of eventuality of generator outage, grid collapse and tripping of captive

generating plant and black start facility have already been implemented. The petitioner has set up a Central Command Centre which can reduce its load in step sizes of 200 to 300 MW within one to two time blocks on the instruction of WRLDC.

36. As regards the real time data monitoring, the petitioner has submitted that as the power system ESIL will be connected to CTU, it will be illogical to expect correlation and load flow control by SLDC. It is noticed that the petitioner on 23.3.2012 has already submitted metering and digital signal data details alongwith Single Line Diagram to WRLDC. The petitioner is directed to provide all telemetry, voice and data communication to WRLDC in accordance with the Grid Code.

37. WRLDC has also raised the issue of coordination of the scheduling, accounting and settlement of ESIL. In our view, after ESIL becomes a regional entity, it shall be the responsibility of WRLDC to coordinate the scheduling, accounting and settlement of ESIL.

(b) Mixed Entity

38. WRLDC has submitted that a bulk consumer can have its own generation also and can sell power to other consumers. In that case, the entity is neither a pure generator nor a pure load and it needs to be clarified whether the entity requires a distribution licensee as in the case of SEZ. The petitioner has submitted that a bulk consumer can either be connected to CTU or STU, depending upon technical requirement of connectivity, and the control area jurisdiction can be decided on the basis of technical merit of connectivity and control of load flow, protection coordination, real time data and transmission capacity to handle the quantum of power flow and

regulation. In our view, the petitioner is seeking connectivity to buy power for its own consumption and not for distribution to the consumers as in the case SEZ. Therefore, the issue raised by POSOCO regarding mixed entity is not germane to the issues raised in the petition.

(c) **Fragmented Control Area**

39. WRLDC has submitted that if a bulk consumer may be connected to the ISTS only, there is fragmentation of control area. The various fragments could lie in geographical different locations i.e. within one State or within one Region or in different States or more than one Region. POSOCO has requested for clarification regarding the manner of dealing with the transmission charges and losses for such bulk consumers. In our view, the issue of control area needs to be viewed in the present day emerging realities. IPPs and their scattered consumer base would require New Control Area concepts for external load and generation. In this connection, it is apt to quote the following paragraph from a paper published in IEEE Computer Application in Power (April 1995) "Control Area Trends: Principle and Responses" by Larry R.Day :

> **"External load and Generation**
>
> Communication and computer technology today permit loads or energy sources that are physically located in another system's control area to be incorporated within the responsible utility's control area instead. Using this technique, isolated customer loads IPPs energy sources can be incorporated into the supplier or purchaser control area automatically. This can reduce many scheduling problem that might otherwise exist because of rapid load changes or generation changes. It also puts the regulation responsibility upon supplying or purchasing utility instead of on the control area where the load or resource is physically located."

The case of the petitioner stands on the similar footing as the load and generation are located in different geographical area and for the purpose of control area, both generation and load can

be combined. Regarding the transmission charges and losses, the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010 and amendments thereto (Sharing Regulations) provide that for generation and load, respective zonal charges shall apply. ESIL is connected at 400kV node and in accordance with the principle applicable for a generator connected at 400kV node, separate zonal charges shall be calculated for ESIL. It is directed that till computation of POC charges for next quarter, the zonal charges and losses pertaining to Gujarat withdrawal zone shall be applied for ESIL.

(d) Universal Service Obligation

40. POSOCO has raised the issue regarding the provider of last resort for bulk consumers, who are directly connected to CTU network in respect of stand-by power supply and primary response. POOSOCO has further submitted that if an entity is embedded within a State control area, stand-by power is provided by a distribution company concerned, which has various avenues for meeting such requirement. If the bulk consumer comes to RLDC jurisdiction, it will tend to lean on the UI mechanism in case of failure to get power from identified supplier. We are of the view that Northern Railways which is also a fluctuating load, is being scheduled by NRLDC. So the deviation issues like UI and provider of last resort would be similar in this case. In this case also, the deviation from Schedule, if any, shall be governed by UI Regulations and other provisions of the Grid code. The Central Electricity Authority has also expressed similar views as under:

> *" 3,* POSOCO has apprehension that if the request of the Petitioner is agreed to, it would open the floodgates for hundreds of consumers to seek connectivity to the ISTS and grid operation would become difficult. POSOCO's presumption that it will affect the ISTS to a larger extent by virtue of being connected directly to ISTS does not seem to be entirely well founded, since even if it is connected to the state system, the variations of load will be equally reflected on the ISTS because of the state and inter-State transmission system being integrated. The Authority has deliberated on this issue and it is of the opinion that we have to strike a reasonable balance between the need to allow bulk consumers to come under the RLDC Control Area and grid security. So long

as such bulk consumers comply with the Regulations of the CERC, there should be no problem in granting them the connectivity to the ISTS.

POSOCO has pointed out that frequency regulation of the synchronously operating system would be difficult for a bulk consumer. In case of variation of load, the bulk consumer may have to draw power under UI. We have already stated in an earlier para that it would have to comply with the provisions of the various Regulations of CERC.

4. After considering various aspects of the matter, the CEA is of the view that after connectivity to the ISTS as a bulk consumer, M/s. ESSAR Steel will essentially fall under the control area of the respective RLDC, subject to the following:

a) M/s. ESSAR steel Ltd shall remain liable to pay all applicable charges including surcharge, if any, applicable under the provisions of the Act.
b) M/s. ESSAR Steel shall comply with various provisions of the CERC Regulations on Connectivity, IEGC and other relevant Regulations."

It has been confirmed by ESIL in its submission to abide by all the instructions of WRLDC. ESIL has also given the details of its operational preparedness for avoiding large variations and adherence to the schedules. Moreover, in accordance with the power vested under Section 29 of the Act, all entities are required to comply with the directions of RLDC, failing which they are liable for penalty. As load is being connected to ISTS in a radial mode, we direct RLDC to monitor the deviations by ESIL more vigilantly and in case of any violation, the issue may be brought to the notice of the Commission. As grid security is of paramount importance, no entity shall be allowed to deviate to affect the grid operation adversely. POSOCO is also directed to submit a report after one month of its experience including difficulties faced, if any, in scheduling and dispatch of power to ESIL.

(e) **Merchant Load**

41. WRLDC has raised the query as to how the new genre of entities called merchant load would be treated. In the absence of any elaboration on the issue, we do not consider it necessary to deal with the same.

42. WRLDC during the hearing on 17.1.2013 had submitted that if the request of the petitioner is accepted, it will open the floodgate for hundreds of consumers to seek connectivity with ISTS and grid operation will be difficult. The petitioner has submitted that the Commission may consider laying appropriate guidelines including eligibility criteria regarding recognition of bulk consumer as a Regional entity which will help in screening the applicant to be included in RLDC control area and at the same time allow those entities who do not have an option to continue with SLDCs on pure technical ground to shift to RLDC control area. In our view, the issue appears to be mere presumption of POSOCO and is not supported by any data in this regard. For assessing the situation, the data available on CTU website regarding applications for connectivity and LTA was checked and it was found that out of 171 applications for connectivity, almost in all the cases, it is the generators which are seeking connectivity except DPSC Limited in Eastern Region and Dandelion Properties Private Limited in Southern Region under Bulk Consumer category. Considering the data available regarding the application for connectivity by bulk consumers, we are of the view that the apprehension of WRLDC is not justified. However keeping in view the futuristic issues in mind, we direct that the issue may be deliberated by CEA, CTU and POSOCO on the basis of POSOCO letter of 16.7.2012 and in case it is found that there is tendency to shift load from STU to ISTS, the views of the States may also be sought and considered by CEA. The issue may be brought to the notice of the Commission for taking suitable measures as may be considered necessary.

D. Issues raised by Gujarat Utilities

43. The following issues have been raised by the Gujarat Utilities:

(a) Issue of Availability and Scheduling of Essar Power plant of 515 MW

(b) Outstanding dues of Essar Steel and cross subsidy charges.

(c) Metering arrangements for computation of cross subsidy charges.

(a) Availability and Scheduling

44. GUVNL has raised the issue of scheduling of 515 MW plant of Essar Power Ltd. between GUVNL and Essar Group of Companies in the ratio of 58:42, on the basis of the long term LTA by GUVNL. The petitioner vide its response dated 22.2.2013 has submitted as under:

> "It is submitted that GUVNL and ESIL both have independent PPA's with EPOL. GUVNL's PPA with EPOL does not have any provision of proportionate sharing of declared availability from EPOL. EPOL will declare In proportion, but it is ESIL's prerogative to take or not to take power as it will also take power based on its merit order. ESIL shall treat EPOL as any other grid connected generating station for scheduling power on merit. GUVNL cannot force ESIL to take technical minimum share, as cost of power at technical minimum is different for ES1L and GUVNL After disconnection from STU, ESIL has the option of not scheduling power from EPOL
>
> It is further submitted that ESIL does not envisage any technical minimum power from EPOL as almost all its power requirements will be fulfilled from CTU lines. At present, ESIL is scheduling technical minimum power to EPOL in order to meet its growing OA power demand while at the same time meeting GETCO transmission fines constraint. After disconnection from STU, ESIL will not be directly connected to EPOL and therefore, it would not be bound by the conditions of proportionality. 6UVNL can schedule power to EPOL based on its requirement governed by the terms of its PPA."

The petitioner vide its affidavit dated 22.2.2013 has further submitted as under:

> ESIL confirms that transfer of load control area jurisdiction shall in no way adversely affect GUVNL's rights under their PPA. Enforcement of PPAs executed between Essar Group Companies and EPOL is a prerogative of the Parties to such PPAs. GUVNL, as third party, should not seek to interfere in such matters. ESIL confirms to pay cross subsidy surcharge and other related charges to DISCOMs in terms of the applicable rules and regulations. It is submitted that since the power received at the gantry (interface of ESIL substation} will include captive power as well as power sourced from bilateral and / or IEX/PTC, the cross subsidy shall be calculated on net off basis as being done presently on power consumed from STU.

It is submitted that any disputed claims by GUVNL on ESIL shall be subject to the grievance redressal mechanisms under the applicable law. It would be incorrect to link such adjustment through Ul account. Further, if this Hon'ble Commission accepts the prayer of Petitioner, then ESIL would be a regional entity and subject to applicable rules and regulations for settlement of disputes between regional entities.

Gujarat SLDC has submitted that ESIL should be considered as a separate regional entity for the purpose of scheduling of power, Ul mechanism and energy accounting to which the petitioner has responded as under:

"It is submitted that ESIL has applied to this Hon'ble Commission seeking treatment as a regional entity under control area jurisdiction of WRLDC.

It is clear from the aforesaid that GUVNL has not pointed out any, technical problems. In light of the aforesaid it is submitted the present Petition be allowed.

GUVNL in its rejoinder on 1.4.2013 again requested the Commission that ESIL should not be granted any relief in the proceedings unless all the conditions mentioned in GUVNL earlier affidavit are acceptable to ESIL."

The Commission is of the view that as this issue is between Essar Power (EPOL), GUVNL and ESIL for scheduling of EPOL generating station of 515 MW, it has no bearing on the request of ESIL under this petition. Hence Commission had no role in this regard. The request of GUVNL that WRLDC should regulate the power drawal by ESIL akin to the regulation of drawal by beneficiary State from ISGS in case of payment default by M/s ESIL to GUVNL so as to enable GUVNL in recovering its outstanding dues, it is not acceptable as no such regulatory provision exists. Also the GUVNL's request in rejoinder dated 1.4.2013 that all conditions mentioned by GUVNL must be accepted by ESIL before any relief was granted is not relevant to the issue raised and relief sought in the petition. However, we direct the petitioner to resolve all bilateral issues with GUVNL and Gujarat SLDC within a given time frame.

(b) Outstanding dues of Essar Steel to DGVCL

45. DGCVL vide its affidavit dated 17.1.2013 has submitted that there is an outstanding dues of Rs.2118.44 crore out of Rs.2311 crore raised by DGVCL on ESIL for violation of the condition 2.2 of MoM dated 1.2.2010 which needs to be paid before seeking surrender of contracted demand from DGVCL and connection to CTU network for taking supply from third parties. The petitioner in its response dated 19.3.2013 has submitted that the penalty imposed by DGVCL has been disputed and the proceeding is presently pending before the Chief Electrical Inspector as the Appellate Authority under section 127 of the 2003 Act. The petitioner has further undertaken to abide by the final outcome of the said proceedings. DGVCL in its affidavit dated 15.4.2013 has reiterated that No Objection would be given only after the claims of DGVCL are cleared.

46. As the matter raised by DGVCL is a bilateral issue between DGVCL and ESIL, we do not consider it appropriate issue directions in this regard. Both parties should resolve the issue in order to facilitate connectivity of the petitioner to the CTU network in terms of the Connection Agreement.

(c) Metering arrangements for computation of cross subsidy charges of DGVCL

47. For the metering arrangement for computation of cross subsidy charges to be paid to DGVCL after the disconnection of ESIL from Gujarat Transmission System, DGVCL has suggested following metering arrangement in its affidavit dated 17.1.2013:

"I say that the petitioner is also required to install a electricity meter at 400 kV sub-station at Jhanor, i.e. the sending end of the CTU inter-connection network of the radial line in accordance with applicable rules. I further say that the Petitioner being in the area of operation of distribution licensee, i.e. DGVCL, is also required to pay cross-subsidy surcharge to DGVCL for the supply taken by the Petitioner from third parties as recorded at the meter at the CTU inter-connection network, In the circumstances, the incidence of cross subsidy surcharge is liable to be paid by the petitioner on the total supply of electricity being taken from third parties."

The petitioner in its response dated 22.2.2013 had stated following:-

"In this context it is submitted that connectivity granted by Powergrid to ESIL is at Hazira end. Hence, it is submitted that it would be preferable to conduct energy recording for cross subsidy surcharge at gantry (interface of ESIL substation) of 220 kV ESIL sub-station after ICT and connecting lines of 220 kv. since, the power received at the gantry will include captive power as well as power sourced from bilateral ad/or IEX/PTC, the cross subsidy can be calculated on net off basis as is being done in the current scenario."

DGVCL vide its submission dated 15.4.2013 had submitted the following:-

On the aspect of installation of energy meter on the 400 kV Essar Power Transmission company Limited's feeder at Gandhar, I say that since the Essar Power Transmission's system will intervene between the CTU system and Essar Steel's system, meters can be installed at the 220 kV side of substation for the purpose of measuring the cross subsidy and calculation of surcharge thereon.

The petitioner, in its response dated 18.04.2013, had stated following:-

It is submitted that this is in conformity with ESIL's submission in its Rejoinder affidavit dated 22.02.2013 and hence requires no response.

From the foregoing, it is evident that the issue of location of meters has been agreed to between DGVCL and ESIL and the issue appears to have been resolved. In any case since the issue of cross subsidy surcharge is falling within the jurisdiction of the Gujarat Electricity Regulatory Commission, parties may approach the said Commission with regard to cross subsidy surcharge.

48. The petitioner has sought relaxation of the provisions in terms of Regulation 6.3(3) read with clause 4 of part 7 of the Grid Code to provide that WRLDC shall exercise control area jurisdiction over the petitioner. As we have already come to the conclusion that WRLDC can exercise control area jurisdiction over ESIL in terms of Regulation 6.4.1 of the Grid Code read with the definition of 'control area', there is no requirement of exercising power under Part 7 of the Grid Code. However, for the sake of clarity, we direct the staff to propose appropriate amendment to the Grid Code regarding control area jurisdiction of RLDC and SLDC over the bulk consumers.

Conclusion:

49. In the light of the above discussion and after considering the views of Central Electricity Authority, the following directions are issued for compliance by all concerned:

(a) The load control area jurisdiction of ESIL shall be shifted from Gujarat SLDC to WRLDC, Mumbai after disconnection of ESIL from Gujarat Transmission system;

(b) ESIL shall be granted status of a Regional Entity of Western Regional Grid.

(c) Scheduling and Energy accounting of ESIL shall be carried out by WRLDC in accordance with the prevailing Regulations.

(d) All telemetry, voice and data communication in accordance with the IEGC shall be provided by ESIL to the satisfaction of WRLDC before commencement of scheduling of ESIL.

(e) ESIL shall comply with various provisions of Connectivity Regulations, Grid Code, UI Regulations and other relevant regulations of the Commission and maintain its drawal as per schedule.

(f) All instructions of WRLDC shall be complied with by ESIL in accordance with the 2003 Act and Grid Code and any instance of non-compliance by ESIL would be viewed seriously and dealt with in accordance with law.

(g) RLDC may like to satisfy itself about the effectiveness of the system of load shedding scheme in case of Generator outage and suggest suitable operational protocol to the petitioner to make this system responsive for safer grid operation. Petitioner shall provide necessary arrangements at its own cost.

(h) ESIL shall be granted status of Designated ISTS Customer (DIC) and since it is connected at 400 kV node of CTU network and not connected with state system, it will be considered as a separate (drawal) zone in accordance with the principles adopted for generating stations directly connected at 400 kV ISTS under the Sharing Regulations as amended from time to time. Till computation of POC charges for next application period, Gujarat Withdrawal Zone charges and losses shall be applied in case of ESIL.

(i) Staff of the commission shall process the case for necessary amendment to the Grid Code to clarify the position of bulk consumers which are connected only to inter-State transmission system and the major portion of its long term power is coming from a generator located outside the state in which bulk consumer is located. (j) M/s. ESSAR steel Ltd shall remain liable to pay all applicable cross subsidy charges including surcharge and other charges, if any, applicable under the provisions of the 2003 Act and as per the provisions of the regulations of State Regulatory Commission. Necessary metering arrangement shall be in accordance with the arrangement as already agreed to between ESIL and DGVCL.

(k) The issue of dues of DGVCL needs to be sorted out by DGVCL and ESIL bilaterally.

50. The matter is disposed of in terms of the above.

Sd/-	sd/-	sd/-
[M. Deena Dayalan]	**[V. S. Verma]**	**[Dr. Pramod Deo]**
Member	**Member**	**Chairperson**