CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 92/MP/2019

Coram:
Shri P.K. Pujari, Chairperson
Dr. M.K. Iyer, Member
Shri I.S. Jha, Member

Date of Order: 28.06.2019

In the matter of

Petition under Section 28(4) of Electricity Act, 2003 read with Regulation 6 and Regulation 29 of Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2015 for approval of Performance Linked Incentive for WRLDC for the financial year 2017-18 with reference to WRLDC Charges for the control period 1.4.2014 to 31.3.2019.

And
In the matter of

Western Regional Load Despatch Centre,
Power System Operation Corporation Ltd. (POSOCO)
(A Govt. of India undertaking),
Registered office: B-9, Qutab Institutional Area, 1st Floor,
Katwaria Sarai, New Delhi -110016

....Petitioner

Vs.

1. Managing Director,
MSEDCL, Prakashgadh, 5th Floor,
Bandra East,
Maharashtra Mumbai 400051

2. Managing Director,
GUVNL, Sardar Patel Vidyut Bhavan
Race Course
Gujarat Vadodara 390007

3. Managing Director,

MP Power Management Co Ltd,
3rd Floor, Block No 11, Shakti Bhavan,
Rampur, Madhya Pradesh 482008

4. Managing Director,
CSPDCL, PO - Sunder Nagar
Chhattisgarh
Raipur, Dangania 492013.

5. Secretary (Power),
Electricity Department, UT of Daman & Diu,
Sachivalaya,
Daman & Diu Moti Daman 396210

6. Secretary (Power),
UT of Dadra Nagar & Haveli,
Secretariat, Electric Depatment,
66kv Amli Road,
Dadra Nagar & Haveli Silvassa 396230

7. Managing Director,
Essar Steel India Limited,
27th KM, Surat Hazira Road,
Gujarat Surat 394270

8. Chief Electrical Engineer,
Goa Electricity Department,
Government of Goa, 3rd Floor,
Vidyut Bhavan,
Panjim, Goa – 403001.

9. General Manager,
Bhadravathi HVDC,
Power Grid Corporation of India Ltd,
Sumthana Village,
Bhadravathi(Tahsil), Bhadravathi,
Chandrapur(Dist), Maharashtra-442 902

10. General Manager,

Vindhayachal HVDC,
Power Grid Corporation of India Ltd,
P.O.Vindhyanagar, P.Box.No.12,
Singrauli(Dist), Madhya Pradesh-486 885

11.BARC FACILITY- Plant Superintendent,
BARC-Nuclear Recycle Board(NRB),
BARC, Tarapur,
Mumbai – 401502, Maharashtra

12.Station Incharge,
+/- 800 kV Champa HVDC Terminal,
Power Grid Corporation of India Ltd,
Vill: Taga, Tahsil: Akaltara, Janjgir-Champa,
Chhattisgarh - 495668

13.General Manager,
Korba STPS STG (I & II), NTPC Ltd.,
P.O.: Vikas Bhavan,
Jamnipali, Korba(District),
Chhattisgarh- 495 450.

14.General Manager,
Korba STPS STG (III),
NTPC Ltd, P.O.Vikas Bhavan,
Jamnipali, Korba(Dist),
Chhattisgarh- 495 450.

15.General Manager,
VSTPS-STAGE-I, Vindhayachal STPS,
NTPC Ltd, P.O.: Vindhyanagar, Sidhi(District),
Madhya Pradesh – 486 885

16.General Manager,
VSTPS-STAGE-II,
Vindhayachal STPS, NTPC Ltd. ,
P.O.: Vindhyanagar, Sidhi(Dist),
Madhya Pradesh – 486 885

17.General Manager,
VSTPS-STAGE-III,
Vindhayachal STPS, NTPC Ltd,
P.O.: Vindhyanagar, Sidhi(Dist),
Madhya Pradesh – 486 885

18.General Manager,
VSTPS-STAGE-IV,
Vindhayachal STPS,
National Thermal Power Corporation of India Ltd,
P.O Vindhyanagar, Sidhi(Dist),
Madhya Pradesh – 486 885

19.General Manager,
VSTPS-STAGE-V,
Vindhayachal STPS,
National Thermal Power Corporation of India Ltd,
P.O Vindhyanagar, Sidhi(Dist),
Madhya Pradesh – 486 885

20.General Manager,
Kawas Gas Power Project,
NTPC Ltd , P.O.Aditya Nagar,
Surat, Gujarat - 394 516

21.General Manager,
Gandhar Gas Power Project,
NTPC Ltd, P.O.: NTPC Township,
Bharuch(Dist), Gujarat- 392215

22.General Manager,
SIPAT TPS Stg-I,
NTPC Ltd, SIPAT,
Chhattisgarh - 495558.

23.General Manager,
SIPAT TPS Stg-II,
NTPC Ltd., SIPAT,
Chhattisgarh-495558.

24.General Manager,
Mouda STPP Stage-I,
NTPC Ltd, Mouda Ramtek Road,
P.O.Mouda,
Nagpur (Dist), Maharashtra

25.General Manager,
Mouda STPP Stage-II,
NTPC Ltd, Mouda Ramtek Road,
P.O.Mouda,
Nagpur (Dist), Maharashtra

26.General Manager/ Plant Head,
NTPC Ltd.,
Solapur Super Thermal Power Station,
PO: Hotgi Station,
Taluka: South Solapur,
District: Solapur, Maharashtra-413003.

27.Station-Incharge,
NTPC Ltd LARA STPP, - Vill-
Chhappora Po+Ps- Pussora,
Raigarh, Chattisgarh-496001

28.Station-Incharge,
NTPC Ltd. Gadarwara STPP,
Village-Dongargaon, PO: Gangai,
Tehsil- Gadarwara, Dist-Narsinghpur,
Madhya Pradesh (Mobile: 9004497016)

29.General Manager ,
2 X 135 MW Kasaipali Thermal Power Project,
ACB (India) Ltd. District - Korba
Chhattisgarh Chakabura 495445

30.General Manager,
Bharat Aluminium Co. Ltd,
Captive Power plant-II,
BALCO Nagar

Chhattisgarh Korba 495684

31.Executive Director,
Costal Gujarat Power Ltd (
CGPL-UMPP), Tunda Vandh Road,
Tunda Village, Mundra,
Gujarat Kutch 370435

32.Executive Director,
DB Power, Village - Baradarha,
Post - Kanwali, Dist - Janjgir, Champa,
Chhattisgarh Baradarha 495695

33.Executive Director
Jindal Power Ltd.
Stg-I, OP Jindal STPP, PO-Tamnar, Gjarghoda
Tehsil, Chhattisgarh
District - Raigarh, 496107

34.Executive Director
Jindal Power Ltd.
Stg-II, OP Jindal STPP,
PO-Tamnar, Gjarghoda
Tehsil, Chhattisgarh
District - Raigarh, 496107

35.Executive Director,
DGEN Mega Power Project,
Plot No Z-9, Dahej SEZ Area (Eastern side),
At: Dahej, Taluka-Vagra,
Dist-Bharuch, Gujarat 392130

36.Executive Director,
GMR Warora Energy Limited,
Plot No B-1,
Mohabala MIDC Growth Center Post
Tehsil - Warora,
Dist – Chandrapur, Maharashtra 442907

37.Executive Director,
ESSAR POWER MP LTD.
Village Bandhora, Post- Karsualal,
Tehsil- Mada,
Distt. Singrauli, Madhya Pradesh - 486886

38.Head (Commercial),
GMR Chhattisgarh Energy Ltd,
Skip House, 25/1, Museum Road,
Karnataka, Banglore-560025

39.Managing Director,
Jaypee Nigrie Super Thermal Power Project,
Nigri District, Singrauli,
Madhya Pradesh 486668

40.Executive Director,
DCPP, OP Jindal STPP,
PO-Tamnar, Gjarghoda Tehsil, Chhattisgarh
District - Raigarh, 496107

41.Station Director,
Nuclear Power Corporation of India ltd,
Kakrapara Atomic Power Station,
PO - via Vyara,
Dist – Surat, Gujarat - 395651

42.Station Incharge,
Kakrapar Atomic Power Project-3&4(KAPP-3&4),
Regd. Office: NPCIL, 16th Floor, Centre-1,
World Trade Centre,
Cuffe Parade, Colaba,
Mumbai-400005

43.Station Director,
Tarapur Atomic Power Station 1&2,
Nuclear Power Corporation of India Ltd,
P.O.TAPP, Thane(Dist),
Maharashtra- 401 504

44.Station Director,
Tarapur Atomic Power Station 3&4,
Nuclear Power Corporation of India Ltd,
P.O.TAPP, Thane(Dist),
Maharashtra- 401 504

45.Managing Director,
Korba West Power Co.Ltd.,
Village - Chhote Bhandar, P.O. - Bade Bhnadar,
Tehsil - Pussore,
District - Raigarh, Chhattisgarh Raigarh 496100

46.Managing Director,
KSK Mahanadhi ,
8-2-293/82/A/431/A,
Road No 22 Jubilee Hills
Andhra Pradesh Hyderabad 500033

47.General Manager(Comml),
LANCO Power Ltd,
Plot No - 397, phase -III,
Udyog Vihar,
Haryana Gurgaon 122016

48.General Manager,
NTPC-SAIL Power Company Private Ltd,
Puranena Village,
Chhattisgarh Dist - Durg, Bhilai 490021

49.General Manager,
Ratnagiri Gas & Power Pvt Ltd (RGPPL),
5th floor, GAIL Jubilee Tower, B-35-36,
Sector-1, Noida, Gautam Budh Nagar,
Uttar Pradesh 201301

50. Managing Director,
Sasan Power Ltd, Reliance Centre,
Near Parbhat Colony, Off Western Express Highway,
Santacruz (E), Mumbai 400055

51.Member (Power) ,
Narmada Control Authority,
Narmada Sadan, Sector -B, Scheme No 74,
Vijaynagar, Indore,
Madhya Pradesh-452010 (Mobile: 9978934846)

52.CEO,
MB Power (Madhya Pradesh) Ltd.,
Corporate Office: 239,
Okhla Industrial Estate Phase-III,
New Delhi- 110020 (Tel: 011-47624100)

53.Chief General Manager,
RKM Powergen Pvt. Ltd.,
Village: Uchpinda,
PO: Dhurkot,
Dist: Janjgir-Champa,
Chhattisgarh -495692

54.Head (Commercial),
Jhabua Power Ltd.,
Village – Barrella, Post – Attaria,
Tahsil –Ghansor,
Dist – Seoni, Madhya Pradesh – 480997

55.Head(Commercial),
Dhariwal Infrastructure Ltd.,
CESC House, Chowringhee Square,
Kolkata – 700001

56.Head (Commercial),
SKS Power Generation Chhattisgarh Ltd.,
501B, Elegant Business Park,
Andheri Kurla Road,
J B Nagar,
Andheri (East), Mumbai – 400059

57.Sr. Vice President (Power),
M/s. TRN Energy Pvt. Ltd., 18,

Vasant Enclave, Rao
Tula ram Marg,
New Delhi-110057

58.Solar Energy Corporation of India Ltd.
1st Floor, D-3, A-Wing, Religare Building,
District Centre,
New Delhi Saket 110017

59.NTPC Viddut Vyapar Nigam Limited,(NVVNL),
7th Floor,Core3,SCOPE Complex,7,
Institutional Area,
Lodhi Road, New Delhi-110003

60.Director,
Sugen, Torrent Power Limited,
Torrent House, Off Ashram Road,
Ahmedabad, Gujarat-380009

61.APL Gen, Associate General Manager - Business Development,
Achalraj, Opp Mayor Bungalow,Law Garden,
Ahmedabad , Gujarat-380 006

62.Head (Electrical),
Heavy Water Board,
Department of Atomic Energy,
V. S. Bhavan, Anushaktinagar,
Mumbai-400094

63.CEDE (Western Railway),
Office of Chief Electrical Engineer,5th Floor,
New Building, Churchgate Rly Station,
W. Rly HQ, Mumbai -400020

64. General Manager,
Power Grid Corporation of India Ltd.
Western Region - I
Headquarters, PO - Uppalwadi, Sampritinagar,
Nagpur, Maharashtra - 440026

65.Managing Director,
Essar Power Transmission Co. Ltd.- 27 Km
Surat Hazira Road,
Surat Gujarat -394270

66.Executive Director,
Jindal Power Ltd., OP Jindal STPP,
OP Jindal STPS, PO- Tamnar,
Chhattisgarh
District - Raigarh, 496107

67.Executive Director,
Torrent Power Grid Ltd,
Torrent House,
Off Ashram Road,
Gujarat Ahmedabad 380009

68.General Manager,
Western Transco Power Limited.,
601,6th Floor,Hallmark Business Plaza,
Opp Gurunanak Hospital,,
Bandra(E), Mumbai-51

69.General Manager,
Western Transmission Gujarat Limited.,
601,6th Floor,Hallmark Business Plaza,
Opp Gurunanak Hospital,,Bandra(E),
Mumbai-51

70.General Manager (Comml),
Adani Power Ltd. Achalraj,
Opp. Mayor Bungalow,
Law Garden,
Ahmedabad, Gujarat - 380006

71.Head (Commercial),
Bhopal Dhule Transmission Company Ltd.,
Sterlite Grid Ltd. 634 Tulip,

New Minal Presidency,
J K Road, Ayodhya Bypass,
Madhya Pradesh Bhopal 462023

72.Head (Commercial),
Raichur Solapur Power Transmission Company Ltd,
Patel Estate, SV Road,
Jogeshwari West, Mumbai 400102

73.Head (Commercial),
Jabalpur Transmission Company Limited (JTCL)-
Sterlite Grid Ltd. 634 Tulip,
New Minal Presidency,
J K Road, Ayodhya Bypass,
Madhya Pradesh Bhopal 462023

74.RAPP Transmission Company,
Sterlite Grid Ltd. 634 Tulip,
New Minal Presidency, J K Road,
Ayodhya Bypass,
Madhya Pradesh Bhopal 462023

75.Powergrid Warora Transmission Ltd (PWTL),
CEO, Sampriti Nagar,
Nari Ring Road,
Nagpur, Maharashtra- 440026

…..**Respondents**

Parties Present:
Shri Aditya Prasad Das, WRLDC

ORDER

The Petitioner, Western Regional Load Despatch Centre (hereinafter referred to as "WRLDC"), has filed the present petition under Section 28(4) of Electricity Act, 2003 (hereinafter referred to as 'the Act') read with Regulations 6 and 29 of Central

Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2015 (hereinafter referred to as "Fees and Charges Regulations") for approval of Performance Linked Incentive (hereinafter referred to as "PLI") for WRLDC for the financial year 2017-18 for the control period 1.4.2014 to 31.3.2019.

Background

2. Brief facts of the case as under:

(a) The Petitioner setup under Section 27 of the Act performs functions specified in Section 28 of the Act. NLDC and RLDCs are operated by Power System Operation Corporation Limited (POSOCO) in accordance with Government of India, Ministry of Power's notification dated 27.9.2010.

(b) As per Regulation 29 (1) to 29 (3) of the Fees and Charges Regulations, the recovery of performance linked incentive by NLDC and RLDCs shall be based on the achievement of Key Performance Indicators (KPIs) as specified in Appendix V of the Fees and Charges Regulations or other such parameters as specified by the Commission.

(c) As per Regulation 29(6) of the Fees and Charges Regulations, RLDCs or NLDC are required to compute the KPIs on annual basis for the previous year ending 31st March and submit to the Commission for approval as per Appendix V and VI of the Fees and Charges Regulations.

(d) As per methodology specified in Appendix-V of the Fees and Charges Regulations, KPI score for WRLDC for the year 2017-18 ending 31.3.2018 has been submitted by petitioner as under:

Sl. No	Key Performance Indicators	Weightage	Previous Year (as allowed by CERC (2016-17)	Current Year (2017-18)
1	Interconnection Meter Error	10	10.00	10.00
2	Disturbance Measurement	10	10.00	10.00
3	Average processing time of shutdown request	10	10.00	10.00
4	Availability of SCADA system	10	10.00	10.00
5	Voltage Deviation Index (VDI)	10	10.00	10.00
6	Frequency Deviation Index (FDI)	10	10.00	10.00
7	Reporting of System Reliability	10	10.00	10.00
8	Availability of Website	10	10.00	10.00
9	Availability of Standby Supply	5	5.00	5.00
10	Variance of Capital expenditure	5	4.04	2.72
11	Variance of Non-Capital expenditure	5	5.00	5.00
12	Percentage of Certified Employee	5	4.83	5.00
	Total	**100**	**98.87**	**97.72**

	Score		
Slabs	>90%	90-95 %	95-97.72 %
% age Incentive (Slab wise)	7	1	0.544
Net Incentive as %age of Annual Charges	**8.544**		

(e) As per the methodology provided in Regulation 29 (5) of Fees and Charges Regulations, the Petitioner is entitled to recover 7% of annual charges for aggregate performance level of 85% for three years commencing from 1.4.2014. The incentive shall increase by 1% of annual charges for every 5% increase of performance level above 90%. Accordingly, recovery of Performance Linked

Incentive (PLI) works out as 8.544% of the Annual charges for the year 2017-18 (i.e. for 90-95% additional 1% and for 95% to 97.72% additional 0.544%).

3. Against the above background, the Petitioner has filed the present petition with the following prayers:

(a) Approve the proposed performance linked incentive based on the KPIs computed by WRLDC for the year ending 31.03.2018 given at para 5, the KPI score given at para6and PLI percentage of Annual Charges of the year 2017-18.

(b) Allow the Applicant to recover the above mentioned incentives from the users for the year 2017-18 as approved by the Hon'ble Commission.

(c) Allow the increase in PRP kitty as prayed in petition No. 344/MP/2018 on 8th November 2018.

(d) Pass such other order(s) as the Hon'ble Commission deems fit and appropriate in this case and in the interest of justice.

Analysis and Decision

4. The petition was heard on 23.4.2019 and notices were issued to the Respondents to file their replies. However, no reply has been filed by the Respondents despite notice. Vide Record of Proceedings for hearing dated 23.4.2019, the Petitioner was directed to explain the procedure for measurement of parameter of "Availability of SCADA", on or before 3.5.2019

5. The Petitioner vide affidavit dated 02.5.2019 has submitted the information called for which has been dealt with in succeeding paras of this order.

6. The present petition has been filed under Regulations 6 and 29 of the Fees and Charges Regulations for approval of Performance Linked Incentive for the financial year 2017-18. Regulations 6 and 29 are extracted as under:

"6. Application for determination of fees and charges:

(1) The RLDCs and NLDC shall make application in the formats annexed as Appendix I to these regulations within 180 days from the date of notification of these Regulations, for determination of fees and charges for the control period, based on capital expenditure incurred and duly certified by the auditor as on 1.4.2014 and projected to be incurred during the control period based on the CAPEX and the REPEX.

(2) The application shall contain particulars such as source of funds, equipments proposed to be replaced, details of assets written off, and details of assets to be capitalized etc.

(3) Before making the application, the concerned RLDC or NLDC, as the case may be, shall serve a copy of the application on the users and submit proof of service along with the application. The concerned RLDC or NLDC shall also keep the complete application posted on its website till the disposal of its petition.

(4) The concerned RLDC or NLDC, as the case may be, shall within 7 days after making the application, publish a notice of the application in at least two daily newspapers, one in English language and one in Indian modern language, having circulation in each of the States or Union Territories where the users are situated, in the same language as of the daily newspaper in which the notice of the application is published, in the formats given in Appendix II to these regulations.

(5) The concerned RLDC or NLDC, as the case may be, shall be allowed the fees and charges by the Commission based on the capital expenditure incurred as on 1.4.2014 and projected to be incurred during control period on the basis of CAPEX and REPEX duly certified by the auditor in accordance with these Regulations:

Provided that the application shall contain details of underlying assumptions and justification for the capital expenditure incurred and the expenditure proposed to be incurred in accordance with the CAPEX and REPEX.

(6) If the application is inadequate in any respect as required under Appendix-I of these regulations, the application shall be returned to the concerned RLDC or NLDC for resubmission of the petition within one month after rectifying the deficiencies as may be pointed out by the staff of the Commission.

(7) If the information furnished in the petition is in accordance with the regulations and is adequate for carrying out prudence check of the claims made the Commission shall consider the suggestions and objections, if any, received from the respondents and any other person including the consumers or consumer associations. The Commission

shall issue order determining the fees and charges order after hearing the petitioner, the respondents and any other person permitted by the Commission.

(8) During pendency of the application, the applicant shall continue to bill the users on the basis of fees and charges approved by the Commission during previous control period and applicable as on 31.3.2014, for the period starting from 1.4.2014 till approval of the Fees and Charges by the Commission, in accordance with these Regulations.

(9) After expiry of the control period, the applicant shall continue to bill the users on the basis of fees and charges approved by the Commission and applicable as on 31.3.2019 for the period starting from 1.4.2019 till approval of fees and charges under the applicable regulations."

"29. Performance linked incentive to RLDCs and NLDC:

(1) Recovery of incentive by the Regional Load Despatch Centre shall be based on the achievement of the Key Performance Indicators as specified in Appendix V or such other parameters as may be prescribed by the Commission.

(2) Each Regional Load Despatch Centre shall submit its actual performance against each of the key performance indicators to the Commission on annual basis as per the format specified in Appendix V.

(3) NLDC shall submit the details in regards to each Key Performance Indicator in the format specified in Appendix V along with the methodology for approval of the Commission.

(4) The Commission shall evaluate the overall performance of the RLDCs or NLDC, as the case may be, on the basis of weightage specified in Appendix V. The Commission, if required, may seek advice of the Central Electricity Authority for evaluation of the performance of system operator.

(5) The RLDCs or NLDC, as the case may be, shall be allowed to recover incentive of 7% of annual charges for aggregate performance level of 85% for three years commencing from 1.4.2014 and for aggregate performance level of 90% from 1.4.2017. The incentive shall increase by 1% of annual charges for every 5% increase of performance level above 90%: Provided that incentive shall be reduced by 1% of annual charges on prorata basis for the every 3% decrease in performance level below 85%.

(6) The RLDCs or NLDC, as the case may be, shall compute the Key Performance Indicators on annual basis for the previous year ending on 31st March and submit to the Commission along with petitions for approval of the Commission as per Appendix V and Appendix VI of these Regulations:

Provided that the key performance indicators of previous year ending on 31st March shall be considered to recover incentive on each year and shall be trued up at the end of the control period."

7. In light of the above provisions, we have considered the Petitioner's claim for Performance Linked Incentive (PLI). The Petitioner has submitted that the Commission has notified the various performance indicators and their weightage for determination of fees and charges in the Fees and Charges Regulations and performance on these KPIs has been quantified to make it measurable. The Petitioner has submitted KPI-wise details which have been dealt with in the succeeding paragraphs:

KPI-1: Reporting of Inter-connection metering error

8. The Petitioner has submitted that the meter readings are processed on weekly basis and an error could only be detected after processing the same and after going through the validation process. According to the Petitioner, RLDCs are reporting the meter errors on weekly basis and these are made available on web sites as per the recommendations in the Regulation. Therefore, the possible number of reports in a year is 52 which have been converted to percentage based on the actual reporting. Percentage performance has been proportionately converted to marks scored.

9. The total weightage given for this parameter is 10. The Petitioner has submitted performance-wise details as under:

Performance during financial year 2017-18 (In %) A* =	100
Marks scored (In proportion of the percentage performance above)	10
*Formula for performance calculation	[No. of weekly reports issued /52 (Total no. of Weeks)]*100

10. The Petitioner has submitted that as per Regulation 2.3.2 of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 (Grid Code),

RLDCs are responsible for meter data processing. Accordingly, problems related to meters including those installed at inter-regional/inter-national tie points are reported by RLDCs concerned to the utilities for corrective action. It has submitted that as per Regulation 6.4.22 of the Grid Code, computations on metering data are to be made available to the regional entities for checking/verifications for a period of 15 days. Accordingly, the data on inter-connection meter error is made available in Public Domain on regular basis for checking/verifications of regional entities. This information on interconnection meter error is published on the on a weekly basis. Web-link for the same is given below:

http://wrldc.in/content/207_1_SEMDiscrepancies.aspx

11. We have considered the submission of the petitioner. The petitioner has complied with the provisions of the Regulation 6.4.22 of the Grid Code. As per Appendix VI of the RLDC Fees and Charges Regulations 2015, the weightage factor for reporting of inter-connection meter error is considered 10 out of 10.

KPI-2: Reporting of Grid Incidents and Grid Disturbance:

12. The Petitioner has submitted that grid incidents and grid disturbances are compiled on monthly basis and the same is forwarded to NLDC for further compilation on National basis for further reporting to the Commission on consolidated basis. As the reporting on grid incidences and grid disturbances is generated on monthly basis, target reports to be generated have been considered to be 12. The Petitioner has submitted that percentage performance has been measured based on the actual

number of reports generated, which has been proportionately converted to marks scored.

13. The Petitioner has submitted that as against the total weightage of 10 for parameter reporting of grid incidents and grid disturbance, actual incidents of such events during the financial year 2017-18 are as under:

Grid Incidents and Grid Disturbance for financial year 2017-18			
Category	Count (Nos)	Recovery period (Hrs)	Loss of Energy (MUs)
GI-1	50	84:51:00	2.00
GI-2	37	71:00:00	1.28
GD-1	44	43:02:00	10.03
GD-2	0	0:00:00	0.00
GD-3	0	0:00:00	0.00
GD-4	0	0:00:00	0.00
GD-5	0	0:00:00	0.00
All	**131**	**198:53:00**	**13.30**

14. The Petitioner has submitted that copy of the report is made available on public domain on POSOCO`s website (https://posoco.in/reports/monthly-reports/monthly-reports-2017-18/)

The Petitioner has submitted the details of the report for the financial year 2017-18 as under:

Sl. No.	**Month**	**Date of Reporting**
1	April 2017	23nd May 2017
2	May 2017	23rd June 2017
3	June 2017	21nd July 2017
4	July 2017	23nd August 2017
5	August 2017	21rd September 2017
6	September 2017	23st October 2017
7	October 2017	22rd November 2017
8	November 2017	22rd December 2017
9	December 2017	23rd January 2018
10	January 2018	23rd February 2018

11	February 2018	23rd March 2018
12	March 2018	23st April 2018

15. The Petitioner has submitted performance-wise details as under:

Performance during financial year 2017-18 (In %) * =	100
Marks scored(In proportion of the percentage performance above)	10
***Formula for performance calculation :**	(No. of Monthly reports issued /12)*100

16. We have considered the submissions of the petitioner. Perusal of the above reveals that the petitioner is reporting incident of grid disturbance every month to the Commission. Accordingly, as per Appendix VI of the RLDC Fees and Charges Regulations, 2015 the weightage factor for reporting of grid incidents and grid disturbance is considered 10 out of 10.

KPI-3: Average processing time of shut down request

17. The Petitioner has submitted that the shut-down process, uniform across all the RLDCs, has been discussed and approved at RPC level. Time allowed to NLDC and RLDCs for approval of the shut-down requests is 26 hours and 50 hours (including NLDC Time). This methodology has been devised considering primarily the planned outages approved in the monthly OCC meetings of RPCs which are processed by RLDCs on D-3 basis (3-day ahead of actual day of outage) based on confirmation from the shutdown requesting agency and then prevailing grid conditions. It has submitted that RLDCs after processing the shut down requests at regional level forward the list to NLDC for impact assessment at national level. After clearance from NLDC, the final list

of cleared shut down requests is intimated by respective RLDCs to the requesting agencies on D-1 (i.e. one day ahead of the proposed date of outage). The Petitioner has submitted that as per the formula used for calculating KPI score for this parameter, performance will be considered 100%, if the time taken for processing shut down requests is less than the prescribed time i.e. 26 hours for NLDC and 50 Hours for RLDCs. If the time taken is more than the prescribed time, then the performance will come down in the same proportion e.g. if the time taken in processing the request is more than 5% of the prescribed time then the percentage performance will be 95%. Percentage performance has been proportionately converted to marks scored.

18. The Petitioner has submitted that the procedure to streamline the process of transmission outage coordination between SLDCs, RLDCs, NLDC, RPCs and Indenting Agencies was developed by NLDC in 2013 and was approved in OCC forum. As per the approved process, RLDC approves the shutdown requests of inter-State transmission lines and NLDC approves the shut down requests for inter-regional and all 765 KV transmission lines. Therefore, WRLDC consults NLDC for approval of outage requests.

19. As per outage planning procedure, shutdown processing time for NLDC/RLDCs is as tabulated below:

Sl. No.	Activity	Day	Time (hrs.)
1	Request of shutdown from indenting agency to concerned RLDC.	D-3	1000
2	Forwarding request of shutdown requiring NLDC approval from RLDC to other concerned RLDCs and NLDC (along with the recommendations and study result)	D-2	1000

3	Comments of other RLDCs or NLDC	D-2	1600
4	Approval or Rejection of Request	D-1	1200

As per table above:
Shutdown Processing Time for NLDC is Calculated as: Sr. No(4) - Sr. No(2)= 26hrs
Shutdown Processing Time for RLDC is Calculated as: Sr. No(4) - Sr. No(1)= 50hrs

20. The total weightage for the parameter "average processing time of shut down request is 10. The Petitioner has submitted average processing time of shut down request during the financial year 2017-18 as under:

S.No.	Month	Total No of shutdown request in a month (B)	Total time (hrs) taken to approve the shutdown in a month(A)	Total time(hrs) taken to approve the shutdown in a month/Total No of shutdown requests in a month(C=A/B)
1	Apr'17	758	31157	41
2	May'17	798	35095	44
3	June'17	721	37754	52
4	July'17	620	24280	39
5	Aug'17	619	25540	41
6	Sep'17	768	26043	34
7	Oct'17	900	36030	40
8	Nov'17	947	49081	52
9	Dec'17	745	41432	56
10	Jan'18	964	36715	38
11	Feb'18	989	35438	36
12	Mar'18	1166	49592	43
	Total	9995	428156	43

For WRLDC

Performance during the financial year 2017-18 (In %)	100
Marks scored (In proportion of the percentage performance above)	10
*Formula for performance calculation	IF((A-B*50)>0,(1-(A-B*50)/(B*50))*100,100)

21. We have considered the submission of the Petitioner. Accordingly, as per Appendix VI of the RLDC Fees and Charges Regulations 2015, the weightage for average processing time of shut down request is considered 10 out of 10.

KPI-4: **Availability of SCADA**

22. Vide Records of Proceedings for the hearing dated 23.4.2019, the Petitioner was directed to explain the procedure for measurement of parameter of "Availability of SCADA". The Petitioner vide its affidavit dated 2.5.2019 submitted the following procedure for measurement of Availability of SCADA:

(a) Availability of SCADA

Main reasons of outages of real-time data are listed below:

1. Failure of critical SCADA servers (hardware level)

2 Failure of critical SCADA applications (software level)

3. Communication failure

Critical infrastructure of SCADA is redundant at server and network level to ensure standby operation and availability in case of any contingency. In case, data at main control centre is not available, then back-up control centre is utilized to visualize the real-time data.

SCADA systems are covered under long term maintenance contract by System Integrator/OEM having financial implications in case of outages even in the component level. The System Integrator need to attend the issues as per time lines defined in the maintenance contract, failing which a portion of the maintenance charges can be deducted as penalty measure. Records of all incidences are

maintained along with resolution details. The measures for the maintenance contract have been kept stringent so that it does not affect the overall SCADA system availability to the Grid Operators. The records for KPI are generated in line with above philosophy.

(b) Methodology followed for calculation of SCADA system availability

Both main and back-up SCADA systems have two SCADA servers working in redundant mode with one of the servers in master role and the other in standby role. Consequently, services of SCADA system is considered available when at least one of the redundant servers is up. In the event of failure of both the SCADA servers at Main control centre (CC), monitoring of regional grid can be done through SCADA system of Backup. Accordingly, for the purpose of computation of SCADA availability, the status of main and standby SCADA servers at Main and Backup control centres is checked. If any one of the servers is working at any instant and real time SCADA data is available to the control room, the SCADA system is considered to be available.

The SCADA system at Main and Backup control centres is checked for healthiness on daily basis based on Server logs and system alarms of SCADA system in Hardware and Software levels. Daily check on healthiness of SCADA system components such as Servers, Networks, and Processes etc. is made by the system integrator and kept in record.

(c) Measurement & Computation of SCADA Availability

There are different levels of severities depending upon the criticality of the failures. Loss of SCADA system to control room is categorised as Severity 1. The severity matrix as per maintenance contract is given below:

Category	Definition
Severity 1 - Urgent	Complete system failure, severe system instability, loss or failure of any major subsystem or system component such as to cause a significant adverse impact to system availability, performance, or operational capability
Severity 2 - Serious	Degradation of services or critical functions such as to negatively impact system operation. Failure of any redundant system component such that the normal redundancy is lost Non-availability of System Integrator's Man-power at Control Centre during working hours, non-availability of spares
Severity 3 – Minor	Any other system defect, failure, or unexpected operation
Severity 4 - General/ Technical Help	Request for information, technical configuration assistance, "how to" guidance and enhancement requests

If due to any fault/malfunction real time grid operations get affected, down time is recorded for the period for which the fault I malfunctioning persist.

For example, if both Main & Back up Servers of SCADA system are down and Grid operators are not getting any data through SCADA system, the incident is considered with highest severity and contributes to unavailability.

As Communication networks are provided by the ULDC/POWERTEL/Third party lease lines, RLDC does not have direct control over the availability of each links. As such the data outage due to communication network is not considered under SCADA availability calculation.

The downtime for all such incidents reported in a month are accumulated to arrive at the total system downtime in that Month based on the status of servers stored in

SCADA database, month wise %age availability in terms of hours & % age is calculated. The same is compiled for computation of monthly/ quarterly availability of the SCADA system

23. The Petitioner in its petition has submitted that SCADA system at WRLDC Main Control Centre acquires real time data from Remote Terminal Unit (RTU) /Sub-station Automation System (SAS) for Central Sector Stations and IPPs, ISTS sub-stations in Western Region, either through Unified Load Despatch and Communication (ULDC) network or through POWERTEL communication network. Main reason reasons of outages of real-time data are listed below:

S. No.	Description	Remarks
1	Failure of critical Servers (hardware level)	Maintained by AMC vendor
2	Failure of critical Applications (software level)	Maintained by AMC vendor
3	Communication equipment failure	Provided and maintained by POWERGRID / Communication provider
4	Communication links failure	Provided and maintained by POWERGRID / Communication Provider

24. The Petitioner has submitted that telemetered data for State sector stations report to WRLDC through respective SLDCs over the inter control centre communication protocol (ICCP), primarily using the ULDC network. The Petitioner has submitted that WRLDC has backup control centre at different location receiving telemetered data independently through terminal server and State back control centers. The Petitioner has submitted that WRLDC has ensured redundant data links from all terminal server locations with dual reporting to both main and backup control centers. Due to different level of hierarchy of back-ups, WRLDC is able to achieve zero downtime of the SCADA system.

25. The total weightage for this parameter is 10. The Petitioner has submitted percentage availability of 12 months (April 2017 to march, 2018) is 100. The marks claimed by the petitioner is as follows:

KPI-4: Availability of SCADA		
Name of NLDC / RLDC : National Load Despatch Centre		
Sl no	Month	% Availability
1	April'17	100.00
2	May'17	100.00
3	June'17	100.00
4	July'17	100.00
5	August'17	100.00
6	September'17	100.00
7	October'17	99.98
8	November'17	100.00
9	December'17	100.00
10	January'18	100.00
11	February'18	100.00
12	March'18	100.00
	Average of 12 months	100.00

Performance during the financial year 2017-18*	**99.998**
Marks scored (In proportion of the percentage performance above)	**9.999**
* Average of 12 months	

26. We have considered the submission of the Petitioner. We have worked out the average of 12 months as 99.998. Accordingly, as per Appendix VI of the RLDC Fees and Charges Regulations 2015, the weightage for availability of SCADA is considered 9.999 out of 10.

KPI-5: Voltage Deviation Index

27. The total weightage for the parameter Voltage Deviation Index (VDI) is 10. The Petitioner has submitted the details of VDI as under:

KPI-5: Voltage Deviation Index (VDI)				
Name of the Region: Western Regional Load Despatch Centre				
S. No.	**Name of the 400/765 kV substation**	**Intimation to utilities through Daily reports for corrective action or not**	**Intimation to utilities through weekly reports for corrective action or not**	**Intimation to utilities through monthly reports for corrective action or not**
A	B	C	D	E
1	400 kV Indore	Yes	Yes	Yes
2	400 kV Itarsi	Yes	Yes	Yes
3	400 kV Bhopal	Yes	Yes	Yes
4	400 kV Karad	Yes	Yes	Yes
5	400 kV Dhule	Yes	Yes	Yes
6	400 kV Asoj	Yes	Yes	Yes
7	400 kV Kasor	Yes	Yes	Yes
8	400 kV Bhilai	Yes	Yes	Yes
9	400 kV Jetpur	Yes	Yes	Yes
10	400 kV Gwalior	Yes	Yes	Yes
11	400 kV Nagda	Yes	Yes	Yes
12	400 kV Khandwa	Yes	Yes	Yes
13	400 kV Damoh	Yes	Yes	Yes
14	400 kV Raigarh	Yes	Yes	Yes
15	400 kV Parli	Yes	Yes	Yes
16	765 kV Sipat	Yes	Yes	Yes
17	765 kV Seoni	Yes	Yes	Yes
18	765 kV Gwalior	Yes	Yes	Yes
19	765 kV Bina	Yes	Yes	Yes
20	765 kV Sasan	Yes	Yes	Yes
21	765 kV Indore	Yes	Yes	Yes
22	765 kV Satna	Yes	Yes	Yes

28. The Petitioner has submitted that VDI is calculated in line with the methodology specified in Appendix VI of CERC (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2015. Voltage deviation index of important substations is calculated on daily, weekly as well as monthly basis and same

is intimated to utilities via daily, weekly and monthly reports. VDI for each important station is calculated as the percentage of time the voltage was outside the IEGC range (380-420 kV at 400 kV level, 728-800 kV at 765 kV level). For this purpose, data recorded by SCADA is used. The percentage of samples lying outside the IEGC specified range constitutes the VDI for the station. A sample calculation is shown below:

Sample VDI calculation for a typical day at a 765 kV substation in WR

Sub-Station	%age of time Voltage below 728 kV	%age of time Voltage between 728 kV & 800kV	%age of time Voltage above 800 kV	Voltage deviation index (%age of time voltage is outside IEGC band)	Maximum Voltage (kV)	Minimum Voltage (kV)	Average Voltage (kV)
Indore	0.00%	100.00%	0.00%	0.00%	785	755	772

Sample VDI calculation for a typical day at a 400 kV substation in WR

Sub-Station	%age of time Voltage below 380 kV	%age of time Voltage between 380 kV & 420 kV	%age of time Voltage above 420 kV	Voltage deviation index (%age of time voltage is outside IEGC band)	Maximum Voltage (kV)	Minimum Voltage (kV)	Average Voltage (kV)
Raipur	0.00%	97.15 %	2.85 %	0.03 %	424	405	413

Accordingly, Corrective actions are being taken in Real Time Grid Conditions, by WRLDC. Apart from these, based on feedback from RLDCs, region wise persistent High Voltage and Low Voltage issues are being reported in 'NLDC Operational feedback' every quarter. As an example, the web link for quarterly operational feedback available at NLDC website is given under:

https://posoco.in/documents/operational-feedback-on-transmission-constraints/

nodes in Western Region experiencing low/high voltage in the quarter April – June 2017 are listed on page no. 102-105 of the NLDC quarterly 'Operational Feedback' dated 21.07.2017. This information is being discussed in meetings of the Standing Committee (SCM) on Power System Planning with all the stake holders. Corrective action is also being discussed in Operation Coordination Committee (OCC) meetings of WRPC.

WRLDC also uploads the information on Voltage Deviation Index (VDI) on its website on daily, weekly and monthly basis as a part of its Daily, Weekly and Monthly reports. The relevant web links are given under:

KPI-5 (VDI)	**Web Link on WRLDC website**
Daily VDI	http://59.185.241.150:8080/pentaho/api/repos/%3Ahome%3Awrldc%3AControl%20Room%3APower%20Supply%20Position%20Report.prpt/viewer?userid=wrldc&password=password
Weekly VDI	http://www.wrldc.org/content/182_1_WeeklyMISReports.aspx
Monthly VDI	http://www.wrldc.org/content/186_1_MonthlyMISReports.aspx

29. The Petitioner has submitted that persistent problems of low/high voltage are identified in the quarterly operational feedback submitted to CTU and CEA. The total weightage given for this parameter is 10. The Petitioner has submitted performance-wise details as under:

Performance during financial year 2017-18*	**100**
Marks scored (In proportion of the percentage performance above)	**10**
* Formula for performance calculation	[((No.of daily reports issued (to be derived from column C/365(Total no.of days in financial year 2017-18)*100)+(No. of weekly reports issued (to be derived from column D)/ 52 (Total no. of weeks in financial year 2017-18)*100)+(No. of monthly reports issued (to be derived from column E/12)*100))]/3

30. The Petitioner has submitted that Clause 3.10 of the WRLDC Operating Procedure, 2016 provides the corrective actions to be taken in the event of high voltage and low voltage. The relevant extract of the Clause 3.10.1 of the WRLDC Operating Procedure, 2016 is extracted as under:

3.10.1 High voltage

" On observing the High voltage at sub-stations (e.g. 400 kV bus voltages going above 410 kV), the following specific steps would be taken by the respective grid substations/generating station in their own, unless specifically mentioned by SLRDC otherwise:

a) The bus reactors be switched in
b) The manually switchable capacitor banks be taken out
c) The switchable line/tertiary reactors are taken in.
*d) Optimize the filter banks at HVDC terminal. ****
e) All the generating units connected on bar shall absorb reactive power within capability limits of the respective generating units.
f) Operate synchronous condensers wherever available, for VAR absorption.
g) Operate hydro generators/gas turbines as synchronous condenser for VAR absorption wherever such facility is available.
h) Re-route the power flows between HVDC links to control voltage rise.
i) Open one of the lightly loaded double circuit and single circuit lines in consultation with WRLDC, keeping in view the security of the balance network. Line Opening would be the Last Resort by WRLDC after receipt of message from the constituents. Details of measures taken needed to be communicated in the line opening request message. The request for line opening should be as per format enclosed at Annexure 12.

3.10.2 Low voltage

On observing low voltage (e.g. 400 kV bus voltages going down below 390 kV), the following specific steps would be taken by the respective grid substations/generating station at their own, unless specifically mentioned by WRLDC otherwise:

a) Close the lines which were opened to control high voltage, in consultation with WRLDC.
b) The bus reactors be switched out.
c) The capacitor banks be switched in.
d) The switchable line/tertiary reactors are taken out.
*e) Optimize filter banks at HVDC terminal. ****
f) All the generating units shall generate reactive power within capability limits of the respective generating units.
g) Operate synchronous condensers wherever available, for VAR generation.
h) Operate hydro generators/gas turbines as synchronous condenser for VAR generation, wherever such facility is available.
i) Re-route the power flows between HVDC links to improve voltages."

31. The Petitioner has submitted that corrective actions are being taken in Real Time Grid Conditions by WRLDC. The Petitioner has submitted that apart from these, persistent high voltage and low voltage are being reported every quarter to the NLDC operational feedback.

32. We have considered the submission of the Petitioner. Accordingly, as per Appendix VI of the RLDC Fees and Charges Regulations 2015, the weightage for Voltage Deviation Index (VDI) is allowed as 10 out of 10.

KPI-6: Frequency Deviation Index

33. The Petitioner has submitted that Frequency Deviation Index (FDI) is calculated as the percentage of time frequency is outside the Grid Code band. The total weightage for FDI is 10. The Petitioner has submitted moth wise details of FDI i.e. April, 2017 to March, 2018.

34. FDI is calculated as the percentage of time frequency is outside IEGC band. Ten second synchrophasor data is used for the calculation. The percentage of samples

lying below 49.90 Hz and above 50.05 Hz together constitutes FDI. The sample is shown below:

Date	Percentage of time frequency is			Freq. Deviation Index (FDI)	Average Frequency (Hz)
	<49.90 Hz	49.90 - 50.05 Hz	>50.05 Hz		
01-06-17	13.16	77.05	9.79	22.95	49.97

35. The deviation indices are being reported on daily basis for the critical nodes along with weekly and monthly reporting as per Regulation. The possible no. of reports which could be generated (365 for daily, 52 for weekly and 12 for monthly) has been converted to KPI scores based on the actual reporting. WRLDC uploads the information regarding FDI on its website on daily, weekly and monthly basis as a part of its daily, weekly and monthly reports for which the relevant web links are as under:

KPI-6 (FDI)	Web Link on WRLDC website
Daily FDI	http://59.185.241.150:8080/pentaho/api/repos/%3Ahome%3Awrldc%3AControl%20Room%3APower%20Supply%20Position%20Report.prpt/viewer?userid=wrldc&password=password
Weekly FDI	http://www.wrldc.org/content/182_1_WeeklyMISReports.aspx
Monthly FDI	http://www.wrldc.org/content/186_1_MonthlyMISReports.aspx

36. The total weightage for this parameter Reporting of frequency deviation index (FDI) is 10. The Petitioner has submitted the following reports of system reliability The details of KPI-VI are as under:

KPI-6: Frequency Deviation Index (FDI)				
Name of the Region: Western Regional Load Despatch Centre				
A	B	C	D	E
S. No.	Month	Intimation to utilities through Daily reports for corrective action or not	Intimation to utilities through weekly reports for corrective action or not	Intimation to utilities through monthly reports for corrective action or not
1	Apr-17	Yes	Yes	Yes
2	May-17	Yes	Yes	Yes
3	Jun-17	Yes	Yes	Yes
4	Jul-17	Yes	Yes	Yes
5	Aug-17	Yes	Yes	Yes
6	Sep-17	Yes	Yes	Yes
7	Oct-17	Yes	Yes	Yes
8	Nov-17	Yes	Yes	Yes
9	Dec-17	Yes	Yes	Yes
10	Jan-18	Yes	Yes	Yes
11	Feb-18	Yes	Yes	Yes
12	Mar-18	Yes	Yes	Yes

Performance during financial year 2017-18*	**100**
Marks scored (In proportion of the percentage performance above)	**10**
*Formula for performance calculation	[((No. of daily reports issued (to be derived from column C/365(Total no.of days in financial year 2017-18))*100)+(No. of weekly reports issued(to be derived from column D)/ 52 (Total no. of weeks in financial year 2017-18))*100)+(No. of monthly reports issued (to be derived from column E/12)*100))]/3

37. We have considered the submission of the Petitioner. Petitioner has provided FDI reports as per Regulation. Accordingly, as per Appendix VI of the RLDC Fees and Charges Regulations 2015, the weightage for Frequency Deviation Index (FDI) is considered 10 out of 10.

KPI-7: Reporting of System Reliability

38. The Petitioner has submitted that deviation indices are being reported on daily basis for the critical nods along with weekly and monthly as per the Fees and Charges Regulations. The Petitioner has submitted that the possible number of reports which could be generated (365 for daily, 52 for weekly and 12 for monthly) have been converted to KPI scores based on the actual reporting.

39. The total weightage for this parameter Reporting of System Reliability (RSR) is 10. The Petitioner has submitted the following reports of system reliability:

(a) Reporting of (N-1) violations (To be reported to CERC)

S.No.	Month	Intimation to utilities through Daily reports for corrective action or not	Intimation to utilities through weekly reports for corrective action or not	Intimation to utilities through monthly reports for corrective action or not
A	B	C	D	E
1	April 17	Yes	Yes	Yes
2	May, 17	Yes	Yes	Yes
3	June'17	Yes	Yes	Yes
4	July'17	Yes	Yes	Yes
5	August17	Yes	Yes	Yes
6	September,17	Yes	Yes	Yes
7	October 17	Yes	Yes	Yes
8	November 17	Yes	Yes	Yes
9	December17	Yes	Yes	Yes

10	January 18	Yes	Yes	Yes
11	February 18	Yes	Yes	Yes
12	March 18	Yes	Yes	Yes

X*	**100**
*Formula	[((No. of daily reports issued (to be derived from column C/365(Total no. of days in financial year 2017-18))*100)+(No. of weekly reports issued(to be derived from column D) /52 (Total no. of weeks in financial year 2017-18))*100)+(No. of monthly reports issued (to be derived from column E/12)*100))]/3

(b) Reporting of ATC violations (To be reported to CERC)

S.No.	Month	Intimation to utilities through Daily reports for corrective action or not	Intimation to utilities through weekly reports for corrective action or not	Intimation to utilities through monthly reports for corrective action or not
A	B	C	D	E
1	April 17	Yes	Yes	Yes
2	May17	Yes	Yes	Yes
3	June17	Yes	Yes	Yes
4	July17	Yes	Yes	Yes
5	August 17	Yes	Yes	Yes
6	September 17	Yes	Yes	Yes
7	October 17	Yes	Yes	Yes
8	November17	Yes	Yes	Yes
9	December 17	Yes	Yes	Yes
10	January 18	Yes	Yes	Yes
11	February 18	Yes	Yes	Yes
12	March18	Yes	Yes	Yes

Y*	**100**
*Formula	[((No. of daily reports issued (to be derived from column C/365(Total no. of days in FY 2017-18))*100)+(No. of weekly reports issued(to be derived from column D) /52 (Total no. of weeks in FY 2017-18))*100)+(No. of monthly reports issued (to be

	derived from column E/12)*100))]/3

(c) Reporting of Angle difference between important buses (To be reported to CERC)

S.No.	Month	Intimation to utilities through Daily reports for corrective action or not	Intimation to utilities through weekly reports for corrective action or not	Intimation to utilities through monthly reports for corrective action or not
A	B	C	D	E
1	April 17	Yes	Yes	Yes
2	May17	Yes	Yes	Yes
3	June17	Yes	Yes	Yes
4	July17	Yes	Yes	Yes
5	August 17	Yes	Yes	Yes
6	September 17	Yes	Yes	Yes
7	October 17	Yes	Yes	Yes
8	November17	Yes	Yes	Yes
9	December 17	Yes	Yes	Yes
10	January 18	Yes	Yes	Yes
11	February 18	Yes	Yes	Yes
12	March18	Yes	Yes	Yes

Z*	**100**
*Formula	[((No. of daily reports issued (to be derived from column C/365(Total no. of days in FY 2017-18))*100)+(No. of weekly reports issued(to be derived from column D) 52 (Total no. of weeks in FY 2017-18))*100)+(No. of monthly reports issued (to be derived from column E/12)*100))]/3

Performance during financial year 2017-18*=	**100**
Marks scored (In proportion of the percentage performance above)	**10**
*Formula	**(X+Y+Z)/3**

40. The Petitioner has submitted that violation of percentage of times N-1 criteria in the inter-regional corridors is being reported by WRLDC on daily, weekly and monthly basis on the following web links:

KPI-7	**Web Link given on WRLDC website**
Daily reporting	https://posoco.in/reports/system-reliability-indices/daily-vdittcatc/daily-vdittcatc-2017-18/
Weekly reporting	https://posoco.in/reports/system-reliability-indices/weekly-vdittcatc/weekly-vdittcatc-2017-18/
Monthly reporting	https://posoco.in/reports/system-reliability-indices/monthly-vdittcatc/monthly-vdittcatc-2017-18/

The Petitioner has placed on record the Reports of 12 months (April 2017 to March 2018) indicating N-1 criteria violations**.**

(ii) With regard to (b) above, the Petitioner has submitted that violation of percentage of times ATC (i.e. Available Transfer Capability) in the inter-regional corridors is being reported by WRLDC on daily weekly and monthly basis on the following web links:

KPI-7	**Web Link given on WRLDC website**
Daily reporting	https://posoco.in/reports/system-reliability-indices/daily-vdittcatc/daily-vdittcatc-2017-18/
Weekly reporting	https://posoco.in/reports/system-reliability-indices/weekly-vdittcatc/weekly-vdittcatc-2017-18/
Monthly reporting	https://posoco.in/reports/system-reliability-indices/monthly-vdittcatc/monthly-vdittcatc-2017-18/

(iii) With regard to (c) above, the Petitioner has submitted that the percentage of times the angular difference on important buses was beyond the permissible limits and the same is being reported by WRLDC on daily, weekly and monthly basis on the following web links:

KPI-7	Web Link given on WRLDC website
Daily reporting	http://wrldc.in/content/176_1_AngularSeperationReports.aspx?FTPUrl=Angular
Weekly reporting	http://www.wrldc.org/content/182_1_WeeklyMISReports.aspx
Monthly reporting	http://www.wrldc.org/content/186_1_MonthlyMISReports.aspx

The Petitioner has placed on record the monthly reports (April 2017 to March 2018) on angular difference between important buses.

41. The Petitioner has submitted the score for KPI No-7 (Reporting of System Reliability) as 10 out of 10. Accordingly, as per Appendix VI of the RLDC Fees and Charges Regulations 2015, the weightage for reporting system reliability is allowed as 10 out of 10.

KPI-8: Availability of website

42. In regard to the availability of websites the Petitioner has submitted the following:

(i) Redundancy of ISPs & webservers:

In order to maintain continuous availability of website WRLDC maintains two websites (viz. WRLDC.org and WRLDC.in) which are identical to each other in all respects. The two web sites are hosted from two different servers through two different internet service providers (ISP). Each ISP supports one of the two websites (WRLDC.org & WRLDC.in). The selection of two service providers has been done judiciously after scrutinizing their infrastructure up to WRLDC building. This ensures adequate redundancy necessary for uninterrupted access to WRLDC website.

(ii) Checking the website availability:

For evaluation of website availability, Each ISP availability is commercially linked to the quarterly payment through a service level agreement (SLA) mechanism. Further, each ISP link availability is verified from the fire-wall analyzer at WRLDC.

Each website server generates its server logs, which automatically maintains the list of activities it performed. Thus, any instant of server failure (if any) is captured through these server logs. These systems generated logs are used for calculation of monthly availability of WRLDC website.

Depending upon the availability of website, month-wise % age availability has been calculated. Then, %age average availability of 12 months has been proportionately converted to marks scored.

43. The total weightage for the parameter “availability of website” is 10. The Petitioner has submitted the details of percentage of availability of website for all 12 months (April,2017 to March,2018) as 100%. The details of marks scored are as follows:

Performance during financial year 2017-18*	**100**
Marks scored (In proportion of the percentage performance above)	**10**
* Average of 12 months	

44. We have considered the submission of the Petitioner. The Petitioner has reported availability of website as 100%. Accordingly, the weightage allowed for availability of website is 10 out of 10.

KPI-9: Availability of Standby power supply

45. The Petitioner has submitted that powers to all the critical infrastructures are supplied through redundant UPS system and battery system. Inputs to these UPS are being supplied either through incoming feeders or DG sets (in case of failure of main inputs). These auxiliary systems are also under AMC and are being checked/tested on regular basis. The Petitioner has submitted that trial runs are carried out on weekly basis to check the DG set availability and daily records are being maintained at each of the locations. The Petitioner has submitted the month-wise percentage in line with the methodology of incentive calculation prescribed in Regulation 29 (5) of the Fees and Charges Regulations. The Petitioner has submitted that percentage performance has been proportionately converted to marks scored.

46. The Petitioner has submitted the details of percentage of availability of standby power supply" for all 12 months (April, 2017 to March, 2018) as 100%. The total weightage for the parameter "availability of standby power supply" is 5. The Petitioner has submitted availability of standby power supply as under:

Performance during financial year 2017-18*	**100**
Marks scored (In proportion of the percentage performance above)	**5**
* Average of 12 months	

47. We have considered the submission of the Petitioner. The Petitioner has claimed availability of standby power supply as 100%. Weightage allowed for availability of standby power supply is considered as 5 out of 5.

KPI-10: Variance of Capital expenditure

48. The total weightage for the parameter "Variance of capital expenditure" is 5.The Petitioner has submitted the details of Variance of Capital Expenditure as under:

(Rs.in lakh)

Capital Expenditure allowed by CERC (A)	Actual Expenditure incurred (B)	% Variation C= ABS (A-B)/A)*100
156.00	385.37	147.03

49. The Petitioner has submitted that the amount considered in the column A above is for the control period 2014-19 as per the Fees and Charges Regulations. The Petitioner has submitted that in Column B, value as per balance sheet for the year 2017-18 has been considered.

Performance during FY 2017-18*:	**54.32**

*** Formula**	**IF(C>10, 100-(C-10)/3,100)#**
Marks Scored (in proportion of the %age performance above)	2.72
* Average of 12 months	
# Up to 10% variation, performance is proposed to be considered 100% and for any additional 3% variation beyond intitial 10%, performance shall be decrease by 1% in line with the methodology of the incentive calculation prescribed in Regulation 29(5) of the Fees and Charges Regulations.	

50. The Petitioner has submitted that figures indicated in the present petition have been considered as targets and the figure as per the balance sheet have been considered as actual performance. The Petitioner has submitted that

limit of upto 10% variation has been considered for claiming 100% performance and for any additional 3% variation beyond initial 10%, performance shall decrease by 1% in line with the methodology of the incentive calculation prescribed in the Regulation 29(5) of the Fees and Charges Regulations. The Petitioner has submitted that percentage performance has been proportionately converted to marks scored.

51. We have considered the submission of the Petitioner. The weightage allowed for variance of capital expenditure is considered as 2.716 out of 5.

KPI-11: Variance of Non-Capital expenditure

52. The total weightage for the parameter “variance of non-capital expenditure” is 5. The Petitioner has submitted the details of variance of non-capital expenditure as under:

(Rs.in lakh)

Non Capital Expenditure allowed by CERC (A)	Actual Expenditure incurred (B)	% Variation C= ABS(A-B)/A)*100

2470.36	2234.11	9.56
In the Non-Capital Expenditure, HR Expenses, O&M Expenses have been considered. In column A, figures as per the RLDCs Fees and Charges Orders by CERC for the control period 2014-19 have been considered. In Column B, value as per Balance Sheet of FY 2017-18 has been considered.		

Performance during financial year 2017-18*	**100**
***Formula**	**IF(C>10,100-(C-10)/3,100)#**
Marks Scored (in proportion of the percentage performance above)	5
*Average of 12 months	
# Up to 10% variation, performance is proposed to be considered 100% and for any additional 3% variation beyond initial 10%, performance shall be decrease by 1% in line with the methodology of the incentive calculation prescribed in Regulation 29(5) of the RLDC Fees and Charges Regulations.	

53. We have considered the submission of the petitioner. It is observed that the actual expenditure incurred as per balance sheet furnished by the petitioner comes out to be Rs 2746.77 lakh. Accordingly, percentage variation is computed as 11.19%. The weightage for variance of non-capital expenditure is allowed as 4.98 out of 5.

KPI-12: Percentage of certified employees

54. The Petitioner has submitted that the pursuant to recommendations of G.B. Pradhan Committee, a framework was developed for System Operators from the States and POSOCO for training and certification by certifying agency, i.e. NPTI. The Petitioner has submitted that framework provides for Basic Level, Specialist Level and Management Level Courses. Till date 6 Basic Level certification and 5 specialist level certifications have been introduced (Two on Regulatory Framework in Power Sector,

Two on Power System Reliability and one on Power System Logistics). The examinations are held online on an all India basis. Basic Level Certification is a foundation level exam where all System Operators in the country can appear, whereas, specialist level exams focus on a particular area of expertise. Validity duration of both the certificates is three years. Eligible System Operators are required to have at least one valid certificate to be considered as certified.

The term "Eligible" in the preceding paragraph includes all executives who are deployed in Technical Functions in the respective RLDC/ NLDC on the cut-off date i.e. (excluding HR, Finance, Legal, Company Secretariat, Executive Secretaries etc.).

"No. of Employees Certified"- is number of eligible employees who have at least one valid certificate (either basic level or specialist level) on the date specified

55. The total weightage for the parameter "percentage of certified employees" is 5. The Petitioner has submitted the details of percentage of certified employees as under:

No. of Employees for Certification as on 31.3.2015(A)	No. of Employees for Certification as on 31.3.2015(B)	Percentage of Employees Certified as on 31.3.2015 (C=B/A*100)
58	50	86.21

Performance during financial year 2017-18*	**100**
***Formula**	**IF [C<85,(100-(85-C)/3),100]#**
Markes Scored (in proportion of the %age performance above)	5.000
* Average of 12 months	
#Upto 85% certification, performance is proposed to be considered 100% and for certification below 85%, performance shall decrease by 1% for every 3 % decrease	

in the certification in line with the methodology of the Incentive calculation prescribed in the Regulation 29(5) of the RLDC Fees and Charges Regulations 2015

56. As per the methodology of the incentive specified in Regulation 29 (5) of the Fees and Charges Regulations, for certification upto 85%, performance would be considered 100% and for certification below 85%, performance would be decreased by 1% for every 3% decrease in the certification. Accordingly, the weightage for percentage of certified employees is considered as 5 out of 5.

57. We have considered the submissions of the Petitioner with regard to KPI. The following KPIs are allowed as per the methodology specified in Appendix-V of the RLDC Fees and Charges Regulations:

Sl. No	Key Performance Indicators	Weightage	Petitioner claimed for financial year 2017-18	Allowed
1	Reporting of Interconnection meter error	**10**	10.00	10.000
2	Reporting of Grid Incidents and Grid Disturbance	**10**	10.00	10.000
3	Average processing time of shut down request	**10**	10.00	10.000
4	Availability of SCADA System	**10**	10.00	9.999
5	Voltage Deviation Index (VDI)	**10**	10.00	10.000
6	Frequency Deviation Index (FDI)	**10**	10.00	10.000
7	Reporting of System Reliability	**10**	10.00	10.000
8	Availability of Website	**10**	10.00	10.000
9	Availability of Standby Supply	**5**	5.00	5.000
10	Variance of Capital expenditure	**5**	2.72	2.716
11	Variance of Non Capital expenditure	**5**	5.00	4.980
12	Percentage of Certified Employee	**5**	5.00	5.000
	Total	**100**	**97.72**	**97.695**

58. Perusal of the above table reveals that the Petitioner has achieved 97.695% Key Performance Indicators out of 100%. Further, the Commission in its Order dated 10.06.2019 in Petition No. 344/MP/2018 has provided as under:

"*62.*
…….in exercise of provisions of "Power to Relax" under Regulation 35 of Fees and Charges Regulations, 2015 we hereby relax Regulation 29(5) of Fees and Charges Regulations, 2015 and direct that RLDCs or NLDC, as the case may be, shall be allowed to recover incentive of 15% of annual charges post implementation of pay revision w.e.f 1.1.2017 subject to ceiling as per DPE Guidelines in place of 7%, keeping other provisions of Regulation 29(5) same. In case of shortfall as per DPE Guideline, the balance amount shall be paid from the LDCD fund."

59. In view of the above, the petitioner is allowed to recover 16.539% of annual charges for the financial year 2017-18 subject to ceiling as per DPE Guidelines. In case of shortfall as per DPE Guideline, the balance amount shall be paid from the LDCD fund.

60. The Petition No. 92/MP/2019 is disposed of in terms of the above.

Sd/-	**Sd/-**	**Sd/-**
(I. S. Jha)	**(Dr. M. K. Iyer)**	**(P.K. Pujari)**
Member	**Member**	**Chairperson**