CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 45/MP/2018

Coram:

Shri P.K.Pujari, Chairperson

Shri A.K Singhal, Member

Dr. M. K. Iyer, Member

Date of Order: 09.10.2018

In the matter of

Petition under of 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 NLDC for the financial year 2016-17 with reference to NLDC Charges for the control period 1.4.14 to 31.3.2019.

And in the matter of

National Load Despatch Centre
Power System Operation Corporation Ltd. (POSOCO)
B-9, Qutub Institutional Area, 1st Floor,
Katwaria Sarai, New Delhi -110016 ….**Petitioner**

Vs

1. Uttar Pradesh Power Corporation Limited (UPPCL),
Shakti Bhawan, 14-Ashok Marg,
Lucknow-226001

2. Government of J&K,
Civil secretariat,
Srinagar, J&K.

3. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg, Jaipur-302005

4. Punjab State Electricity Board,
The Mall, Patiala-147 001

5. Haryana Vidyut Prasaran Nigam Limited,
Shakti Bhawan, Sector-6,
Panchkula-134109.

6. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110 002

7. Himachal Pradesh State Electricity Board,
Kumar House, Vidyut Bhawan,
Shimla-171004

8. Power Transmission Corporation of Uttarakhand Limited,
7-B, Lane No-1, Vasant Vihar Enclave,
Dehradun-248001

9. Electricity Department,
UT Chandigarh, Sector 9-D,
UT Chandigarh-160019

10. North Central Railway,
GM Office Building,
Allahabad, UP.

11. NRTS-I, Power grid Corporation of India Ltd.,
B-9, Qutab Institutional Area,
New Delhi-110016

Users under the category of Generating Stations and Sellers

12. Singrauli Super Thermal Power Station,
Shakti Nagar, UP-231222

13. Singrauli Solar PV Power Project,
Shakti Nagar, UP-231222

14. Rihand Super Thermal Power Station-I,
Rihand Nagar, UP-231223

15. Rihand Super Thermal Power Station-II,
Rihand Nagar, UP-231223

16. Rihand Super Thermal Power Station-III,
NTPC Rihand, Dist-Sonbhadra, UP – 231223

17. Dadri, National Capital Power Project,
Dadri Dhaulana Road, Distt. Gautam Buddh Nagar,
UP-201008

18. Dadri – Stage - II, National Capital Power Project,
Dadri Dhaulana Road, Distt. GautamBuddh Nagar,
UP-201008

19. Firoz Gandhi Unchahar Thermal Power Project-I,
Unchahar, Distt. Raibareilly, UP

20. Firoz Gandhi Unchahar Thermal Power Project-II,
Unchahar,Distt. Raibareilly, UP

21. Firoz Gandhi Unchahar Thermal Power Project-III,
Unchahar, Distt. Raibareilly, UP

22. Firoz Gandhi Unchahar Solar PV Power Project,
Unchahar, Distt. Raibareilly, UP

23. Dadri Gas Power Project,
Dhaulana Road, Distt. Gautam Buddh Nagar,
UP-201008

24. Dadri Solar PV Power Project,
Dhaulana Road, Distt. Gautam Buddh Nagar,
UP-201008

25. Auraiya Gas Power Project
(Gas Fired, RLNG Fired, Liquid Fired), Dibiyapur,
Distt Etawah, UP-206244

26. Anta Gas Power Project
(Gas Fired, RLNG Fired, Liquid Fired),
Distt. Baran, Rajasthan-325209

27. Koldam HPP, NTPC,
Post- Barman, Dist- Bilaspur,
Himachal Pradesh 174013

28. Narora Atomic Power Station,
Narora, Distt. Bulandshahar,
UP-202389

29. Rajasthan Atomic Power Station-B,
NPCIL Rawatbhata, PO- Anu Shakti, Kota,
Rajasthan-323303

30. Rajasthan Atomic Power Station-C,
(RAPS-5&6) NPCIL Rawatbhata, PO-Anushakti,
Kota, Rajasthan-323303

31. Bairasiul Hydro Electric Project,
NHPC Ltd.,Surangini, Distt. Chamba,
HP-176317

32. Salal Hydro Electric Project,
NHPC Ltd, Jyotipuram, Distt. Udhampur,
J&K-182312

33. Tanakpur Hydro Electric Project,
NHPC Ltd., Banbassa, Distt. Champawa,
Uttrakhand-262310

34. Chamera-I Hydro Electric Project,
NHPC Ltd., Khairi, Distt. Chamba,
HP-176310

35. Uri Hydro Electric Project,
NHPC Ltd., Mohra, Distt. Baramulla,

J&K-193122

36. Chamera-II Hydro Electric Project,
NHPC Ltd., Karian, Distt. Chamba,
HP-176310

37. Chamera-III Hydro Electric Project,
NHPC Ltd.,Dharwala,Distt.- Chamba,
HP-176311

38. Dhauliganga Hydro Electric Project,
NHPC Ltd., Tapovan, Dharchula, Pithoragarh,
Uttrakhand-262545

39. Dulhasti Hydro Electric Project,
NHPC Ltd., Chenab Nagar, Distt. Kishtwar,
J&K-182206

40. Uri 2 Hydro Electric Project,
NHPC Ltd., Nowpura, Distt. Baramulla,
J&K-193123

41. Parbati HE Project Stage-III Behali,
P.O- Larji Kullu 175122
Himachal Pradesh

42. Sewa-II Power Station,
NHPC Ltd. Maska, Dist: Kathua,
Jammu and Kasmir -176325

43. Satluj Jal Vidyut Nigam Ltd. Power Project,
Jhakri, Rampur, Distt. Shimla,
HP-172201

44. Rampur HEP, Satluj Jal Vidyut Nigam Ltd. Power Project,
Jhakri, Rampur, Distt.
Shimla, HP-172201

45. Tehri Hydro Development Corporation Ltd.,
Bhagirath Puram, Tehri,
Uttrakhand-249001

46. Koteshwar HEP, THDCIL,

Koteshwerpuram, Post Office- Pokhari Tehri Garwal,
Uttarakhand -249002

47. ADHPL, Village- Prini,
PO -Jagat Sukh, Tehsil - Manali,
Distt- Kullu (H.P) India.

48. Indra Gandhi Super Tharmal Power Project,
PO -Jharli, Tahsil Matanhail, Dist – Jhajjar,
(Haryana)-124125

49. Karcham Wangtoo HEP,
Himachal Baspa Power Company Limited,
Sholtu Colony, PO- Tapti,
Dist-Kinnaur, H.P -172104

50. Malana - II Everest Power Pvt. Ltd,
Hall-A/ First Floor Plot No-143-144,
Udyog Vihar, Phase -4, Gurgaon,
Haryana 122015

51. Shree Cement Thermal Power Project
Bangurnagar, Beawar , District Ajmer,
Rajasthan -305901

52. Greenco Budhil HPS Ltd,
Plot No. 1367 Road No- 45, Jubilee Hills,
Hyderabad- 500033

53. Himachal Sorang Power Limited,
D-7, Lane-I, Sector-I, New Shimla,
Shimla, H.P.-171009.

54. Bhakra Power House,
BBMB, Tehsil Nangal Township,
Distt. Ropar (Punjab)

55. Indira Gandhi Super Thermal Power Project,
Aravali Power company Private Limited, P.O.: Jharli,
Dist – Sorang, Jhajjar

Users under the category of Inter State Transmission Licensees

56. NRTS-I, Power Grid Corporation of India Ltd.,
B-9, Qutab Institutional Area,
New Delhi-110016

57. Powerlinks Transmission Ltd.,
10th Floor, DLF Tower-A, District Centre,
Jasola, New Delhi-110044

58. Jaypee Powergrid Ltd.
JIIT Basement, Sector -128 Noida- U.P

59. APL, Business Development,
Achalraj, Opp Mayor Bungalow, Law Garden,
Ahmedabad 380009.

60. NRTS-I, Parbati Koldam Transmission Company LTD.,
B-9, Qutab Institutional Area,
New Delhi-110016

61. Indira Gandhi Super Thermal Power Project,
Aravali Power company Private Limited,
P.O.: Jharli, Dist-Jhajjar

Users of WRLDC
Users under the category of Distribution Licensees and Buyers

62. MSEDCL, Prakashgadh,
5th Floor, Bandra East, Maharashtra
Mumbai 400051.

63. GUVNL, Sardar Patel Vidyut Bhavan
Race Course Gujarat,
Vadodara 390007.

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

65. CSPDCL, PO - Sunder Nagar Chhattisgarh Raipur,
Dangania 492013.

66. Electricity Department,
UT of Daman & Diu, Sachivalaya, Daman & Diu

Moti Daman 396210

67. UT of Dadra Nagar & Haveli,
Secretariat, Electric Depatment, 66kv Amli Road,
Dadra Nagar & Haveli
Silvassa 396230

68. Essar Steel India Limited
27th KM, Surat Hazira Road, Gujarat
Surat 394270

69. Goa Electricity Department,
Government of Goa, 3rd Floor, Vidyut Bhavan,
Panjim, Goa – 403001.

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

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

72. TRP Nuclear Recycle Board, BARC, Tarapur,
Mumbai – 401502, Maharashtra

Users under the category of Generating Stations and Sellers

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

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

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

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

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

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

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

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

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

82. SIPAT TPS Stg-I,
NTPC Ltd, SIPAT,
Chhattisgarh - 495558.

83. SIPAT TPS Stg-II,
NTPC Ltd., SIPAT,
Chhattisgarh-495558.

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

85. Mouda STPP Stage-II,
NTPC Ltd, Mouda Ramtek Road, P.O.Mouda,

Nagpur (Dist), Maharashtra

86. 2 X 135 MW Kasaipali Thermal Power Project,
ACB (India) Ltd. District - Korba
Chhattisgarh Chakabura 495445

87. Bharat Aluminium Co. Ltd,
Captive Power plant-II, BALCO Nagar
Chhattisgarh Korba 495684

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

89. DB Power, Village - Baradarha,
Post - Kanwali, Dist - Janjgir, Champa,
Chhattisgarh Baradarha 495695

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

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

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

93. EMCO Power Ltd, Plot No B-1,
Mohabala MIDC Growth Center Post Tehsil –
Warora, Dist – Chandrapur,
Maharashtra 442907

94. Essar Power MP Ltd.
Village Bandhora, Post- Karsualal, Tehsil- Mada,
Distt. Singrauli, Madhya Pradesh – 486886

95. GMR Chhatisgarh Energy Ltd
Skip House, 25/1, Museum Road, Banglore,
Karnataka 560025

96. Jaipee Nigrie Super Thermal Power Project,
Nigri District, Singrauli, Madhya Pradesh 486668

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

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

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

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

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

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

103. LANCO Power Ltd,
Plot No - 397, phase -III, Udyog Vihar,
Haryana Gurgaon 122016

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

105. Ratnagiri Gas & Power Pvt Ltd,
2nd Floor, Block-2, IGL Complex, Sector-126,
Express-way, Noida, Utter Pradesh- 201304

106. Sasan Power Ltd, DAKC,
I Block, 2nd Floor, North Wing, Thane Belapur Road,

Koparkhairana Maharashtra
New Mumbai 400710

107. Narmada Control Authority,
Narmada Sadan, Sector -B, Scheme No 74, Vijaynagar,
Indore, Madhya Pradesh-452010

108. Vandana Vidyut Bhavan,
M. G. Road Chhattisgarh Raipur 492001

109. MB Power (Madhya Pradesh) Ltd.,
Corporate Office: 239, Okhla Industrial Estate Phase-III,
New Delhi- 110020

110. RKM Powergen Pvt. Ltd.,
Village: Uchpinda, PO: Dhurkot, Dist: Janjgir-Champa,
Chhattisgarh -495692

111. Jhabua Power Ltd.,
Village – Barrella, Post – Attaria, Tahsil –Ghansor,
Dist – Seoni, Madhya Pradesh – 480997

112. Dhariwal Infrastructure Ltd.,
CESC House, Chowringhee Square,
Kolkata – 700001

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

114. NTPC Ltd.,
Solapur Super Thermal Power Station, PO: Hotgi Station,
Taluka: South Solapur, District: Solapur,
Maharashtra-413003.

115. M/s. TRN Energy Pvt. Ltd.,

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

116. NTPC, LARA- Vill-Chhappora Po+Ps- Pussora,
Raigarh, Chattisgarh-496001

Users under the category of Inter State Transmission Licensees

117. Power Grid Corporation of India Ltd.
Western Region - I Headquarters, PO - Uppalwadi,
Sampritinagar, Nagpur, Maharashtra – 440026

118. ESSAR Power Transmission Co Ltd,
A-5, Sector -3 , Gautam Buddha Nagar,
Uttar Pradesh, Noida 201301

119. Jindal Power Ltd., OP Jindal STPP,
OP Jindal STPS, PO- Tamnar, Chhattisgarh
District - Raigarh, 496107

120. Torrent Power Grid Ltd,
Torrent House, Off Ashram Road,
Gujarat Ahmedabad 380009

121. Western Region Transmission (Gujarat) Pvt. Ltd.,
12th Floor, Building No - 10-B, DLF, Cyber City,
Haryana Gurgaon 122002

122. Western Region Transmission (Maharashtra) Pvt. Ltd.,
12th Floor, Building No - 10-B, DLF, Cyber City,
Haryana Gurgaon 122002

123. Adani Power Ltd.
Achalraj, Opp Mayor Bungalow, Law Garden,
Ahmedabad, Gujarat – 380006

124. Bhopal Dhule Transmission Company Ltd.,
C-2, Mitra Corporate Suite, Iswar Nagar,
Mathura Road, New Delhi -110065

125. Raichur Solapur Power Transmission Company Ltd,
Patel Estate, SV Road,
Jogeshwari West, Mumbai 400102

126. Jabalpur Transmission Company Ltd,
Tower-B, 1st Floor, Logix Techno Park, Sector-127,
Noida, Uttar Pradesh- 201301

127. RAPP Transmission Company, Mira Corporate Suites 1&2,
Ishwar Nagar, Okhla Crossing, Mathura Road,
New Delhi -110065

Users of ERLDC:
Users under the Category of Distribution Licensees & Buyers

128. Bihar State Holding Co. Ltd.,
Vidyut Bhavan, Bailey Road, Patna,
Bihar 800021

129. Jharkhand Urja Vikash Nigam Limited,
Dhurwa Road, Ranchi, Jharkhand 834002

130. Damodar Valley Corporation,
DVC Tower, VIP Road, Kolkata,
WB 700054

131. Grid Corporation of India Ltd,
Janpath, Bhubaneswar,
Odisha 751022

132. Power Deptt., Govt. of Sikkim,
Kaji Road Sikkim Gangtok 731101

133. West Bengal State Electricity Distribution Corporation Limited,
Bidyut Bhavan, Saltlake,
Kolkata WB 700091

134. ER-I, Power Grid Corporation (I) Ltd.,
Boring Road, Patna 800001

135. NTPC Vidyut Vyapar Nigam Limited,
Lodhi Road New Delhi 110003.

Users under the Category of Generating Stations & Sellers

136. Farakka Super Thermal Power Plant-I&II,
NTPC Ltd., Farakka, WB 742236

137. Kahalgaon Super Thermal Power Plant-I

NTPC Ltd, Bhagalpur Bihar 813214

138. Kahalgaon Super Thermal Power Plant-II
NTPC Ltd, Bhagalpur Bihar 813214

139. Talcher Super Thermal Power Stn-I NTPC Ltd,
Nayapalli, Odisha 751012

140. Teesta V HEP, NHPC,
Singtam, East Sikkim 737134

141. Rangit Hydro Electric Project NHPC,
P.O. Rangit Nagar South Sikkim 737111

142. Damodar Valley Corporation DVC Tower,
VIP Road West Bengal Kolkata 700054

143. Farakka Super Thermal Power Plant-III,
NTPC Ltd., Farakka, WB 742236

144. Sterlite Energy Limited 1st. Floor,
City Mart Complex, Baramunda, Odisha 751023

145. Maithon Power Limited MA-5 Gogna Colony,
P.O: Maithon, Dhanbad, Jharkhand 828027

146. National Thermal Power Corporation Limited,
BARH Thermal Power Station,
Patna, Bihar 803213

147. GATI Infrastructure Pvt.Ltd,
268, Udyog Vihar, Phase-IV, Gurgaon,
Haryana 122001

148. Adhunik Power & Natural Resource Limited
Village: Padampur, PS: Kandra Tata-Seraikela Road,
Jharkhand 832105

149. Talcher Solar PV,
ER-II Headquaters,NTPC Limited, 3rd Floor,
OLIC Builiding, Plot No.: N-17/2, Nayapalli,
Odissa Bhubaneswar 751012

150. GMR Kamalanga Energy Ltd,
Plot No.-29, Satyanagar, Bhubaneswar,
Odissa-751007

151. Jindal India Thermal Power Ltd.,
Plot No.12,Local Shopping Complex,Sector-B1,
Vasant Kunj, New Delhi- 110070

152. WBSEDCL,
Power Trading & Regulatory Cell, Bidyut Bhavan,
Block - A, Sector-II, Saltlake,
Kokata, West Bengal- 700091

153. Ind-Barath Energy Utkal Ltd ,
Sahajbahal, PO CgarpaliBarpali, Dist - Jharsuguda,
Odisha , Pin – 768211

154. Tata Power Trading Co. Ltd .,
C-43,Sec-62, UP Noida 201307.

155. Grid Corporation of India Ltd.,
Janpath, Orissa, Bhubaneswar 751022

156. DANS ENERGY PVT. LTD. 5th Floor,
DLF Building No. 8, Tower C, DLF Cyber City,
Phase – II, Gurgaon- 122002, Haryana.

157. Bharatiya Rail Bijlee Company Ltd. Nabinagar,Khera Police Station
Dist.-Aurangabad, Bihar-824303

Users under the Category of Inter-State Transmission Licensees

158. East North Interconnection Company Ltd.,
C-2, Mathura Road, New Delhi 110065

159. ER-I, Power Grid Corporation (I) Ltd
Boring Road, Patna 800001.

160. Powerlinks Transmission Limited Vidyut Nagar,
Siliguri WB 734015.

SRLDC

Users under the category of Distribution licensees and Buyers

161. Andhra Pradesh Power
Co-ordination Committee, 4th Floor, Room No: 451,
Vidyut Soudha, Khairatabad, Hyderabad-500 082.
Telangana State.

162. Power Company of Karnataka Ltd.,
KPTCL Building, Kaveri Bhavan, Bangalore - 560 009,
Karnataka State

163. Kerala State Electricity Board, Vydyuthi Bhavanam, Pattom,
Thiruvananthapuram - 695 004, Kerala State.

164. 7th Floor, Eastern Wing, NPKRR Maaligai,
TANGEDCO, TNEB Ltd., 144, Anna Salai,
Chennai - 600 002, Tamil Nadu State.

165. I Floor,
Main Building, Electricity Department, Govt of Puducherry,
PIN: 605001, Puducherry

166. Electricity Department,
Division No: III, Curti, Ponda,
Goa , Pin: 403 401

167. POWERGRID HVDC, POWERGRID,
Southern Regional Transmission System – II,
Near.RTO Driving Test Track, Singanayakanhalli,
Yelahanka, Bangalore – 560 064, Karnataka

168. Telangana Power Co-ordination Committee,
4th Floor, Vidyut Soudha,
Khairatabad, Hyderabad-500 082, Telangana State.

Users under the category of Generating Stations and Sellers

169. Ramaguntam STG I & II
NTPC, RSTPS, Jyothi Nagar, Dist. Karim Nagar,
Telangana - 505 215

170. Ramaguntam STG III
NTPC, RSTPS, Jyothi Nagar, Dist. Karim Nagar,
Telangana - 505 215

171. Simadri STG II
NTPC, Southern Region Head Quarters, II & V Floors,
MCH Complex, R.P. Road Secunderabad,
Telangana – 500003

172. NTPC, Talcher STG II
Angul, Orissa – 7591011

173. Kudgi STPP NTPC,
Southern Region Head Quarters, II & V Floors,
MCH Complex, R.P. Road Secunderabad,
Telangana – 500003

174. NLC TPS II STG I
Neyveli Lignite Corpn. Ltd, Thermal Power Station II,
Neyveli 607 801, Tamil Nadu

175. NLC TPS II STG II
Neyveli Lignite Corpn. Ltd , Thermal Power Station II,
Neyveli 607 801, Tamil Nadu

176. NLC TPS I EXPANSION
Neyvei Lignite Corpn. Ltd., Thermal Power Station I (Exp.),
Neyveli 607 801, Tamil Nadu

177. NLC TPS II EXPANSION
Neyveli Lignite Corpn. Ltd., Thermal Power Station II (Expn.),
Neyveli 607 801, Tamil Nadu

178. MAPS, Nuclear Power Corpn. Of India Ltd,
Madras Atomic Power Station, Kalpakkam – 603 102,
Tamil Nadu

179. KGS UNITS 1&2, Nuclear Power Corpn. Of India Ltd,
Kaiga Generating Station, Kaiga – 581 400, Karwar,
Karnataka

180. KGS UNIT 3&4
Nuclear Power Corpn. Of India Ltd,
Kaiga Generating Station, Kaiga – 581 400,
Karwar, Karnataka

181. Kudankulam Nuclear Power Project Unit-1,
Nuclear Power Corporation of India ltd.,
Kudankulam Post, Radhapuram
Taluk – 627106, Tamil Nadu

182. KNPP Unit-2 Kudankulam
Nuclear Power Project, Nuclear Power Corporation of India ltd.,
Kudankulam Post, Radhapuram Taluk – 627 106,
Tamil Nadu

183. NTPC Tamilnadu Energy Company Ltd.,
Vallur Thermal Power Project, Vellivoyalchavadi Post,
Poneri Taluck, Tiruvallur Dist,
Chennai – 600 013, Tamil Nadu

184. NLC Tamilnadu Power Limited, 2 * 500MW JV
Thermal Power Project, Harbour Estate,
Tuticorin – 628 004, Tamilnadu

185. LANCO, Kodapalli St II
LANCO Kodapalli Power Pvt. Ltd,
Kondapalli,Ibrahimpatnam Mandal,
PIN 521 228 (Telangana)

186. LANCO Kodapalli St III
LANCO Kodapalli Power Pvt. Ltd,
Kondapalli, Ibrahimpatnam Mandal,
PIN 521 228, Telangana

187. Meenakshi Energy Pvt Ltd., NSL ICON,
Plot No. 1, 2, 3, 4, H-No-8-2-684/2/A,
2nd Floor, Road No. 12, Banjara Hills,
Hyderabad 500034, Talangana

188. Simhapuri Energy Ltd.,
Madhucon Green lands, 6 – 3 – 866 / 2, 3rd Floor,
Begumpet, Hyderabad – 560016,
Telengana

189. Coastel Energen Pvt Limited, 7th Floor,
Buhari Towers, No.4 Moores Road,
Chennai – 600006, Tamil Nadu

190. Thermal Powertech Corporation India Ltd.,
6-3-1090, A-Block, 5th Floor, T.S.R Towers,
Raj Bhavan Road, Somajiguda,
Hyderabad 500082, Telangana

191. IL&FS Tamil Nadu Power Company Ltd,
C. Pudhupettai (Post), Parangipettai (Via), Chidambaram (TK),
Cuddalore 608502, Tamil Nadu

192. SEMBCORP Gayatri Power Limited,
TP Gudur Mandal, Nellore - 524344,
Andhra Pradesh

Users under the category of Inter State Transmission Licensees

193. Powergid ISTS,
Southern Regional Transmission System – II,
Near RTO Driving Test Track, Singanayakanhalli,
Yelahanka, Bangalore – 560 064, Karnataka.

194. Raichur Sholapur Transmission Company Limited,
Patel Estates, S.V.Road, Jogeshwari (West),
Mumbai 400102, Maharashra.

195. Kudgi Transmission Ltd.,
Building No 3, Second Floor, Sudeep Plaza,
MLU Sector - 11, Pocket - 4, Dwarka,
NEW DELHI – 110 075, Delhi

196. Powergrid Vizag Transmission Ltd., CM (TLC),
Vizag 400kV SS, Sector 10, Ukkanaguram,
Vishakapatnam 530032, Andhra Pradesh

Users of NERLDC:
Users under the category of Distribution licensees and Buyers

197. APDCL, Bijuli Bhavan,
Paltan Bazar, Guwahati- 781001

198. MePDCL,
Meter Factory Area, Short Round Road,
Integrated Office Complex,
Shillong- 793001

199. TSECL,
Bidyut Bhavan, North Banamalipur,
Agartala- 799001.

200. Department of Power,
Govt. of Ar. Pradesh, Bidyut Bhavan,
Itanagar- 791111

201. P & E Department,
Govt. of Mizoram, Khatla,
Aizawl- 796001.

202. Department of Power,
Goverment of Nagaland, Kohima- 797001.

203. MSPDCL, 3rd Floor,
New Directorate Building, Near 2nd MR Gate,
Imphal – Dimapur Road, Imphal- 795001, Manipur

Users under the category of Generating Stations and Sellers

204. Doyang HEP,
NEEPCO, Wokha, Nagaland

205. Ranganadi HEP,
NEEPCO, P.O. Ranganadi Proj.
Dist. Subansiri, Ar. Pradesh-791121

206. AGBPP, NEEPCO,
Kathalguri, Tinsukia, Assam

207. AGTPP, NEEPCO,
Ramchandranagar, Agartala, Tripura

208. KHANDONG HEP,
NEEPCO, Umrangsoo,
N.C.Hills, Assam

209. KOPILI HEP,
NEEPCO, Umrangsoo,
N.C.Hills, Assam

210. KOPILI-2 HEP,
NEEPCO, Umrangsoo,
N.C.Hills, Assam

211. AGTP CC Extn.
NEEPCO, Ramchandranagar,
Agartala, Tripura

212. NHPC Loktak HEP,
Leimatak-795124, Manipur

213. ONGC Tripura Power Company Ltd,
6th Floor, A Wing, IFCI Tower-61, Nehru Place,
New Delhi-110019

214. NTPC Ltd., BgTPP, Salakati (P),
Dist: Kokrajhar (BTAD), Assam-783369

Users under the category of Inter State Transmission Licensees

215. NERTS,
Power Grid Corporation of India Ltd.,
Lapalang, Shillong-793006,
Meghalaya.

216. North Eastern Transmission Company Ltd,
1st Floor, Ambience Corporate Tower,
Ambience Mall, Gurgaon, 122001, Haryana

217. ENICL,
C-2 Mira Corporate Suite, Ishwar Nagar,
Mathura Road, New Delhi- 110065

……..Respondents

Parties present : Shri S.R. Narasimhan, NLDC
Shri Rakesh Kumar, NLDC
Shri Ashok Rajan, NLDC
Shri Manash Protim Nath, NERLDC

Shri Venkateshan M., SRLDC
Shri Aditya Prasad Das, WRLDC
Shri Manas Das, ERLDC
Shri Nadim Ahmad, ERLDC
Shri Debasis De, NRLDC

ORDER

The petitioner, National Load Despatch Centre (NLDC), has filed the present petition under of Section 28 (4) of Electricity Act, 2003 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 for National Load Despatch Centre for the Financial year 2016-17 during the control period 1.4.2014 to 31.3.2019.

2. The petitioner, National Load Despatch Centre (NDLC) setup under Section 27 of the Electricity Act, 2003 performs functions specified in Section 28 of the Electricity Act, 2003. 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.

3. 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 (KPI) as specified in Appendix- VI of the Fees

and Charges Regulations or such other parameters as specified by the Commission.

4. 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 to submit to the Commission for approval as per Appendix-V and VI of the Fees and Charges Regulations.

5. Petitioner has submitted that as per methodology specified in Appendix V of the Fees and Charges Regulations, 2015, KPI score for NLDC for the year 2016-17 ending 31.3.2017 has been computed by NLDC as under:

Sl. No	Key Performance Indicators	Weightage	(2016-17)
1	Reporting of Interconnection meter error	10	10.00
2	Reporting of Grid Incidents and Grid Disturbance	10	10.00
3	Average processing time of shut down request	10	10.00
4	Availability of SCADA System	10	9.998
5	Voltage Deviation Index (VDI)	10	10.00
6	Frequency Deviation Index (FDI)	10	10.00
7	Reporting of System Reliability	10	10.00
8	Availability of Website	10	9.940
9	Availability of Standby Supply	5	5.00
10	Variance of Capital expenditure	5	4.192
11	Variance of Non Capital expenditure	5	4.068
12	Percentage of Certified Employee	5	4.715
	Total	100	97.913

6. The Petitioner has submitted that as per the methodology provided in the Regulation 29(5) of the RLDC Fees and Charges Regulations 2015, NLDC should be allowed 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, as per NLDC, recovery of Performance Linked Incentive comes at 8.583 % (For 90-95% additional 1% and for 95% to 97.913% additional 0.583%) of the Annual charges for the year 2016-17.

7. The petitioner has filed the present petition with the following prayers:

a). Approve the proposed performance linked incentive based on the KPIs computed by NLDC for the year ending 31.03.2017 given at para 5, the KPI score given at para 6 and PRP percentage of Annual Charges of the year 2016-17 as per para 7.

b). Allow the Applicant to recover the above mentioned incentives from the users for the year 2016-17 as approved by the Hon'ble Commission.

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

8. The petition was heard on 5.4.2018. The Commission vide RoP dated 11.04.2018 directed the petitioner to submit the following:

(a) Whether the Petitioners have informed the Commission about each incident of grid disturbance as required under Appendix VI of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2015;

(b) With regard to Voltage Deviation Index (VDI), submit the details of No. of hours the voltage at all sub-Stations of 400 kV and above was out of range in a month;

(c) With regard to Frequency Deviation Index (FDI), submit the details of No. of hours during which frequency was out of range in a month;

(d) Submit the following with regard to System Reliability: (i) % of times N-1 criteria was violated in the inter-regional corridors. (ii) % of times ATC violated on inter-regional corridors. (iii) % of time Angular difference on important buses was beyond permissible limit.

9. The petitioner vide affidavit dated 2.5.2018 has submitted point-wise reply to the above queries.

10. The Respondent UPPCL has filed reply to NLDC reply dated 4.5.2018 vide affidavit dated 4.6.2018 as observations on the response submitted by NLDC.

Ref. Point	CERC Directives	Remarks of UPPCL on the response submitted by NDLC
4(d)(i)	w.r.t. System Reliability, submit the % of times N-1 criteria was violated in the inter-regional corridors.	The reports attached by NLDC are from May 2016 to April 2017, April 2016 report is missing for FY 2016-17.
4(d)(iii)	w.r.t. System Reliability, submit the % of times ATC violated on inter-regional corridors.	The reports attached by NLDC are from May 2016 to April 2017, April 2016 report is missing for FY 2016-17.

11. In response to reply filed by UPPCL, Petitioner filed the rejoinder on dated 15.6.2018.

Ref. Point	CERC Directives	Reply by NDLC
4(d)(i)	w.r.t. System Reliability, submit the % of times N-1 criteria was violated in the inter-regional corridors.	It is stated that all the reports for system reliability pertaining to N-1 criteria for the month from April 16 to March 17 were attached with the response in ROP dated 11.04.2018. However, system reliability report pertaining to N-1 criteria for April 2016 issued in the month of May 2016 is attached again in rejoinder.

4(d)(iii)	w.r.t. System Reliability, submit the % of times ATC violated on inter-regional corridors.	It is stated that all the reports for system reliability pertaining to ATC violation from April 16 to March 17 were attached with the response in ROP dated 11.04.2018. However, system reliability report pertaining to ATC violation for April 2016 issued in the Month of May 2016 is attached again in rejoinder.

12. The matter was heard on dated 5.7.2018. The Petitioner has submitted that the requisite information has been filed as per the Commission's direction dated 5.4.2018. After hearing the representatives of the Petitioner, the Commission reserved order in the petition.

13. We have considered the submission of the petitioner and respondent UPPCL. As per methodology of the incentive specified in Regulation 29 (5) of the Fees and Charges Regulations, 2015 the relevant extract is stated here:

> 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 pro-rata basis for the every 3% decrease on performance level below 85%.

14. The parameter-wise submissions made by the petitioner have been examined. The petitioner has submitted the KPI-wise details in the petition.

KPI-1: Reporting of Inter-connection metering error

15. The petitioner has submitted that as against the total weightage of 10 for parameter reporting of Inter-connection metering error during the financial year 2016-17 are as under:

Performance during FY 2016-17 (in %)	100%

Marks Scored (In proportion of the %age performance above)	10
Formula for performance calculation:	(No. of weekly reports issued / 52 (Total no. of Weeks))*100

16. The petitioner has contended that since the reporting of inter-connection metering error is not applicable for NLDC, performance of NLDC has been considered as average performance of RLDCs against this parameter.

17. We have observed that submission made by petitioners in other KPI related petitions as under:

S.No.	RLDC	Petition No.	Performance during FY 2016-17 (in %age)	Marks Scored (in proportion of the %age performance
1	NRLDC	56/MP/2018	100	10
2	SRLDC	57/MP/2018	100	10
3	WRLDC	81/MP/2018	100	10
4	ERLDC	55/MP/2018	100	10
5	NERLDC	80/MP/2018	100	10

18. We have considered the submission of the petitioner. We have worked out the average of marks scored by five (5) RLDCs mentioned in table above as (10 + 10 + 10 + 10 + 10)/5=10. Accordingly, the claim of the petitioner for weigthage factor for reporting of inter-connection meter error is allowed as 10 out of 10.

KPI-2 Reporting of Grid Incidents and Grid Disturbance

19. 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 2016-17 are as under:

Grid Incidents and Grid Disturbance for FY 2016-17			
Category	Count(No's)	Recovery period (Hrs)	Loss of Energy (MUs)
GI-1	107	115:24:28	3.48
GI-2	285	577:31:11	5.01
GD-1	561	618:03:21	63.09
GD-2	4	1:52:00	0.33
GD-3	0	0:00:00	0.00
GD-4	1	0:00:00	0.00
GD-5	1	2:12:00	0.33
All	959	1315:03:01	72.23

20. The petitioner has submitted performance during FY 2016-17 and marks scored details as under:

Performance during FY 2016-17(In %) *	100%
Marks scored(In proportion of the %age performance above)	10
*Formula for performance calculation	(No. of monthly reports issued /12)*100

21. The petitioner has submitted that the incidences of grid disturbance/ incidences are being reported by the Regional Load Despatch Centres to National Load Despatch Centre on a monthly basis which are thereafter compiled and are independently verified by National Load Despatch Centre and reported to the Commission on a monthly basis

as a part of monthly operational report issued by National Load Despatch Centre in accordance with the provisions of the Grid Code. The petitioner has submitted the details of the report for the Financial Year 2016-17, copy of which is available on public domain on POSOCO website (https://posoco.in/reports/monthly-reports/).

22. 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. As per our direction, the petitioner has placed on record the details of reporting to the Commission. Accordingly, the claims of the petitioner for weightage factor for reporting of grid incidents and grid disturbance is allowed as 10 out of 10.

KPI-3: Average processing time of shut down request (RLDC/NLDC)

23. The petitioner has submitted that the shutdown process, uniform across all the RLDCs has been discussed and approved at RPC level. Time allowed to NLDC for approval of the shutdown requests is 26 hours and RLDCs is 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 & then prevailing grid conditions. 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 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. It may be noted that RLDCs after processing the shutdown 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). Relevant extract of NRPC approved procedure is as under.

> "7.1. Request for outages which are approved by OCC must be sent by the indenting agency of the transmission asset at least 3 days in advance to respective RLDC by 1000 hours as per Format II.(For example, if an outage is to be availed on say 10th of the month, the indenting agency would forward such requests to the concerned RLDC on 7th of the month by 1000 hours.)
>
> "7.1. Request for outages which are approved by OCC must be sent by the indenting agency of the transmission asset at least 3 days in advance to respective RLDC by 1000 hours as per Format II.(For example, if an outage is to be availed on say 10th of the month, the indenting agency would forward such requests to the concerned RLDC on 7th of the month by 1000 hours.)
>
> 7.3. Approval of Outage where Approving Authority is NLDC:
>
> 7.3.1. NRLDC shall forward the request for shutdown along with their consent and observation as per Format-III to NLDC/other concerned RLDCs with clear observations regarding possible constraints / contingency plan and consent including study results by1000 hours of D-2 day. Other concerned RLDCs would forward their observations/ consent/reservations by 1600 hours of D-2.
>
> 7.3.2. NLDC shall approve the outage along with the clear precautions/measures to be observed during the shutdown and inform all concerned RLDCs.
>
> 7.3.3. The proposed outages shall be reviewed on day ahead basis depending upon the system conditions and the outages shall be approved/refused latest by 1200 Hrs of D-1 day. A suggested format for approval/refusal of outage is enclosed as Format IV."

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%. The percentage performance has been proportionately converted to marks scored.

24. 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 2016-17 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’16	51	1056	20.71
2	May’16	70	1244	17.77
3	June’16	69	914	13.25
4	July’16	60	532	8.87
5	Aug’16	64	842	13.16
6	Sep’16	56	1256	22.43
7	Oct’16	47	722	15.36
8	Nov’16	75	1489	19.85
9	Dec’16	70	1364	19.49
10	Jan’17	51	977	19.16
11	Feb’17	64	1547	24.17
12	Mar’17	57	1228	21.54
	Total	734	13171	17.94

Figures under column 'A' represents cumulative hours month wise.

25. The Petitioner has further submitted that the total time allowed to NLDC and RLDC

for approval of the shutdown requests are 26 hours and 50 (Including NLDC Time) Hours respectively.

For NLDC

Performance during FY 2016-17(In %)*	100%
Marks scored (In proportion of the %age performance above)	10
*Formula for performance calculation	IF((A-B*26)>0,(1-(A-B*26)/(B*26))*100,100)

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

KPI-4: Availability of SCADA

27. The Petitioner has submitted that the SCADA system at NLDC requires real time data from RLDC through dedicated communication links either on ULDC communication network or through Powergrid own communication network provided by CTU. Similarly, SCADA system at RLDC acquires real time data from Remote Terminal Unit (RTU) /Sub-station Automation System (SAS) for Central Sector Stations and IPP stations installed in respective region by using ULDC communication network (whenever it is not available, PGCIL`s own communication network is being used) and real time data from the various SLDCs of Region is fetched through ICCP protocol by using dedicated communication links provided by POWERGRID ULDC with redundancy and communication network under POWERTEL department of PGCIL.

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

S. No.	Description	Remarks

1	Failure of critical server (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 Power Grid/ Communication Provider.
4	Communication link failure	Provided and maintained by Power Grid/ Communication Provider.

28. Further it is submitted by Petitioner that all critical systems are configured and operational in hot-standby mode so as to ensure availability of the corresponding system in the case of contingency. In addition to above, all control centres have their back-up control centre at different locations. The real time data is updated simultaneously from source. In case data at main control centre is not available, then back-up control centre is utilized to visualize the real time data. Due to different level of hierarchy of back-ups it leads to minimum (almost zero) downtime of the system. As all these systems are under comprehensive maintenance with the OEM, records of all the incidences are maintained, which also has financial implication to the AMC vendor. The records of KPI are made in accordance with it. Depending upon the real time availability of the data, month-wise percentage availability has been calculated. Then percentage availability of 12 months has been proportionately converted to marks scored.

29. The total weightage for this parameter is 10. The Petitioner has submitted percentage availability of SCADA for the months (from April 2016 to March 2017), performance during FY 2016-17 and marks scored as under:

Availability of SCADA		
S. No.	**Month**	**% Availability**
1	Apr-16	100.00
2	May-16	100.00
3	Jun-16	99.95

4	Jul-16	99.98
5	Aug-16	100.00
6	Sep-16	100.00
7	Oct-16	100.00
8	Nov-16	100.00
9	Dec-16	100.00
10	Jan-17	99.88
11	Feb-17	100.00
12	Mar-17	99.94
	Average of 12 months	99.98

Performance during FY 2016-17*:	99.98%
Marks Scored (In proportion of the %age performance above)	10.00
* Average of 12 months	

.

30. We have considered the submission of the petitioner. We have worked out the average of 12 months as (100 + 100 + 99.95 + 99.98 + 100 + 100 + 100 + 100 + 100 + 99.88 + 100 + 99.94)/12=99.98. Accordingly, the marks scored for availability of SCADA has been allowed as 9.998 out of 10.

KPI-5: Voltage Deviation Index (VDI)

31. The Petitioner has submitted that VDI is calculated in line with the methodology specified in Appendix-VI of CERC (Fee and Charges of Regional Load Despatch Centre and other related matters) Regulation, 2015. Voltage Deviation Index (VDI) of important substations is calculated on daily, weekly and monthly basis and same is intimated to utilities via daily, weekly and monthly reports. VDI for each substation is calculated as percentage of time the voltage was outside the IEGC range (380-420 kV at 400kV, 728-800kV at 765kV). For this purpose, data recorded by SCADA is used. The percentage of samples lying outside the range constitutes the VDI for the station.

A sample calculation is shown below:

Sub-Station	%age of time Voltage below 728/380kV	%age of time Voltage between 728/380kV & 800/420kV	%age of time Voltage above 800/420kV	Voltage deviation index (%age of time voltage is outside IEGC band)	Maximum Voltage(kV)	Minimum Voltage(kV)	Average Voltage(kV)
Agra	0.00%	100.00%	0.00%	0.00%	796	755	777

32. The petitioner has submitted that Section-2.2.4.6 of the NLDC Operating Procedure, 2016, gives the corrective actions to be taken in the event of voltage going high and low. The relevant extract from the procedure is extracted as under:

"Following corrective measures shall be taken in the event of voltage going high / low:-

i) In the event of high voltage (when the bus voltage going above 410 kV), following specific steps would be taken by the respective grid substation/generating station at their own, unless specifically mentioned by NLDC/RLDC/SLDCs

.

a. The bus reactor is switched in

b. The manually switchable capacitor banks is taken out

c. The switchable line/tertiary reactor or convertible line reactor (if the line kept open for High voltage) wherever possible are taken in. Optimize the filter banks at HVDC terminal

e. All the generating units on bar shall absorb reactive power within the capability curve

f. Operate synchronous condensers wherever available for VAR absorption

g. Operate hydro generator/gas turbine as synchronous condenser for VAR absorption wherever such facilities are available

h. Bring down power flow on HVDC terminals so that loading on parallel EHVAC network goes up, resulting in drop in voltage.

i. Open lightly loaded lines in consultation with RLDC/SLDC for ensuring security of the balanced network. To the extent possible, it must be ensured that no loop of transmission lines is broken due to opening of lines to control the high voltage.

ii) In the event of low voltage (when the bus voltage going down below 390kV), following specific steps would be taken by the respective grid substation/generating station at their own, unless specifically mentioned by NLDC/RLDC/SLDCs.

a. Close the lines which were opened to control high voltage in consultation with RLDC/SLDC.

b. The bus reactor is switched out

c. The manually switchable capacitor banks are switched in.

d. The switchable line/tertiary reactor are taken out

e. Optimize the filter banks at HVDC terminal
f. All the generating units on bar shall generate reactive power within capability curve.
g. Operate synchronous condenser for VAR generation
h. Operate hydro generator/gas turbine as synchronous condenser for VAR generation wherever such facilities are available
i. Increase power flow on HVDC terminals so that loading on parallel Extra High Voltage (EHV) network goes down resulting in rise in voltage."

33. The petitioner has submitted that corrective actions are being taken in Real Time Grid Conditions by NLDC at 765 kV and Inter-regional level by opening /closing shunt reactors, transmission lines, etc. and by RLDCs for other Inter-State system. Apart from these, persistent High Voltage and Low Voltage are being reported in the NLDC Operational feedback every quarter. Link for NLDC operational feedback for the quarter Jul'16-Sep'16 quarter is

https://posoco.in/dowload/nldc-operational-feedback_oct_2016_q2_final/?wpdmdl=7213

Nodes experiencing low/high voltage are listed on page no. 29-30 of Operational Feedback. This information is being discussed in Standing Committee on Power System Planning of different regions with all the stakeholders. Corrective actions are also being discussed in standing committee meetings and OCC meetings.

34. The petitioner has submitted the reply on dated 2.5.2018 in compliance to the direction given by the Commission vide RoP dated 11.04.2018 related to KPI-5 w.r.t the Appendix-VI of the CERC (Fees & Charges of Regional Load Dispatch Centre & other related matters) Regulations 2015, NLDC 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 NLDC website

Daily VDI	https://posoco.in/reports/system-reliability-indices/daily-vdittcatc/daily-vdittcatc-2016-17/
Weekly VDI	https://posoco.in/reports/system-reliability-indices/weekly-vdittcatc/weekly-vdittcatc-2016-17/
Monthly VDI	https://posoco.in/reports/monthly-reports/monthly-reports-2016-17/

35. The total weightage for the parameter Voltage Deviation Index (VDI) is 10. The Petitioner has submitted the performance calculated during FY 2016-17 and marks scored as under:

Performance during FY 2016-17*	100%
Marks scored (In proportion of the %age performance above)	10
* Formula for performance calculation	((No. of daily reports issued/365(Total no. of days in FY 2016-17))*100)+(No. of weekly reports issued/ 52 (Total no. of weeks in FY 2016-17))*100)+(No. of monthly reports issued/12)*100))/3

36. We have considered the submission of the petitioner. It is observed that intimation of VDI is given to utilities for corrective action through daily, weekly and monthly reports and there has been no default by the petitioner during the period 2016-17. Accordingly the weightage for Voltage Deviation Index (VDI) is considered as 10 out of 10.

KPI-6: Frequency Deviation Index (FDI)

37. The Petitioner has submitted that VDI is calculated in line with the methodology specified in Appendix-VI of CERC (Fee and Charges of Regional Load Despatch Centre and other related matters) Regulation, 2015. FDI is calculated as percentage of time frequency is outside IEGC band. Ten second synchrophasor used for calculation. The deviation indices are being reported on daily basis for the critical nodes along with weekly and monthly as per regulation. The possible no. of reports which could be generated

(365 daily, 52 weekly, and 12 monthly) have been converted to KPI scores based on actual reporting.

The percentage of samples lying below 49.90Hz and above 50.05Hz together constitutes FDI.

Date	Percentage of time frequency is			Frequency Deviation Index(FDI)	Average Frequency (Hz)
	<49.9 Hz	49.9-50.05 Hz	>50.05 Hz		
01-May-2017	3.36	73.47	23.17	26.53	50.00

38. The petitioner has submitted the reply on dated 2.5.2018 in compliance to the direction given by the Commission vide RoP dated 11.04.2018 related to the KPI-6 w.r.t the Appendix-VI of the CERC (Fees & Charges of Regional Load Dispatch Centre & other related matters) Regulations 2015, NLDC uploads the information on Frequency Deviation Index (FDI) 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-6 (FDI)	Web Link on NLDC website
Daily FDI	https://posoco.in/reports/frequency-profile/frequency-profile-2016-17/
Weekly FDI	https://posoco.in/reports/weekly-reports/weekly-reports-2016-17/
Monthly FDI	https://posoco.in/reports/monthly-reports/monthly-reports-2016-17/

39. The total weightage for the parameter Frequency Deviation Index (FDI) is 10. The Petitioner has submitted the performance calculated during FY 2016-17 and marks scored as under:

Performance during FY 2016-17*	100%
Marks scored (In proportion of the %age performance above)	10
* Formula for performance calculation	((No. of daily reports issued/365(Total no. of days in FY 2016-17))*100)+(No. of weekly reports issued/52 (Total no. of weeks in FY 2016-17))*100)+(No. of monthly reports issued /12)*100))/3

40. We have considered the submission of the petitioner. It is observed that intimation of FDI is given to utilities for corrective action through daily, weekly and monthly reports and there has been no default by the petitioner during the period 2016-17. Accordingly, the weightage for Frequency Deviation Index (FDI) is considered as 10 out of 10.

KPI 7- Reporting of System Reliability

41. The petitioner has submitted that the deviation indices are being reported on daily basis for the critical nodes along with weekly and monthly as per Regulation. The possible no. of reports which could be generated (365 daily, 52 weekly, and 12 monthly) have been converted to KPI scores based on actual reporting.

42. The total weightage for this parameter Reporting of System Reliability (RSR) is 10. The petitioner has submitted the month-wise reports of system reliability to the commission on the following aspects:

(a) Reporting of (N-1) violations (weightage X)

(b) Reporting of ATC violations (weightage Y)

(c) Reporting of Angle difference between important buses (weightage Z)

43. The petitioner has submitted that it has given intimation of RSR to utilities for corrective action through daily, weekly and monthly reports without any default during FY 2016-17.

44. The Commission in the instant petition vide RoP dated 11.04.2018 directed the petitioner to submit the following with regard to System Reliability:

(i) % of times N-1 criteria was violated in the inter-regional corridors.

(ii) % of times ATC violated on inter-regional corridors.

(iii) % of time Angular difference on important buses was beyond permissible limit

In response, the petitioner has submitted the reply on dated 2.5.2018 with reference to the System Reliability, the percentage of times N-1 criteria was violated in the inter-regional corridors, the percentage of times ATC (i.e. Available Transfer Capability) was violated in the inter-regional corridors and the percentage of times the angular difference on important buses was beyond the permissible limits, is being reported by NRLDC on daily weekly and monthly basis.

The relevant web links are given under:

(i) % of times N-1 criteria was violated in the inter-regional corridors.

KPI-7	Web Link on NLDC website
Daily	https://posoco.in/reports/system-reliability-indices/daily-vdittcatc/
Weekly	https://posoco.in/reports/system-reliability-indices/weekly-vdittcatc/
Monthly	https://posoco.in/reports/system-reliability-indices/monthly-vdittcatc/monthly-vdittcatc-2016-17

(ii) % of times ATC violated on inter-regional corridors.

KPI-7	Web Link on NLDC website
Daily	https://posoco.in/reports/system-reliability-indices/daily-vdittcatc/
Weekly	https://posoco.in/reports/system-reliability-indices/weekly-vdittcatc/
Monthly	https://posoco.in/reports/system-reliability-indices/monthly-vdittcatc/monthly-vdittcatc-2016-17

(iii) % of time Angular difference on important buses was beyond permissible limit.

KPI-7	Web Link on NLDC website

Daily	https://posoco.in/reports/system-reliability-indices/daily-angular-difference/ daily-angular-difference-2016-17/
Weekly	https://posoco.in/reports/system-reliability-indices/weekly-angular-difference/ daily-angular-difference-2016-17/
Monthly	https://posoco.in/reports/system-reliability-indices/ monthly-vdittcatc/ monthly-vdittcatc-2016-17

45. The total weightage for the parameter Reporting of System Reliability is 10. The Petitioner has submitted the performance calculated during FY 2016-17 and marks scored as under:

X, Y, Z	100%
*Formula	(((No. of daily reports issued/365(Total no. of days in FY2016-17)*100)+(No. of weekly reports issued/52(Total no. of weeks in FY2016-17))*100)+ (No. of monthly reports issued/12)*100))/3
Performance during FY 2016-17*	100
Marks scored (In proportion of the %age performance above)	10
*Formula	(X+Y+Z)/3

46. We have considered the submission of the Petitioner. Reporting of System Reliability is being done by the Petitioner as per Appendix VI of the Fees and Charges Regulations. Accordingly, weightage claimed for reporting system reliability is considered as 10 out of 10.

KPI-8: Availability of website

47. The Petitioner has submitted that different type of network tools are being deployed at different control centre to capture the outages of websites, some of those are PRTG, Trend Micro Anti-APT Deep Discovery etc. This network management software generates

the comprehensive reports. Similarly, with the ISP services provider's user interface, user can see the availability of the ISP links which is commercially linked also. Depending upo the availability data, Month-wise percentage availability has been calculated. Then, percentage availability of 12 months has been proportionately converted to marks scored.

48. The total weightage for the parameter availability of website is 10. The petitioner has submitted the month-wise percentage of availability of website, percentage of performance and marks scored during FY 2016-17 as under:

S. No.	Month	% Availability
1	Apr'16	100.00
2	May'16	100.00
3	June'16	100.00
4	July'16	99.99
5	Aug'16	100.00
6	Sep'16	100.00
7	Oct'16	99.99
8	Nov'16	97.63
9	Dec'16	97.08
10	Jan'17	98.16
11	Feb'17	99.99
12	Mar'17	99.99
	Average of 12 months	99.40
Performance during FY 2016-17		99.40%
Marks scored(In proportion to the %age performance above)		9.940

49. We have considered the submission of the Petitioner. The Petitioner is reporting availability of website as per Appendix VI of the Fees and Charges Regulations. Accordingly, the weightage claimed for availability of website is allowed as 9.940 out of 10.

KPI 9-Availability of Standby Power Supply

50. 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. Trial runs are carried out on weekly basis to check the DG set availability. Daily records are being maintained at each of the locations. The corresponding data is uses to calculate the availability of standby power supply. Depending upon the availability of data, month-wise percentage availability has been calculated. Then percentage availability of 12 months has been proportionately converted to marks scored.

51. The total weightage for the parameter "availability of standby power" is 5. The Petitioner has submitted the performance calculated during FY 2016-17 and marks scored as under:

Performance during FY 2016-17*	100%
Marks scored (In proportion of the %age performance above)	5
* Average of 12 months	

52. We have considered the submission of the Petitioner. The Petitioner has claimed availability of standby power supply as per Appendix VI of the Fees and Charges Regulations. Accordingly, weightage claimed for availability of Standby power supply is considered as 5 out of 5.

KPI 10: Variance of Capital expenditure

53. The Petitioner has submitted that the figures (Capital and Non-Capital) in the Fees

and Charges Petitions for the control period 2014-19 have been considered as targets and the figures as per the balance sheet have been taken as actual performance. 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. Percentage performance has been proportionately converted to marks scored.

54. The petitioner has submitted the details of Variance of Capital Expenditure as under:

(₹ in lakh)

Capital Expenditure allowed by CERC (A)	Actual Expenditure incurred (B)	% Variation C=ABS((A-B)/A)*100
287.00	119.10	58.50

55. The petitioner has submitted that the amount considered in the column A above is as per the Fees and Charges Regulations for the control period 2014-19. The petitioner has submitted that in Column B, value as per balance sheet for the year 2016- 17 have been considered.

56. The total weightage for the parameter variance of capital expenditure is 5. The petitioner has submitted the performance during FY 2016-17 and marks scored as under:

Performance during FY 2016-17*:	83.83%
*** Formula**	**IF(C>10, 100-(C-10)/3,100)#**
Marks Scored (in proportion of the %age performance above)	4.192
* Average of 12 months	

#Upto 10% variation, performance is proposed to be considered 100% 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 RLDC Fees and Charges Regulations 2015

57. We have considered the submission of the Petitioner. We also agree with the formula given by the petitioner to compute KPI-10. The weightage claimed for variance of capital expenditure is provisionally considered as 4.192 out of 5 in terms of Appendix VI of the Fees and Charges Regulations.

KPI 11: Variance of Non-Capital expenditure

58. The Petitioner has submitted that the figures (Capital and Non-Capital) in the Fees and Charges Petitions for the control period 2014-19 have been considered as targets and the figures as per the balance sheet have been taken as actual performance. 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. Percentage performance has been proportionately converted to marks scored.

59. The petitioner has submitted the details of variance of non-capital expenditure as under:

(₹ in lakh)

Capital Expenditure allowed by CERC (A)	Actual Expenditure incurred (B)	% Variation C=ABS((A-B)/A)*100
2391.08	3967.52	65.93

60. The petitioner has submitted that 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 2016-17 has been considered.

61. The total weightage for the parameter variance of non-capital expenditure is 5. The Petitioner has submitted the performance during FY 2016-17 and marks scored as under:

Performance during FY 2016-17*:	81.36%
*** Formula**	**IF(C>10, 100-(C-10)/3,100)#**
Marks Scored (in proportion of the %age performance above)	4.068
* Average of 12 months	
#Upto 10% variation, performance is proposed to be considered 100% 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 RLDC Fees and Charges Regulations 2015	

62. The Commission vide RoP dated 11.4.2018 in the instant petition directed the petitioner to submit

> "*Submit the financial statement pertaining to NLDC and the RLDCs for the FY 2016-17".*

In response, the petitioner vide affidavit dated 2.5.2018 has submitted the copy of financial

statement of NLDC of FY 2016-17.

63. We have considered the submission of the Petitioner. We also agree with the formula given by the petitioner to compute KPI-11.Based on the percentage variation, the weightage claimed for variance of non-capital expenditure is allowed as 4.068 out of 5 in terms of Appendix VI of the Fees and Charges Regulations.

L. Percentage of certified employees (Parameter 12)

64. The Petitioner has submitted that the certification framework was introduced in 2011 based on recommendations of G.B. Pradhan Committee Report, which called for "Introduction of system of 'certification' of System Operators by an independent body such as the NPC/NPTI" and "Establishment of an institute for training of system operators…..National Power Training Institute (NPTI) may be entrusted with the responsibility of training initially.

65. Further it is submitted by Petitioner that a framework was developed for System Operators from the states and POSOCO for training and certification, with NPTI appointed as the certifying agency. The framework provides for Basic Level, Specialist Level and Management Level courses. Till date 5 Basic Level Certification and 4 specialists level certifications have been introduced (Two on Regulatory Framework in Power Sector and Two on Power System Reliability). The exams 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 of both certificates is three years, System Operators are required to have at

least one certificate still in its validity period to be qualified as certified.

"Eligible"- Includes all Executive who are in Technical Functions posted in the respective RLDC/NLDC on the cut-off date (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.

66. The Petitioner has submitted that while evaluating the performance, performance is proposed to be considered 100% for certification level of 85% 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 Fee and Charges Regulations, 2015. Percentage performance has been proportionately converted to marks scored.

67. The total weightage for the parameter “variance of percentage of certified employees” is 5. The petitioner has submitted the details of variance of percentage of certified employees as under:

Name of NLDC / RLDC	NLDC	
No. of Eligible Employees for Certification as on 31.3.2017 (A)	No. of Employees Certified as on 31.3.2017 (B)	%age of Employees Certified as on 31.3.2017 (C=B/A*100)
53	36	67.92
Performance during FY 2016-17*:	94.31%	
*** Formula**	**IF(C<85, (100-(85-C)/3),100)#**	

Marks Scored (in proportion of the %age performance above)	4.715
* 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	

68. We have considered the submission of the petitioner. We also agree with the formula given by the petitioner to compute KPI-12. Accordingly, the weightage claimed for percentage certified employees is allowed as 4.715 out of 5.

69. The following Key Performance Indicators are allowed as per details discussed in above paragraph.

Sl. No	Key Performance Indicators	Weightage	Claimed for (2016-17)	Allowed
1	Reporting of Interconnection meter error	10	10.00	10.00
2	Reporting of Grid Incidents and Grid Disturbance	10	10.00	10.00
3	Average processing time of shut down request	10	10.00	10.00
4	Availability of SCADA System	10	9.998	9.998
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	9.940	9.940
9	Availability of Standby Supply	5	5.00	5.00
10	Variance of Capital expenditure	5	4.192	4.192

Sl. No	Key Performance Indicators	Weightage	Claimed for (2016-17)	Allowed
11	Variance of Non Capital expenditure	5	4.068	4.068
12	Percentage of Certified Employee	5	4.715	4.715
	Total	100	97.913	97.913

70. As per the above table, the petitioner has achieved 97.913 % Key Performance Indicators out of 100%. Accordingly, the petitioner is allowed to recover incentive of 8.583**%** of annual charges for the financial year 2016-17.

71. Petition No. 45/MP/2018 is disposed of in terms of above.

Sd/-
(Dr. M.K Iyer)
Member

Sd/-
(A.K.-Singhal)
Member

Sd/-
(P.K.Pujari)
Chairperson