CENTRAL ELECTRICITY REGULATORY COMMISSION 3rd & 4th floor, Chanderlok Building, 36-Janpath, New Delhi-110001

Dated: 25/06/2020

To

Members of the Validation Committee & Generating Companies (As per list enclosed)

No. Engg/Tr.Pricing/Validation/L-1/44/2013/CERC

Subject: Minutes of the 2<sup>nd</sup> Meeting of Validation Committee for the Application Period from 1st July 2020 to 30th September, 2020 for implementation of CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010

Sir,

Please find enclosed herewith minutes of the 2<sup>nd</sup> Meeting of the Validation Committee for the year 2020-21 (Application Period from 1<sup>st</sup> July 2020 to 30<sup>th</sup> September, 2020) for implementation of CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 held on 29.05.2020 through video conferencing for information and necessary action.

Yours faithfully,

Sd/-(Shilpa Agarwal) Joint Chief (Engg)

Encl.: As above

#### **Validation Committee Members**

SI. No	Name of the Organizations	Name of the nominated persons	Address
1.	CERC	Shri S.C Shrivastava, Chief (Engg)	Central Electricity Regulatory Commission, 3 <sup>rd</sup> & 4 <sup>th</sup> Floor, Chanderlok Building, 36-Janpath, New Delhi -110001
2.		Shri P.K. Awasthi, Chief (Fin.)	Central Electricity Regulatory Commission 3 <sup>rd</sup> & 4 <sup>th</sup> Floor, Chanderlok Building, 36-Janpath, New Delhi -110001
3.	CEA	Chief Engineer, (PSP & PA-II) Division	Central Electricity Authority 3 <sup>rd</sup> Floor, N-Wing, Sewa Bhawan, R.K. Puram, New Delhi - 110 066
4.		Director, GM Division	Central Electricity Authority 6 <sup>th</sup> Floor, N-Wing Sewa Bhawan, R.K. Puram, New Delhi-110066
5.	CTU/ Power grid	Shri J. Mazumder ,GM (Comm)	Power Grid Corporation of India Ltd Plot No. 2, Sector-29, Near IFFCO Chowk, Gurgaon-122001
6.		Shri Ashok Pal, GM alternate member Shri RVMM Rao, Chief. Design Engineer (SEF)	Power Grid Corporation of India Ltd Plot No. 2, Sector-29, Near IFFCO Chowk, Gurgaon-122001
7.		Shri S.S Barpanda, Executive Director, NRLDC	Northern Regional Load Despatch Centre, Jeet Singh Marg, Katwaria Sarai, New Delhi-110016
8.		Shri A. Gartia Executive Director, SRLDC	Southern Regional Load Despatch Centre 29, Race Course Cross Road, Bangalore, Karnataka-560009
9.	D00000	Shri V.K.Shrivastava Executive Director, WRLDC	Western Regional Load Despatch Center F3, MIDC Area, Marol, Andheri East, Mumbai- 400093
10.	POSOCO	Shri D.K Jain Executive Director, ERLDC	Eastern Regional Load Despatch Center 14, Golf Club Road, Tollygunge, Kolkata-700 033 (W.B.)
11.		Shri Debasis dey Executive Director, NLDC	National Load Despatch Centre B-9, Qutab Institutional Area, KatwariaSarai, New Delhi-110016
12.		Shri V.Suresh Executive Director, NERLDC	North Eastern Regional Load Despatch Centre, Lower Nongrah, Dongtieh, Lapalang, Shillong – 793006

SI. No	Name of the Organizations	Name of the nominated persons	Address
13.	NRPC	Shri Naresh Bhandari, Member Secretary	Northern Regional Power Committee 18-A Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-11
14.	WRPC	Member Secretary	Western Regional Power Committee Plot No. F-3, MIDC Area, Marol, Opp: SEEPZ, Andheri (East), Mumbai-400093
15.	SRPC	Member Secretary	Southern Regional Power Committee 29, Race Course Cross Road, Bangalore-560009, Karnataka
16.	ERPC	Shri Joydeb Bandyopadhyay , Member Secretary	Eastern Regional Power Committee 14, Golf Club Road, Tollygunge, Kolkata-700 033 (W.B.)
17.		Shri S.K. Das, Director Engineering	Bihar State Electricity Board 1 <sup>st</sup> Floor, VidyutBhawan, Bailey Road, Patna-21, Bihar
18.	NERPC	Member Secretary	North Eastern Regional Power Committee, NERPC Complex, Dong Parmaw, Lapalang, Shillong-793006 Phone No:0364-2534077 Fax NO::0364-2534040
19.		Shri Jatin Baishya, Dy. General Manager	State Load Despatch Centre Complex,Kahelipara,Guwahati
20.	SLDC	Shri P.A.R. Bende, Member Director, SLDC	Chief Engineer Madhya Pradesh Power Transmission Company Ltd., Nayagaon, Rampur, Jabalpur- 482008
21.	KPTCL	Shri S. Sumanth Director(Transmission), KPTCL	Karnataka Power Transmission Corp. Ltd, KauveryBhavan, K.G. Road, Bangalore – 560009
22.	UPPTCL	Shri A.K. Singh, Director (Operation), Uttar Pradesh Power Transmission Corporation Ltd.	Uttar Pradesh Power Transmission Corporation Ltd , 7th Floor, Shakti Bhavan, Ashok Marg, Lucknow– 226001

#### **LIST OF GENERATING COMPANIES**

SI. No.	Name of the Statutory Bodies	Name of the persons and Designation	Address		
1.	NTPC	Shri A.K Gupta, Director (Commercial)	NTPC Bhawan, Core 7, Scope Comple. Institutional Area, Load Road, New Delhi 110003		
2.	NHPC	Shri N S Parameshwaran, Executive Director, (O&M)	NHPC office Complex, Sector-33, Faridabad – 121003 (Haryana)		
3.	NEEPCO	Ms. Debjani Dey GM (Commercial)	Brookland Compound, Lower New Colony, Shillong–793003		
4.	NLC	Director (Commercial)	No.135, Periyar E.V.R. High Road, Kilpauk, Chennai - 600 010. Tamil Nadu, India		
5.	SJVN	Shri Romesh Kapoor, General Manager (C&SO)	SJVN Ltd, Sharma Niwas Below BCS, New Shimla – 171009.		

Minutes of the 2<sup>nd</sup> Meeting of Validation Committee for the Application Period from 1<sup>st</sup> July 2020 to 30<sup>th</sup> September, 2020 held on 29<sup>th</sup> May, 2020 through video conferencing.

- 1. The Chairman of Validation Committee, Chief (Engg.), CERC welcomed all the members and participants connected through video conferencing. Participants of RPCs, RLDCs, STUs, Generating Companies present through video conferencing SLDCs of Delhi, Haryana, Himachal Pradesh, Punjab, UP, Chhattisgarh, Daman, DNH, Goa, Gujarat, MP, Bihar, Maharashtra Jharkhand, DVC, Telangana, Tamilnadu, Karnataka, Odisha. List of the participants is enclosed at *Annexure-I*.
- 2. Chief (Engg.), CERC stated that the meeting is convened to discuss the Load Generation data for consideration of load flow studies for implementation of CERC (Sharing of Inter-State Transmission Charges and Losses), Regulations, 2010 for the Second Quarter of 2020-21. The presentation shown during the meeting is attached at Annexure-II.
- 3. After deliberation among members, it was decided that the peak generation for new hydro units shall be considered at 100%, for new thermal units and new gas based stations, peak injection would be considered as 70% and 30% of ex-bus capacity, respectively. Peak generation for wind power plants shall be considered at 50% of the installed capacity and solar generation shall not be considered in the Load Generation balance for PoC computations. In case of non-submission of data by the DICs, following shall be considered for the purpose of Base case preparation
  - (a) Peak Demand: Forecasted peak demand to be calculated from last 3 years' data taken from CEA website as per provisions of the Regulations.
  - (b) Peak Generation: Forecasted peak generation to be calculated from last 3 years' SEM/SCADA data available with RLDCs as per the provisions of the Regulations.
- 4. Demand Projection for Application Period from 1<sup>st</sup> July 2020 to 30<sup>th</sup> September, 2020 (Q2 of 2020-21).

#### 5.1 Northern Region:

(i) Projected demand by IA for Chandigarh was 401 MW. During the meeting, NRPC suggested to consider demand projection as 440 MW considering LGBR. It was decided to consider projected demand as 440 MW.

(ii) Projected demand for Haryana by IA was 11009 MW. Prior to meeting, Haryana had submitted its demand as 9850 MW. During the meeting Member NRPC suggested that in LGBR demand projections was higher than the demand submitted by Haryana. NRLDC suggested that Haryana has given its demand projection as 10017 MW few days back. Haryana stated that higher figure was given by considering the fact that lockdown will end by 3<sup>rd</sup> of May 2020 but it has extended till 31<sup>st</sup> May 2020. It was decided that demand projection as submitted by Haryana i.e. 9850 MW shall be considered.

#### 5.2 Eastern Region:

- (i) Projected demand by IA for Bihar was 6400 MW. During the meeting, Bihar representative suggested its demand projection as 6000 MW and the same was agreed upon.
- (ii) Projected demand by IA for DVC was 2980 MW. During the meeting, DVC representative suggested its demand projection as 2800 MW and the same was agreed upon.
- (iii) Projected demand by IA for Jharkhand was 1360 MW. During the meeting, Jharkhand representative agreed upon the projected demand.
- (iv) Projected demand by IA for Odisha was 5494 MW. Prior to the meeting Odisha has given its demand projections as 4331 MW. During the meeting Odisha has submitted its demand projections as 4400 MW and the same was agreed upon.

#### 5.3 Western Region:

(i) Projected demand for DNH by IA was 829 MW. Prior to meeting, DNH submitted its demand as 825 MW. During the meeting WRLDC has highlighted that DNH demand is on higher side. During the meeting DNH submitted its demand projection as 500 MW and the same was agreed upon.

#### 5.4 Southern Region:

- (i) Projected demand for Telangana by IA was 10964 MW. During the meeting, Telangana has submitted its demand projection as 13164 MW and the same was agreed upon.
- (ii) Projected demand for Goa\_SR by IA was 80 MW. Prior to the meeting Goa has submitted its demand projections as 100 MW. During the meeting, SRLDC has suggested to take demand projection as 80 MW and the same was agreed upon.

#### 5.5 North Eastern Region:

Demand projections for NER constituents as agreed at OCC and submitted by them were agreed upon.

# 5. Generation Projection for Application Period from 1<sup>st</sup> July 2020 to 30<sup>th</sup> September, 2020 (Q2 of 2020-21).

#### 6.1 Northern Region:

- (i) Projected generation by IA for Haryana was 3113 MW. Prior to meeting Haryana has suggested its generation projection as 3700 MW. During the meeting NRPC has suggested to take generation projection as 3500 MW and the same was agreed upon.
- (ii) Projected generation by IA for Himachal Pradesh was 1131 MW. During the meeting Himachal Pradesh has suggested that it has given its generation projection as 1135 MW not 1235 MW and the same was agreed upon.
- (iii) Member present at NRLDC suggested following changes:
  - (a) Generation from Koteshwar may be taken as 395 MW instead of 405 MW.
  - (b)Generation from AD Hydro may be taken as 210 MW instead of 237 MW after considering 10% overload capacity.
  - (c)Generation from Karcham Wangtoo may opbe taken as 1100 MW instead of 1184 MW.
  - (d)Generation from Lanco Budhil may be taken as 76 MW instead of 75 MW after considering 10% overload capacity.
  - (e)Generation from Rampur HEP may be taken as 448 MW instead of 456 MW after considering 10% overload capacity.
  - (f) Generation from Sainj HEP may be taken as 109 MW instead of 123 MW after considering 10% overload capacity.

The Generation figures as suggested above were agreed.

#### 6.2 Eastern Region:

- (i) Projected generation by IA for Bihar was 317 MW. During the meeting, Bihar has submitted its generation projection as 400 MW and the same was agreed upon.
- (ii) Projected generation by IA for DVC was 4226 MW. During the meeting, DVC has submitted its generation projection as 4000 MW and the same was agreed upon.
- (iii) Projected generation by IA for Jharkhand was 333 MW. During the meeting, representative of Jharkhand suggested that generation may be taken as 450 MW and the same was agreed upon.
- (iv) Member present at ERLDC suggested following changes:
  - (a) Generation from JITPL may be taken as 1000 MW instead of 555 MW.

(b)Generation from Tashideng may be taken as 104 MW instead of 127 MW after considering 10% overload capacity.

The Generation figures as suggested above were agreed upon.

#### 6.3 Western Region:

- (i) Projected generation by IA for Chhattisgarh was 2477 MW. Prior to the meeting, Chhattisgarh has submitted its generation projection as 2004 MW. During the meeting, Chhattisgarh has submitted its generation projection as 2104 MW as Marwa Unit will be running by July 2020 instead of September 2020 and the same was agreed upon.
- (ii) Projected generation by IA for Maharashtra was 13632 MW. Prior to the meeting, Maharashtra has submitted its generation projection as 12976 MW. During the meeting, Maharashtra has submitted its generation projection as 12648 MW and the same was agreed upon.
- (iii) Member present at WRLDC suggested following changes:
  - (a) Generation from CGPL may be taken as 3357 MW instead of 3800 MW.
  - (b) Generation from Mauda may be taken as 1600 MW instead of 2050 MW.
  - (c) Generation from Essar Mahan may be taken as 600 MW instead of 1123 MW.
  - (d)Generation from RKM Power may be taken as 450 MW instead of 900 MW.
  - (e) Generation from Sholapur STPP may be taken as 360 MW instead of 970 MW.
  - (f) Generation from Lara STPP may be taken as 400 MW instead of 560 MW.
  - (g)Generation from Gadarwada may be taken as 440 MW instead of 560 MW.
  - (h)Generation from Khargone STPS may be taken as 432 MW instead of 867 MW.
  - (i) Generation from Vadwa Green may be taken as 125 MW.
  - (j) Generation from Ratadiya AGEMPL may be taken as 88 MW.
  - (k) Generation from Dayapar Inox wind may be taken as 100 MW.

The Generation figures as suggested above during the meeting by WRLDC were agreed upon.

#### 6.4 Southern Region:

- (i) Projected generation for Andhra Pradesh by IA was 7503 MW. Prior to meeting, Andhra Pradesh had submitted its generation projection as 10014 MW. During the meeting SRPC has suggested to consider generation projection as 8400 MW and the same was agreed upon.
- (ii) Projected generation for Telangana by IA was 5244 MW. During the meeting, Telangana has submitted its generation projection as 6520 MW and the same was agreed upon.
- (iii) Member present at SRLDC suggested following changes:
  - (a) Generation from Ramagundum may be taken as 2240 MW instead of 2421 MW.

- (b) Generation from Simhadri 2 may be taken as 898 MW instead of 943 MW.
- (c) Generation from Simhadri 1 may be taken as 898 MW instead of 943 MW.
- (d) Generation from Kaiga may be taken as 700 MW instead of 847 MW.
- (e) Generation from Neyveli TPS-II may be taken as 1050 MW instead of 1263 MW.
- (f) Generation from Neyveli TPS-II Exp may be taken as 350 MW instead of 283 MW.
- (g) Generation from MAPS may be taken as 192 MW instead of 260 MW.
- (h) Generation from Kundankulam may be taken as 900 MW instead of 1517 MW as only one unit is in service.
- (i) Generation from Tuticorin TPP may be taken as 900 MW instead of 955 MW.
- (j) Generation from Sembcrop Energy India Ltd. may be taken as 1250 MW instead of 1274 MW.
- (k) Generation from Talcher Stage-II may be taken as 1875 MW instead of 1699 MW.
- (I) Generation from Kudgi STPS may be taken as 760 MW instead of 2050 MW as only one unit is running.
- (m) Generation from Neyveli New Thermal Power may be taken as 450 MW instead of 608 MW.

The Generation figures as suggested above were agreed upon.

#### 6.5 North Eastern Region:

- (i) Generation projections for NER constituents as agreed at OCC and submitted by them were agreed upon.
- (ii) Subsequent to meeting IA has submitted generation from Kameng HEP Unit-1 commissioned on 17.06.2020 to be taken as 163.02 MW considering 10% overloading and excluding 1.2% auxiliary consumption. The same shall be considered for Quarter 2, 2020-2021.

Note: The data not specifically indicated above shall be as submitted by DIC or where DIC has not submitted any data, the projected data as forecasted by IA shall be considered as recorded in V.C. presentation.

#### 6. HVDC Set Points:

- (i) HVDC set points to be considered in the All India Base case for computation of PoC charges and Losses for July 2020 September 2020 period were projected by Implementing Agency based on operational experience and was put up for validation before the Committee.
- (ii) After discussion, following HVDC set points are finalized.

HVDC Name	Set points (in MW) to be considered in Base case
Mundra-Mahindergarh Pole-1	1000
Mundra-Mahindergarh Pole-2	1000
Talcher-Kolar Pole- 1	1000
Talcher-Kolar Pole- 2	1000
Rihand-Dadri Pole- 1	750
Rihand-Dadri Pole- 2	750
Balia-Bhiwadi Pole-1	500
Balia-Bhiwadi Pole-2	500
Bhadrawati_HVDC	1000
Vindhyachal_HVDC	250
Gajuwaka_HVDC	650
Pusauli HVDC	400
Chandrapur-Padghe Pole-1	750
Chandrapur-Padghe Pole-2	750
BNC-Agra Pole-1 & Pole-2	500 (towards NR)
Alipurduar-Agra Pole-1 & Pole-2	500
Champa-Kurukshetra Pole-1 & Pole-2	2000
Champa-Kurukshetra Pole-3	1000

#### 7. New Assets:

- (i) The inclusion of assets of M/s. Khargone Transmission Limited (KTL) was discussed. M/s KTL submitted that the remaining assets would be commissioned by the end of Aug'2020. It was discussed and decided not to consider the assets of M/s KTL for 2020-21 Q2 computations.
- (ii) Implementing Agency informed that two new licensees namely M/s. Kohima Mariyani Transmission Ltd and M/s. NER-II Transmission Ltd. anticipated commissioning of their new assets by 01-Aug-20 and Sep-20 respectively. It was discussed and decided to take up the assets of M/s. Kohima Mariyani Transmission Ltd for 2020-21 Q2 computations. However, it was decided not to consider the assets of M/s. NER-II Transmission Ltd as the transmission assets are anticipated to be commissioned by the end of second month of the application period.
- (iii) Implementing Agency informed regarding the new assets of M/s. PowerGrid that are to be considered for 2020-21 Q2 computations as per data submitted by PowerGrid. It was discussed and decided to consider these assets in 2020-21, Q2 computations.
- (iv) Implementing agency informed that the asset cost of 13 state utilities whose Tariff as approved by the Commission was not available as on 31.03.2019 were excluded in 2019-20 Q3 computations, Q4 computations as well as in 2020-21 Q1 computations. It was further discussed upon continuing the same in 2020-21 Q2 computations and

- decided to continue the exclusion of the YTC of state utilities whose approved tariff by Commission was not available as on 31.03.2019 in 2020-21 Q2 calculations.
- (v) As per CERC Order dated 20.01.2020 in Petition no: 132/MP/2018, CERC had directed M/s Essar Power Ltd. to pay transmission charges for LILO of 400kV Vindhyachal-Korba at Essar Mahan. Thus, YTC of LILO of 400kV Vindhyachal-Korba at Essar Mahan is to be excluded from POC sharing mechanism. However, CERC Tariff Order has no separate tariff for the said asset. The tariff was approved along with other assets (GIS S/s at Hazira and 400kV Hazira-Gandhar line vide CERC Order dated 19.12.18 in Petition No. 173/TT/2013 and 111/TT/2015.). The issue has been discussed in Validation Committee meeting. It was opined that in the absence of exclusive tariff for the LILO asset, the same cannot be excluded separately. Hence, it was decided to exclude entire tariff of the combined assets (i.e tariff for LILO of 400 kV Vindhyachal-Korba at Essar Mahan, GIS S/s at Hazira and 400kV Hazira-Gandhar line) from the POC computations in line with CERC Order dated 20.01.2020. Also, Implementing Agency was directed to inform M/s EPTCL to approach Commission to get the tariff of the LILO of 400kV Vindhyachal-Korba at Essar Mahan in appropriate time so that it can be excluded from the computations

#### (a)TBCB Assets:-

S.N o.	Name of the Transmission line	ISTS Licensee	CoD as per TSA	Anticipated CoD /Actual CoD	Remarks	
1	765kV Khandwa-Dhule	l/h argana			Not to be	
2	765kV Line Dhule bays for Khandwa-Dhule	Khargone Transmission Limited (KTL)	July,2019	End Aug,2020	in POC for Q2 of 2020-21.	
3	400/200 kV, 2 x 500 MVA Substation at New Kohima					
4	Imphal – New Kohima 400kV D/C Line with Twin Moose ACSR Conductor	KOHIMA MARIYANI TRANSMISSI	29 <sup>th</sup> April 2020	1-Aug-20	To be considered in POC for Q2 of 2020-21.	
5	New Kohima – New Mariani 400 kV D/C Line with Twin Moose ACSR Conductor	ON LTD.	2020			
6	132kV AGTPP (NEEPCO) – PK Bari	NER-II	31 <sup>st</sup> March 2020		Not to be considered in POC for Q2 of	
7	400 kV Surjamani Nagar- PK Bari	Transmission Ltd.	1.1	31 <sup>st</sup> July 2020	Sep-20	2020-21 as anticipated COD is in
8	400kV Silchar- Misa		1 <sup>st</sup> Dec 2020		Sep'20	

#### (b)Assets as submitted by PGCIL

S.No.	Name of the Transmission line	ISTS Licensee	Actual CoD	Remarks
1	63 MVAR, 400 KV Switchable Line Reactor along with 500 Ohms NGR at Rajgarh (POWERGRID) end of Khargone TPS – Rajgarh (POWERGRID) 400 kV line		3/1/2018	
2	1X500 MVA 400/220 kV ICT along with associated bays at Tumkur (Pavagada) Substation		3/31/2019	
3	02 Nos. 400kV bays at Samba Substation for Amargarh to Samba (POWERGRID) transmission line along with 02 Nos. 50 MVAR Non switchable line Reactors	POWERGRID	8/26/2018	To be considered in POC for Q2 of 2020-21.
4	Tumkur (Pavagada) Pool- Hiriyur400 kV D/C line along with associated bays and equipment at both ends		9/27/2018	
5	1x500MVA, 400/220/33kV ICT along with associated bays at Trichy Substation		6/10/2017	
6	2 Nos. 765kV line bays at 765/400kV Raipur Pooling Station (Powergrid) for Raipur PS (Powergrid)- Rajnandgaon(TBCB) 765kV D/C line		11/30/2018	

(i) It was decided that assets put into use or anticipated to be put under use shall be considered in PoC subject to CERC Regulations & Orders.

#### Preparation of final All India Base case in PSS/E platform :

It may be mentioned that there would be variation in the validated generation and demand figures in the final all India Base case because of the following steps involved:

- (i) Normalization with All India Forecasted Peak Demand figure.
- (ii) Arriving at Load Generation Balance for convergence of the All India Base case.
- (iii) Adjustment of Slack Bus Generation.

# <u>List of Participants in the 2<sup>nd</sup> meeting for 2020-21 of the Validation Committee held on 29<sup>th</sup> May, 2020 at New Delhi.</u>

#### **CERC**

- 1. Shri S.C.Shrivastava, Chief (Engg.) In Chair
- 2. Shri P. K. Awasthi, Chief (Finance)
- 3. Ms Shilpa Agarwal, Joint Chief (Engg.)
- 4. Shri Abhishek Rohilla Dy. Chief (Engg.)
- 5. Ms Sonika Hayaran, Research Officer

#### **POWERGRID**

6. Shri V Srinivas, Senior GM

#### **NLDC**

- 7. Shri Debasish De, ED(NLDC)
- 8. Shri G Chakraborty, CGM
- 9. Shri Ravi Shankar Chinnam, Manager
- 10. Shri Sanny Machal, Dy. Manager
- 11. Shri Laxman Singh, AM

#### **NRLDC**

- 12. Shri S. S. Barpanda, ED
- 13. Shri Alok Kumar, Senior DGM
- 14. Shri Riza Naqvi, Manager
- 15. Shri Gaurav Malviya, Dy. Manager

#### **WRPC**

16. Shri Deepak Gawali, SE(Operation)

#### **WRLDC**

- 17. Shri Balaji, CGM
- 18. Smt. S. Usha, GM(MO)
- 19. Smt. Pushpa. S, GM(SO-II)
- 20. Smt. Chitrankshi G., CM(SO-II)

#### **NRPC**

- 21. Shri Naresh Bhandari, Member Secretary
- 22. Shri S. Majumdar, SE

#### **ERLDC**

23. Shri Saurav Kumar Sahay, Chief Manager

#### **SRPC**

- 24. Shri A Balan, MS
- 25. Shri Meka Rawakrishna, SE
- 26. Ms. Anusha Das J, EE

#### **SRLDC**

- 27. Shri Abhimanyu Gartia, ED
- 28. Shri Pradeep Reddy, Manager
- 29. Shri G Madhukar, CM
- 30. Shri S P Kumar, CGM

#### **NERLDC**

- 31. Shri V Suresh, ED
- 32. Shri Samar Ch. De., GM
- 33. Shri Sachin Kr Singh, DM
- 34. Shri Chitra Bahadur Thapa, DM
- 35. Shri Palash Jyoti Bosh, DM

#### **NHPC**

36. Shri Vijay Kumar, Senior Manager

#### Delhi, SLDC

37. Shri Saurabh Mishra, Junior Engineer

#### Punjab, SLDC

38. Shri Nitish Bansal, AEE

#### **UP, SLDC**

- 39. Shri Mithilesh Kumar Gupta, EE
- 40. Shri Sanjay Jaiswal, AE

#### **KPTCL SLDC**

- 41. Shri Malleshappa, EE
- 42. Shri Mohan, AE
- 43. Shri Chetan, EE

#### **GRIDCO**

44. Shri S.K.Maharana, AGM (Electrical)

#### **HPPC**

45. Shri Gaurav Gupta, XEN

#### **HPSEBL**

- 46. Shri Gagan, Senior XEN/Power Controller
- 47. Shri Shashi Kumar, AEE

#### **HVPNL**

- 48. Shri Rajesh Goel, SE
- 49. Shri Sunny Adlakha, AEE

#### **DVC**

- 50. Shri Subrat Ghosal, AGM Commercial
- 51. Shri Rakshit Manik

#### **ArcelorMittal Nippon Steel India**

52. Shri Alok Singh

#### **CSPGCL**

53. Shri. K.K. Bajaj, EE,CE office O&M

#### **CSPTCL**

54. Shri. Manoj Verma, EE, office of CE(P&P)

#### **DNHPDCL**

55. Shri. R B Chaubal, AE (Coml)

#### **MSETCL**

56. Shri. Umesh S Bhagat, EE

#### **MSLDC**

- 57. Shri. Anil Kolap, Chief Engineer
- 58. Shri. Peeyush Sharma, Superintending Engineer (Operation)
- 59. Shri. Sachin Lomate, Addl. E.E. (REMC-Operation)

#### **MPSLDC**

- 60. Shri. Shankar Chakraborty, EE
- 61. Shri. R.P.Rakhya, AE

#### **Gujrat SLDC**

- 62. Shri. M. G. Gahdavi, SE (OP)
- 63. Shri. B. M. Shah, EE (MIS)
- 64. Shri. G. J. Mistry, DE (MIS)

#### SLDC CSPTCL

- 65. Ms. Namita Vibha Lakra, EE
- 66. Shri. K S Manothiya, ED
- 67. Ms. Reshma Setpal, AE

#### **SLDC Goa**

68. Ms. Amina Ghode, JE

#### TR & SLDC, Electricity Department, Daman

69. Shri. K.K.Bhaskaran, AE

70. Shri. Jay Solanki, JE

#### **Jharkhand**

71. Shri Tushar Ranjan, EE

#### PMC, Bihar

72. Shri Suman Anand, EEE

#### **TSTRANSCO**

- 73. Shri P. Suresh babu, CE(SLDC)
- 74. Shri B. Jetya Naik, DE
- 75. Shri G. Raghu, ADE
- 76. Shri N. Rajashekar, AE
- 77. Ms. Swapna reddy, AE
- 78. Ms. S.Susmitha, DE

#### **TANTRANSCO**

79. Shri P. Murugavelan, AEE

#### **KSEB**

80. Shri Maria Sheema.M.X, AEE 81. Shri Anu.S.Ramesh, AE

Annexure II

# Point of Connection Charges and Losses Computation Jul 2020 - Sep 2020 (Q2)

Meeting of the Validation Committee Date :29th May, 2020

**Through Webex** 

# **Assumptions**

- As per CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 and amendments thereof;
- Maximum/Peak generation (based on SEM data) and Maximum/Peak load (based on CEA data) considered.

# **Contents**

- □ PoC Computation for Q2 Case (Jul'20 Sep'20)
  - Demand & Generation Projection
  - New Generation
  - HVDC Set points

# **Demand Generation Projection**

- Demand and Generation Projection
  - Based on Last 3 years data.
- Generation Projection
  - Average of monthly maximum injection in the last three years.
  - Based on actual metered data available with RLDCs.
  - Increasing Trend : Last Year Average figure considered
  - In other cases : Average of last three years
  - For State's generation, maximum injection data for last 3 yrs and projected generation to be provided by state SLDC.

# **Demand Generation Projection**

- For State's generation, in case of non-submission of data by the DICs, the maximum injection of the concerned State is taken as the difference between peak met and withdrawal from ISTS based on actual metered data (for the time block corresponding to the block in which peak met occurred).
- □ New Generation: DOCO by 30<sup>th</sup> June, 2020.

# **Demand Generation Projection**

- Demand Projection
  - Projection based on last 3 year's average of corresponding month's peak demand met figures.
  - Projected all India peak demand met calculated.
  - Based on FORECAST function of MS-Excel
  - Data taken from monthly power supply position published by CEA.
  - Normalization factor: <u>Projected All India Peak Demand Met</u>
    Sum of projected met for all states

# New Units Loading Thermal Units with DOCO from 1st Oct'19 to 30th June'20 70% Hydro Units with DOCO from 1st Oct'19 to 30th June'20 100% Gas Units with DOCO from 1st Oct'19 to 30th June'20 30%

# **Demand and Generation Projections**

- Northern Region
- **□** Eastern Region
- Western Region
- North-Eastern Region
- **□ Southern Region**

**Projection** Gen. addition

**Projection** Gen. addition

**Projection** Gen. addition

Projection Gen. addition

**Projection Gen. addition** 

**MW Values** 

650

400

750

750

500 (towards NR)

500 2000

1000

# **HVDC Set points**

Gajuwaka\_HVDC

Chandrapur-Padghe Pole-1

Chandrapur-Padghe Pole-2

Champa-Kurukshetra Pole-3

Alipurduar-Agra Pole-1 & Pole-2

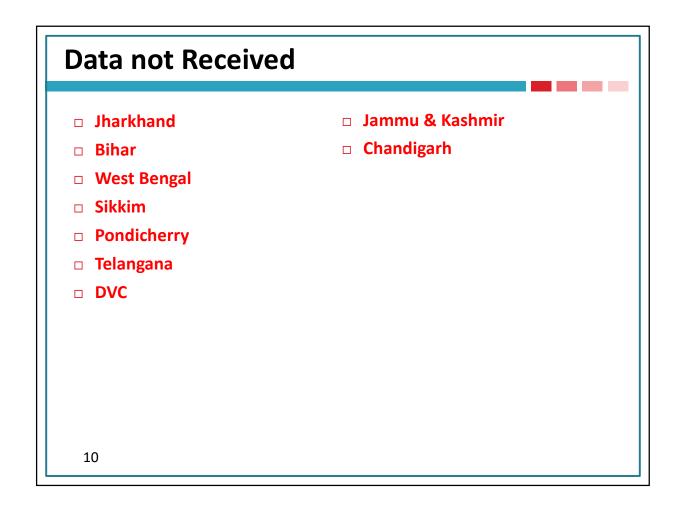
Champa-Kurukshetra Pole-1 & Pole-2

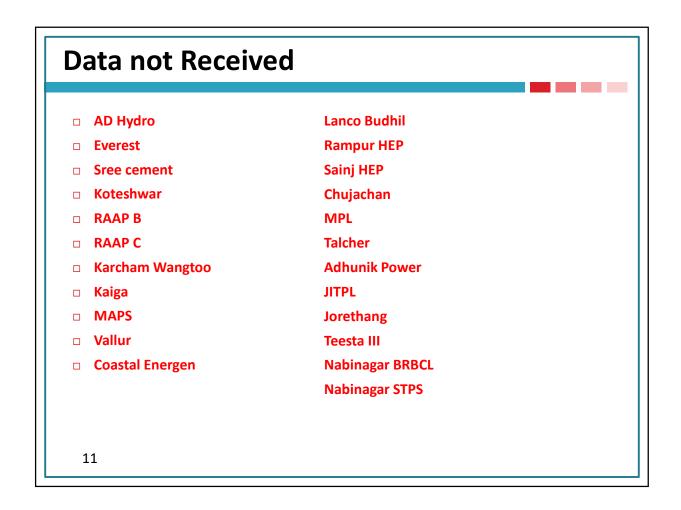
BNC- Agra Pole-1& Pole-2

Pusauli HVDC

# Maximum Flow based on operational experience.

HVDC Name	Set points to be considered in Basecase
Mundra-Mahindergarh Pole-1	1000
Mundra-Mahindergarh Pole-2	1000
Talcher-Kolar Pole- 1	1000
Talcher-Kolar Pole- 2	1000
Rihand-Dadri Pole- 1	750
Rihand-Dadri Pole- 2	750
Balia-Bhiwadi Pole-1	500
Balia-Bhiwadi Pole-2	500
Bhadrawati_HVDC	1000
Vindhyachal_HVDC	250





#### **YTC Data received from Transmission Licensees**

- Adani Power Limited
- **■** Darbhanga Motihari Transmission Company Ltd.
- **■** Jabalpur Transmission Company Ltd.
- East North Inter-connection Ltd.
- **■** Bhopal Dhule Transmission Company Ltd.
- **■** RAPP Transmission Company Ltd.
- **□** Purulia & Kharagpur Transmission Company Ltd.
- **□** NRSS-XXIX Transmission Ltd.
- NRSS-XXXI B Transmission Ltd.
- **■** Maheshwaram Trans. Ltd.
- **□** Gurgaon-Palwal Trans. Ltd.
- **□** Khargone Trans. Ltd.
- **■** Jindal Power Ltd.
- Alipurduar Transmission Limited

## YTC Data received from Transmission Licensees... (2)

- Odisha Generation Phase-II Trans. Ltd.
- **■** Teestavalley Power Transmission Ltd.
- **■** Essar Power Transmission Company Ltd.
- **■** Western Transco Power Limited
- **■** Western Transmission Gujarat Limited
- Sipat Transmission Limited
- **□** Chhattisgarh -WR Transmission Limited
- Raipur-Rajnandgaon-Warora Transmission Limited
- **□** Patran Trans. Co. Ltd.
- **□** Torrent Power Grid Ltd.
- **□** Jaypee Powergrid Ltd.
- **■** Power Grid Corporation of India Limited
- **■** Raichur Sholapur Transmission company Ltd

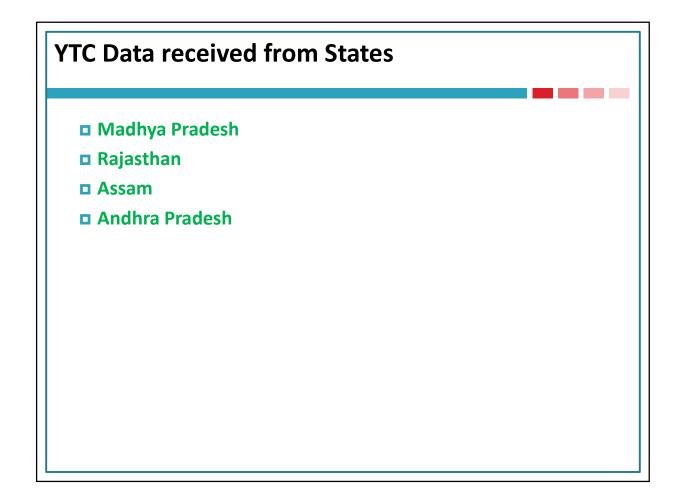
Conto

# YTC Data received from Transmission Licensees... (3)

- **■** PowerGrid Jabalpur Trans. Ltd.
- **POWERGRID Warora Trans. Ltd.**
- **□** POWERGRID NM Trans. Ltd.
- **□** POWERGRID Vizag Trans. Ltd.
- **■** PowerGrid Parli Trans. Ltd.
- PowerGrid Unchahar Trans. Ltd.
- **□** PowerGrid Kala Amb Trans. Ltd.
- **POWERGRID Southern Interconnector Transmission System Limited**
- **■** Kohima Mariani Transmission Ltd.
- **NER-II Transmission Ltd.**

### YTC Data not received

- Kudgi Trans. Ltd.
- Powerlinks Transmission Ltd.
- Warora-Kurnool Transmission Limited
- North East Transmission Company Ltd.
- NRSS-XXXVI Transmission Ltd.
- Parbati Koldam Trans. Company Ltd.
- Aravali Power Company Pvt. Ltd.



#### List of new assets CoD as per As per CEA **Name of the Transmission Asset** Anticipated/ website **TSA Actual CoD Khargone Transmission Limited** July,2019 765kV Khandwa-Dhule Aug 2020 765kV Line Dhule bays for Khandwa-Dhule July,2019 Aug 2020 Khandwa Substation 2\*1500 MVA 765/400 kV July,2019 Mar 2020 765kV Khandwa-Indore July,2019 Mar 2020 400kV Khargone TPP switchyard- Khandwa pool July,2019 Mar 2020 LILO of one ckt of 400kV Khandwa-Rajgarh D/c line Khargone TPP Feb,2018 Mar 2018 17

# List of new assets ... (2)

SI.No	Name of Transmission line	Scheduled COD	As per CEA website	Anticipated /Actual CoD	CERC Order date			
	KOHIMA MARIYANI TRANSMISSION LTD (New Licensee)							
1	400/200 kV, 2 x 500 MVA Substation at New Kohima.			01-Aug-20				
2	Imphal – New Kohima 400kV D/C Line with Twin Moose ACSR Conductor	29th April 2020		01-Aug-20	90/AT/2017; Order Date: 06th July' 2018			
3	New Kohima – New Mariani 400 kV D/C Line with Twin Moose ACSR Conductor			01-Aug-20				

# List of new assets ... (3)

SI.No	Name of Transmission line	Scheduled COD	As per CEA website	Anticipated /Actual CoD	CERC Order date			
	NER-II Transmission Ltd (New Licensee)							
1	132kV AGTPP (NEEPCO) – PK Bari	31 Mar 2020		Sep-20				
2	400 kV Surjamani Nagar- PK Bari	31 Jul 2020		Sep-20	80/TL/2017; Order Date: 23.05.2017			
3	400kV Silchar- Misa	01 Dec 2020		Sep-20				

.9

# List of new assets (PowerGrid) ... (4)

SI. No	Name of Transmission line	Act. CoD	CERC Order date
1	63 MVAR, 400 KV Switchable Line Reactor along with 500 Ohms NGR at Rajgarh (POWERGRID) end of Khargone TPS – Rajgarh (POWERGRID) 400 kV line	01-03-2018	19-Mar-20
2	1X500 MVA 400/220 kV ICT along with associated bays at Tumkur (Pavagada) Substation	31-03-2019	14-Apr-20
3	02 Nos. 400kV bays at Samba Substation for Amargarh to Samba (POWERGRID) transmission line along with 02 Nos. 50 MVAR Non switchable line Reactors	26-08-2018	14-Apr-20
4	Tumkur (Pavagada) Pool-Hiriyur400 kV D/C line along with associated bays and equipment at both ends	27-09-2018	28-Apr-20

## List of new assets (PowerGrid) ... (5)

SI. No	Name of Transmission line	Act. CoD	CERC Order date
5	1x500MVA, 400/220/33kV ICT along with associated bays at Trichy Substation	10-06-2017	30-Apr-20
6	2 Nos. 765kV line bays at 765/400kV Raipur Pooling Station (Powergrid) for Raipur PS (Powergrid)-Rajnandgaon(TBCB) 765kV D/C line	30-11-2018	10-May-20

1

## Other issues

- Exclusion of YTC of LILO of 400kV Vindhyachal –Korba at Essar Mahan
- Vide Order dated 20.01.2020 in Petition no: 132/MP/2018, CERC had directed M/s Essar Power Ltd. to pay transmission charges for LILO of 400kV Vindhyachal-Korba at Essar Mahan.
- Thus, YTC of LILO of 400kV Vindhyachal-Korba at Essar Mahan to be excluded from POC sharing mechanism
- CERC Tariff Order has no separate tariff for the said asset
- The tariff was approved along with other assets (GIS S/s at Hazira and 400kV Hazira-Gandhar line vide CERC Order dated 19.12.18 in Petition No. 173/TT/2013 and 111/TT/2015.)
- Validation Committee may take view



Entity	Projected Demand (MW) by IA	Demand as given by DICs	Projected Generation (MW) by IA	Generation data as given by DICs	Projected ISTS drawal (MW) as per IA	ISTS drawal as per data submitt ed by DICs
Chandigarh	401	-	-	-	401	-
Delhi	7,169	6300	1344	1099	5,825	5201
Haryana	11,009	9850	3113	37003500	7896	6150
Himachal Pradesh	1,622	1569	1131	1235-1135	491	334
Jammu & Kashmir	2,366	-	1283	-	1083	-
Punjab	13,375	12400	6254	6200	7121	6200
Rajasthan	12,384	11466	8778	8325	3606	3141
Uttar Pradesh	23,083	21533	9705	10900	13378	10633
Uttarakhand	2,154	1993	1062	1130	1092	863

<b>Generation Projection – Northern Region 25</b>											
S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+C	Comments From DICs /States (if any)	Figure as per Comments				
		(MW)	(MW)	(MW)	(MW)		(MW)				
1	ввмв	2488	-	-	2488	As per data given by BBMB	2528				
2	Dadri Thermal	1663	-	-	1663		1200				
3	Rihand	2878	-	-	2878		2795				
4	Singrauli	1734	-	-	1734	As per data given	1858				
5	Unchahar	1478	-	-	1478	by NTPC	1421				
6	Auraiya	333	-	-	333		150				
7	Dadri CCPP	566	-		566		300				
8	NAPS	390	-	-	390	-	-				
9	Jhajjar	1369	-	-	1369	Data given by APCPL Jhajjar	1414				

G	eneratio	on Proj	ection -	- North	ern Re	gion(	<b>(2)</b> 26
S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+C	Comments From DICs /States (if any	Figure as per Comments
		(MW)	(MW)	(MW)	(MW)		(MW)
10	Dhauliganga	293	-	-	293	As per NHPC	280
11	Tanakpur	103	-	-	103	As per NHPC	98
12	Koteshwar	405	-	-	405	-	405395
13	Tehri	1008	-	-	1008	As per Tehri	967
14	Anta	225	-	-	225	As per data given by NTPC	150
15	RAAP B	373	-	-	373	-	373
16	RAAP C	440	-	-	440	-	440
17	AD Hydro	237	-	-	237	-	237210
18	Everest	108	-	-	108	-	108
19	Karcham Wangtoo	1184	-	-	1184	-	1184—1100

Ge	eneration	n Proje	ction – N	Northe	rn Re	gion(3)	Back
S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+C	Comments From DICs /States (if any	Figure as pe
		(MW)	(MW)	(MW)	(MW)		(MW)
20	Bairasul	159	-	-	159	As per NHPC	120
21	Chamera 1	553	-	-	553	As per NHPC	540
22	Chamera 2	285	-	-	285	As per NHPC	100
23	Chamera 3	242	-	-	242	As per NHPC	233
24	Naptha Jhakri	1630	-	-	1630	As per Naptha Jhakri	1605
25	Lanco Budhil	75	-	-	75	-	10% OL
26	Dulhasti	408	-	-	408	As per NHPC	390
27	Salal	736	-	-	736	As per NHPC	700
28	Sewa-II	132	-	-	132	As per NHPC	130
29	URI I HPS	515	-	-	515	As per NHPC	480
30	URI II HPS	244	-	-	244	As per NHPC	240
31	Sree Cement	251	-	-	251	-	251
32	Parbati III	527	-	-	527	As per NHPC	520
33	Rampur HEP	456	-	-	456	-	10% OL
34	Koldam	882	-	-	882	As per NTPC	792
35	Kishanganga	309	-	-	309	As per NHPC	220
36	Sainj HEP	123	-	-	123	-	10% OL
37	Tanda Stg-2	-	432	-	432	As per NTPC	433
38	Bhadhla Solar	-	-	-	_	-	-

Entity	Projected Demand (MW) by IA	Demand as given by DICs	Projected Generation (MW) by IA	Generation data as given by DICs	Projected ISTS drawal (MW) as per IA	ISTS drawal as per data submitt ed by DICs
Bihar	6,400	6000	317	400	6083	5600
DVC	2,980	2800	4226	4000	-1246	-
Jharkhand	1,360	1360	333	450	1027	-
Odisha	5,494	43314400	3412	4183	2082	148
West Bengal	9,480	8670	5135	5100	4345	3570
Sikkim	91	-	-	-	91	-
Normalization			0.8			

G	Generation Projection – Eastern Region(1) <sup>29</sup>											
S. No.	Entity	Projections based on 3 Years Data (A)		Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+ C	Comments From DICs /States (if any	Figure as per Comments					
		(MW)	(MW)	(MW)	(MW)		(MW)					
1	Chujachan	113	-	-	113	-	-					
2	MPL	933	-	-	933	-	-					
3	Teesta V	526	-	-	526	As per NHPC	518					
4	Kahalgaon	2233	-	-	2233		2171					
5	Farakka	1901	-	-	1901	As per data given by NTPC	1960					
6	Talcher	936	-	-	936	-	-					
7	Rangeet	64	-	-	64	As per NHPC	60					
8	Adhunik Power	503	-	-	503	-	-					
9	Barh	1253	-	-	1253	As per data given by NTPC	1238					

G	eneration	Proj	ection	– East	ern	Region.	(2)
							Back
S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+C	Comments From DICs /States (if any)	Figure as pe Comments
		(MW)	(MW)	(MW)	(MW)		(MW)
10	Kamalanga TPP (GMR)	645	-	-	645	-	-
11	JITPL	555	-	-	555	-	<del>555</del> 1000
12	Jorthang	104	-	-	104	-	-
13	Bhutan	1663	713	-	2376	-	-
14	Teesta-III	1185	-	-	1185		-
15	Dikchu HEP	113	-	-	113	-	-
16	Nabinagar BRBCL	659	-		659	-	-
17	Tashideng	127	-	-	127	-	110—take 10% OL
18	Kanti Bijlee Stg-2 (KBUNL)	-	-	-	-	As per last quarter	350
19	Nabinagar STPS	609	-	-	609	-	-
20	Darlipalli STPP ST-I	-	524	-	524	As per NTPC	560

Entity	Projected Demand (MW) by IA	Demand as given by DICs	Projected Generation (MW) by IA	Generati on data as given by DICs	Projected ISTS drawal (MW) as per IA	ISTS drawal as per data submitte d by DICs
Chattisgarh	4,788	4481	2477	2004-2104	2,311	2477
Gujarat	16,736	14,575	11214	9620	5,522	4,955
Madhya Pradesh	9,882	9,000	4877	4986	5005	4,014
Maharashtra	20,390	19,500	13632	12976 12648	6,758	6,524
Daman & Diu	355	280	-	-	355	280
Dadra Nagar Haveli	829	825500	-	-	829	825
Goa	574	485	-	-	574	485
ESIL	553	450	-	-	553	450

Generation Projection – Western Region(1) 32												
S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+C	Comments From DICs /States (if any	Figure as per Comment s					
		(MW)	(MW)	(MW)	(MW)		(MW)					
1	Vindhyachal	4519	-	-	4519	As per NTPC	4415					
2	Ratnagiri Dabhol	618	-	-	618	As per data given by Ratnagiri Dabhol	660					
3	TAPS (1,2,3,4)	1305	-	-	1305	As per data given by TAPS	1138					
4	JINDAL	523	-	-	523	As per data given by JPL	440					
5	LANCO	505	-	-	505	As per data given by LANCO	573					
6	NSPCL Bhilai	470	-	-	470	As per data given by NSPCL Bhilai	432					
7	Korba	2457	-	-	2457	As per NTPC	2421					
8	SIPAT	2755	-	-	2755	As per NTPC	2794					
9	CGPL	3357	-	-	3357	As per CGPL	3800 3357					
10	Mauda	2036	-	-	2036	As per NTPC	2050 1600					
11	Gandhar	541	-	-	541	As per NTPC	350					

G	eneratio	n Proje	ction –	Weste	rn Re	gion (2	<b>2)</b> 33
S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+C	Comments From DICs /States (if any	Figure as pe Comments
		(MW)	(MW)	(MW)	(MW)		(MW)
12	Kawas	475	-	-	475	As per NTPC	250
13	SSP	456	-	-	456	As per SSP	1194
14	KAPS	400	-	-	400	As per data given by KAPS	406
15	Essar Mahan	575	-	-	575	As per data given by Essar Mahan	1123600
16	BALCO	557	-	-	557	As per BALCO	400
17	KSK Mahanadi	1317	-	-	1317	As per KSK Mahanadi	1682
18	Sasan UMPP	3747	-	-	3747	As per data given by Sasan UMPP	3470
19	JPL Stg-2	981	-	-	981	As per data given by JPL	1100
20	DGEN	250	-	-	250	As per data given by DGEN	400
21	DB Power	1146	-	-	1146	As per data given by DB Power	820
22	Korba West(REGL)	0	-	-	0	As per data given by Korba West	500
23	Dhariwal	284	-	-	284	As per data given by Dhariwal	273
24	GMR Chattishgarh	1191	-	-	1191	As per data given by GMR Chhattisgarh	900
25	JP Nigrie	1156	-	-	1156	As per data given by JP Nigrie	1241
26	GMR Warora	507	-	-	507	As per data given by GMR Warora	350

G	eneration	Projec	tion – \	Vesteri	n Regi	ion (3)	34 Back
S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+C	Comments From DICs /States (if any	Figure as pe Comments
		(MW)	(MW)	(MW)	(MW)		(MW)
27	ACBIL+ Spectrum+MCCPL	660	-	-	660	As per data given by ACBIL	666
28	MB Power	1138	-	-	1138	As per data given by MB Power	900
29	RKM Power	309	-	-	309	As per data given by RKM Power	900450
30	Jhabua Power	542	-	-	542	As per Jhabua Power	566
31	TRN Energy	414	-	-	414	As per data given by TRN Energy	549
32	Sholapur STPP	848		-	848	ANITDO	970360
33	Lara STPP	536	-	-	536	As per NTPC	560-400
34	SKS Power	523	-	-	523	As per SKS Power	534
35	Gadarwada	626	-	-	626	As per NTPC	560440
36	Khargone STPS	-	432	432	864	As per NTPC	867432
37	Naranpar_Ostro	-	-	-	-	As per last Quarter	125
38	Rewa_Solar (Acme+Arinsun+Badw ar_Mahinder)	-	-	-	-	As per last Quarter	0

G	eneration I	Projec	tion – \	<b>Nester</b>	n Reg	gion (4)	35 Back
S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+C	Comments From DICs /States (if any	Figure as pe Comments
		(MW)	(MW)	(MW)	(MW)		(MW)
39	Vadwa_Green Infra(wind)	-	-	-	-	As per last Quarter	115125
40	Roha Green Infra (Wind)	-	-	-	-	As per last Quarter	113
41	Ratadiya AGEMPL	-	-	-	-	As per last Quarter	6388
42	Dayapar Inox wind	-	-	-	-	As per last Quarter	75-100
43	Bhuvad_Renew wind	-	-	-	-	As per last Quarter	92

			-	on – Nor		
Entity	Projected Demand (MW) by IA	Demand as given by DICs	Projected Generation (MW) by IA	Generation data as given by DICs	Projected ISTS drawal (MW) as per IA	ISTS drawal as per data submitt ed by DICs
Arunachal Pradesh	152	156	18	12	134	144
Assam	1,987	2040	257	326	1,730	1714
Manipur	191	193	-	-	191	193
Meghalaya	348	351	280	281	68	70
Mizoram	102	129	41	59	61	70
Nagaland	164	154	38	24	126	130
Tripura	283	401	39	159	244	242

G	eneration	Proje	ction –	North-	East	ern Regi	on <sup>37</sup>
S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+C	Comments From DICs /States (if any	Figure as per Comments
		(MW)	(MW)	(MW)	(MW)		(MW)
1	AGTPP, NEEPCO	93	-	-	93	As per NEEPCO	130
2	Doyang, NEEPCO	70	-	-	70	As per NEEPCO	74
3	Kopili , NEEPCO	197	-	-	197	As per NEEPCO	0
4	Kopili 2, NEEPCO	27	-	-	27	As per NEEPCO	25
5	Khandong, NEEPCO	49	-	-	49	As per NEEPCO	48
6	Ranganadi, NEEPCO	422	-	-	422	As per NEEPCO	408
7	AGBPP_Kathalguri	210	-	-	210	As per NEEPCO	230
8	Loktak, NHPC	101	-	-	101	As per data given by NHPC	105

S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+ C	Comments From DICs /States (if any	Back Figure as per Comments
		(MW)	(MW)	(MW)	(MW)		(MW)
9	Palatana GBPP	673	-	-	673	As per data given by Palatana GBPP	680
10	Bongaigaon_NTPC	679	-	-	679	As per NTPC	615
11	Pare NEEPCO	120	-	-	120	As per NEEPCO	112

Demand	and Gene	eration	Projectio	n – Sout	hern Re	gion 39
Entity	Projected Demand (MW) by IA	Demand as given by DICs	Projected Generation (MW) by IA	Generation data as given by DICs	Projected ISTS drawal (MW) as per IA	ISTS drawal as per data submitt ed by DICs
Andhra Pradesh	9,779	9763	7503	100148400	2,276	-251
Telangana	10,964	13164	5244	6520	5,720	-
Karnataka	11,326	10916	8812	8610	2,514	2306
Kerala	3,707	3630	1425	1550	2,282	2,080
Tamil Nadu	15,509	15200	8936	10032	6,573	5168
Pondicherry	459	-	-	-	459	-
Goa_SR	80	10080	-	-	80	100
Normalization Factor			0.89	9		

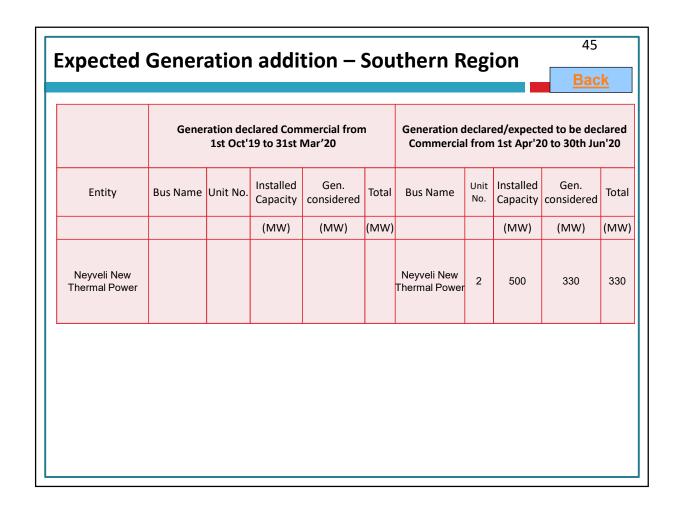
G	eneratio	on Proj	ection	– Sout	hern	Region	(1) <sup>40</sup>
S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+C	Comments From DICs /States (if any	Figure as per Comments
		(MW)	(MW)	(MW)	(MW)		(MW)
1	Ramagundam	2394	-	-	2394		<mark>2421</mark> 2240
2	Simhadri 2	898	-	-	898	As per NTPC	943898
3	Simhadri 1	898	-	-	898		943898
4	SEPL	0	-	-	0	-	0
5	Lanco Kondapalli	0	-	-	0	-	-0
6	Kaiga	847	-	-	847	-	700
7	NEYVELI ( EXT) TPS	375	-	-	375	-	375
8	NEYVELI TPS-II	1263	-	-	1263	-	1050
9	NEYVELI TPS-II EXP	283	-	-	283	-	350

Ge	neration P	roiectic	n – Soi	uthern	Regi	on(2)	41
						,	<u>Back</u>
S. No.	Entity	Projections based on 3 Years Data (A)	Generation addition during 1st Oct'19 to 31st Mar'20 (B)	Generation CoD from 1st Apr'20 to 30th Jun'20 (C)	TOTAL D=A+B+C	Comments From DICs /States (if any	Figure as per Comments
		(MW)	(MW)	(MW)	(MW)		(MW)
10	MAPS	260	-	-	260	-	192
11	Vallur	999	-	-	999	-	999
12	Meenakhshi	0	-	-	0	-	0
13	Coastal Energen	675	-	-	675	-	675
14	Kudankulam	1517	-	-	1517	-	900
15	Tuticorin TPP	955	-	-	955	-	900
16	Sembcorp Energy India Ltd.	1274	-	-	1274	-	1250
17	IL&FS	794	-	-	794	-	794
18	Talcher Stage-II	1699	-	-	1699	-	1875
19	Sembcorp Gayatri Power Ltd.	1268	-	-	1268	-	1268
20	Kudgi STPS	2010	-	-	2010	As per NTPC	<b>2050</b> —760
21	Neyveli New Thermal Power	279	-	330	608	-	450
22	Green Infra_SR	-	-	-	-		125
23	Mytrah	-	-	-	-	As per last Quarter	125
24	Orange	-	-	-	-	, is per last each ter	100
25	Betam	-	-	-	-		25

	Gener		lared Com 9 to 31st N	mercial fron Mar'20	n				ted to be dec 20 to 30th Jur	
Entity	Bus Name	Unit No.	Installed Capacity	Gen. considered	Total	Bus Name	Unit No.	Installed Capacity	Gen. considered	Total
			(MW)	(MW)	(MW)			(MW)	(MW)	(MW)
「anda Stg-2	Tanda Stg-2	5	660	432	432					

									Bac	<u>ck</u>
			lared Com	nmercial fro Mar'20	m				ed to be dec 0 to 30th Jui	
Entity	Bus Name	Unit No.	Installed Capacity	Gen. considered	Total	Bus Name	Unit No.	Installed Capacity	Gen. considered	Total
			(MW)	(MW)	(MW)			(MW)	(MW)	(MW)
Khargone STPS	Khargone STPS	1	660	432	432	Khargone STPS	2	660	432	432

	1st O	ct'19 to	31st Mar	cial from '20					d to be decla to 30th Jun'	
Entity	Bus Name	Unit No.	Installed Capacity	Gen. considered	Total	Bus Name	Unit No.	Installed Capacity	Gen. considered	Total
			(MW)	(MW)	(MW)			(MW)	(MW)	(MW
Odisha	OPGC Stage-II	4	660	432	432					
	Mangdechu HEP	1	180	178						
Mangdechu HEP	Mangdechu HEP	2	180	178	713					
ПЕР	Mangdechu HEP	3	180	178	113					
	Mangdechu HEP	4	180	178						
Darlipalli STPP ST-I	oarlipalli STPP ST-I	1	800	524	524					



			clared Co '19 to 31s	mmercial fro t Mar'20	m	Generation of Commercia				
Entity	Bus Name	Unit No.	Installed Capacity		Total	Bus Name	Unit No.	Installed Capacity	lconsider	To
			(MW)	(MW)	(MW)			(MW)	(MW)	(∿