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भारत सरकार  
Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युत प्रणाली योजना एवं मूल्यांकन - I प्रभाग

Power System Planning & Appraisal - I Division

सेवा में / To

1. Chairperson, Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	2. Member (Power System), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.
3. Member (Economic & Commercial), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	4. Director (Trans) Ministry of Power Shram Shakti Bhawan, New Delhi-110001.
5. Chief Operating Officer, Central Transmission Utility POWERGRID, Saudamini, Plot No. 2, Sector-29, Gurgaon – 122 001.	6. Sh. Surinder Singh Sur, Joint Adviser (Energy) NITI Aayog, Parliament Street, New Delhi – 110 001.
7. Shri P. K. Pahwa, Ex. Member (GO&D), CEA 428 C, Pocket -2, Mayur Vihar, Phase -1, Delhi – 110091.	8. Shri Prabhakar Singh, Ex. Director (Projects), POWERGRID D 904, Tulip Ivory, Sector-70, Gurgaon – 122 001.

**विषय: 1 मार्च 2019 को आयोजित "ट्रांसमिशन पर राष्ट्रीय समिति" (एनसीटी) की तृतीय बैठक - मीटिंग नोटिस एवं कार्यसूची**

**Subject: 3<sup>rd</sup> meeting of "National Committee on Transmission" (NCT) to be held on 1<sup>st</sup> March 2019– Meeting Notice and Agenda note.**


Sir/Madam,

The 3<sup>rd</sup> meeting of the "National Committee on Transmission" (NCT) is scheduled to be held on **1<sup>st</sup> March 2019 at 1030 hrs** under the chairmanship of Shri P. S. Mhaske, Chairperson, CEA in conference Room of CEA (Manthan), 2<sup>nd</sup> Floor, Sewa Bhawan, R.K. Puram, New Delhi.

The agenda for the meeting is available on CEA website <http://www.cea.nic.in>. (path to access: Home Page-Wing-Power System-PSPA I-National Committee on Transmission)

Kindly make it convenient to attend the meeting.

Yours faithfully,

  
(Ravinder Gupta)

Chief Engineer(PSPA-I) & Member Secretary (NCT)

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**Copy to:**

- (i) Joint Secretary (Trans), Ministry of Power, Shram Shakti Bhawan, New Delhi-110001
- (ii) Chief Engineer (PSPA-II), CEA
- (iii) CEO, RECTPCL, ECE House, 3<sup>rd</sup> Floor, Annexe - II, 28A, KG Marg, New Delhi - 110001
- (iv) PFC Consulting Ltd, First Floor, "Urjanidhi", 1, Barakhmba Lane, Connaught Place, New Delhi -110001

<p>Joint Secretary (Trans), Ministry of Power, Shram Shakti Bhawan, New Delhi-110001</p>	<p>Joint Secretary (Trans), Ministry of Power, Shram Shakti Bhawan, New Delhi-110001</p>
<p>Chief Engineer (PSPA-II), CEA</p>	<p>Chief Engineer (PSPA-II), CEA</p>
<p>CEO, RECTPCL, ECE House, 3<sup>rd</sup> Floor, Annexe - II, 28A, KG Marg, New Delhi - 110001</p>	<p>CEO, RECTPCL, ECE House, 3<sup>rd</sup> Floor, Annexe - II, 28A, KG Marg, New Delhi - 110001</p>
<p>PFC Consulting Ltd, First Floor, "Urjanidhi", 1, Barakhmba Lane, Connaught Place, New Delhi -110001</p>	<p>PFC Consulting Ltd, First Floor, "Urjanidhi", 1, Barakhmba Lane, Connaught Place, New Delhi -110001</p>

The following information is being furnished for your information. The details are as follows:

Subject: 2<sup>nd</sup> quarter of National Commission on Power Sector (NCPSE) report.

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## Agenda note for the 3rd meeting of National Committee on Transmission (NCT)

Date and Time: 1st March 2019, 1030 hrs

Venue: Conference Room of CEA (Manthan), 2<sup>nd</sup> Floor, Sewa Bhawan, R.K. Puram, New Delhi

## 1. Confirmation of the minutes of 2nd meeting of National Committee on Transmission (NCT)

1.1 The Minutes of 2<sup>nd</sup> meeting of the National Committee on Transmission were issued vide CEA letter No. CEA-PS-11-15(11)/3/2018-PSPA-I Division dated 12.12.2018.

1.2 Following corrigendum is proposed in the minutes:

Item No.	Scheme name	Table location	As recorded in the minutes of the meeting	Corrigendum proposed
5.6	Interconnection of Jam Khambhaliya Pooling Station for providing connectivity to RE projects (1500 MW) in Dwarka (Gujarat)	Sl. No. 2 2 <sup>nd</sup> column	2 nos. of 400kV line bays at Jam Khambhaliya PS for termination of of Jam Khambhaliya PS-Lakadia 400kV D/c (triple) line	2 nos. of 400kV <i>GIS</i> line bays at Jam Khambhaliya PS for termination of of Jam Khambhaliya PS-Lakadia 400kV D/c (triple) line
6.1	Transmission system associated with LTA applications from Rajasthan SEZ Part-A	Sl. No. 1 3 <sup>rd</sup> column	----- ----- 765kV reactor bay-1 400kV reactor bay-2	----- ----- <i>765kV reactor bay-2</i> <i>400kV reactor bay-1</i>
		Sl. No. 4 3 <sup>rd</sup> column	----- ----- 765kV reactor bay-1 400kV reactor bay-2	----- ----- <i>765kV reactor bay-2</i> <i>400kV reactor bay-1</i>
		Sl. No. 4 2 <sup>nd</sup> column	----- ----- Future provisions: 765/400kV ICT along with bays: 1 Nos ----- -----	----- ----- Future provisions: 765/400kV ICT along with bays: <i>2 Nos</i> ----- -----
6.1.6	-	As the transmission scheme for evacuation of power from SEZs in Rajasthan was agreed technically in the 1st meeting of NRSCT held	As the transmission scheme for evacuation of power from SEZs in Rajasthan was agreed technically in the 1st meeting of NRSCT held	

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			therefore, CTU needs to take regulatory approval from CERC for the scheme	CTU needs to take regulatory approval from CERC for the scheme
6.7	ICT Augmentation works at existing Bhiwani (PG) ISTS S/S associated with LTA applications from SEZs in Rajasthan	3 <sup>rd</sup> row 4 <sup>th</sup> column	Total Rs (in Crore): 243	Total Rs (in Crore): 65
6.8	Transmission system for providing connectivity to RE projects in Bhadla-II	Sl.No. 2 2 <sup>nd</sup> column	Creation of 220kV level at Bhadla-II: 10 nos. of 220kV line bays	Creation of 220kV level at Bhadla-II - 9 nos. of 220kV line bays
6.10.1	12ohm series reactor at 400kV Mohindergarh S/s of M/s Adani	-	The scheme to control Fault Level in Northern Region ----- -- end. Mohindergarh substation is owned by M/s Adani Power limited.	The scheme to control Fault Level in Northern Region ----- - end. Mohindergarh substation is owned by <b>M/s Adani Transmission (India) limited.</b>
6.10.2		-	After deliberations, ----- at existing ISTS HVDC station (of M/s Adani Power limited). The above works falls under the category of technical upgradation	After deliberations, -----at existing ISTS HVDC station ( <b>of M/s Adani Transmission (India) limited</b> ). The above works falls under the category of technical upgradation

1.3 The corrigendum proposed in item no. 6.1, 6.1.6, 6.7 and 6.8 has already incorporated in their respective items in minutes of the 3<sup>rd</sup> ECT. Other corrigendum in item no. 5.6, 6.10.1 and 6.10.2 also needs to be modified in the ECT minutes.

1.4 Members may deliberate the corrigendum proposed and confirm the minutes of the meeting.

## 2. Implementation of associated transmission schemes for the projects identified as potential RE projects and issues related to LTA

2.1. MoP vide its letter dated 19.02.2019 has scheduled the 4<sup>th</sup> meeting of ECT on 07.03.2019 to discuss taking up the implementation of associated transmission schemes for the projects identified as potential RE projects and issues related to LTA. MoP has requested to convene NCT meeting to deliberate on the same.

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- 2.2. The 2<sup>nd</sup> NCT meeting was held on 04.12.2018 and its recommendations were deliberated in the 3<sup>rd</sup> ECT meeting held on 21.12.2018.

Empowered Committee on Transmission (ECT) in its 3<sup>rd</sup> meeting held on 21.12.2018 has concurred with the recommendation of NCT with few modifications. The transmission scheme associated with RE generation projects in WR (10.5 GW) and NR (8.9 GW) was recommended for implementation through Tariff Based Competitive Bidding (TBCB) route (Nine nos.) and balance through RTM route. The RfQ of all the nine transmission scheme to be implemented through TBCB route has already been opened.

The RE potential based transmission schemes were agreed by the ECT. ECT also agreed that as no developer has applied for connectivity/LTA so far, SECI would be requested to apply for stage-II connectivity/LTA beforehand, in order, to take up for implementation of the schemes.

The transmission scheme associated with potential RE projects along with recommendation of 2<sup>nd</sup> NCT and 3<sup>rd</sup> ECT regarding its implementation is as given below:

S. No.	Potential RE project schemes from 3 <sup>rd</sup> ECT	Estimated Cost (Rs.) Cr.	2 <sup>nd</sup> NCT recommendations	3 <sup>rd</sup> ECT recommendation
1	Transmission System for providing connectivity to RE projects in Gujarat [Lakadia (2000MW)]*	196	Implementation of the schemes may be taken up only after receipt of connectivity/LTA application/s either from RE generator/s or by SECI on behalf of generators.	Proposed for potential basis based on the LTA applications of SECI
2	Transmission system associated with RE generations from potential wind energy zones in Osmanabad area of Maharashtra*	301		
3	Transmission system associated with RE generations from potential Solar Energy Zone in Maharashtra (1000 MW under Ph-I)*	220		
4	Transmission system for providing connectivity to RE projects at Bikaner(PG)*	93		
5	Transmission system for providing connectivity to RE projects in Fatehgarh-II*	298		
6	Transmission system for providing connectivity to RE projects in Bhadla-II*	298		
7	Evacuation of power from RE sources in Tirunelveli and Tuticorin Wind Energy Zone (Tamil Nadu) (500MW)*	37		
8	Evacuation of power from RE sources in Karur / Tiruppur Wind Energy Zone (Tamil Nadu) (2500MW)*	578		
9	Evacuation of power from RE sources in Koppal Wind Energy Zone	824		

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10	Evacuation of power from RE sources in Kurnool Wind Energy Zone (3000MW) /Solar Energy Zone (AP)(1500MW)*	2680		
11	Transmission system associated with RE generations at Bhuj –II, Dwarka & Lakadia	1075	Implementation through TBCB by June 2021 or as per the progress of connectivity/LTA applications of RE projects from WEZ in Gujarat.	Concurred the decision of NCT
12	Transmission System for providing connectivity to RE projects at Bhuj-II (2000MW) in Gujarat	645	Implementation through TBCB with commissioning schedule of December 2020 or as per progress of connectivity/LTA applications at Bhuj-II	Concurred the decision of NCT
13	Transmission system associated with LTA applications from Rajasthan SEZ Part-B	676	Implementation through TBCB route. Time frame to be decided based on connectivity/LTA applications at Fatehgarh-II	Concurred the decision of NCT

2.3. The bidding process of the schemes listed at s.no. 11 to 13 of the above table has already been started but its implementation time frame is dependent on the connectivity/LTA applications. If there is no connectivity/ LTA application, then its bidding process cannot be completed.

2.4. Augmentation/ implementation of transmission infrastructure under Inter State Transmission System is taken up in consultation with various stakeholders for the following cases:

- i) Transmission System strengthening requirements in view of the operational challenges/constraints envisaged by POSOCO through quarterly operational feedback.
- ii) Transmission System requirement if any to meet the load requirement as per the CEA projection for load growth.
- iii) Receipt of connectivity application as per CERC (Grant of Connectivity, Long-

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thereof. The augmentation is in terms common transmission system for providing connectivity to the generators with the ISTS system. This augmentation (common transmission system) is taken up on behalf of the generators for providing connectivity only and does not ensures evacuation of power of power from these generators.

- iv) Receipt of LTA application as per CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access) Regulations, 2009 and amendments thereof. The augmentation is taken up to evacuate power from the generators to their identified beneficiaries with reliability.

2.5. As per the existing tariff policy, all ISTS schemes have to be implemented through TBCB route except for the exemptions provided. The bidding is carried as per the existing Standard Bidding documents for procuring the transmission services. The Bidding documents includes Transmission Service Agreement (TSA) which is required to be executed between the Transmission Service Provider (TSP) and LTTCs, pursuant to which TSP shall build, own, operate and maintain the Project and make available the assets of the Project to Long Term Transmission Customer(s) on a commercial basis. Though the process of revision of SBDs, interalia, to align with CERC Regulation for sharing of ISTS charges is on, the bidding is being done on the basis of existing SBDs, which require the list of LTTCs for signing of TSA. Further, Schedule: 1 of the TSA also provides that ISTS charges are to be recovered by CTU from LTTCs as per the applicable CERC Regulation i.e. Point of connection mechanism of sharing and disbursed to TSPs as per Revenue Sharing Agreement.

2.6. In case of transmission schemes, whose beneficiaries are identified, the beneficiaries serve as the LTTCs. In case of transmission schemes, whose beneficiaries are not identified, the generators who seeks LTA on target basis serves as LTTCs and is required to execute the TSA. In case of transmission schemes, which has been broadly planned on potential basis, there is no identified generators nor beneficiaries, hence there is no LTTC to the sign the TSA and therefore, the bidding process of such scheme cannot be completed.

2.7. To identify ISTS connectivity of renewable energy projects from potential solar energy zones (SEZs) and potential wind energy zones (WEZs) of about 50 GW and 16.5 GW respectively, MNRE vide its order dated 08.06.2018 had constituted a Sub-Committee. The committee to facilitate development of the transmission system had solicited decisions on the following aspects from the competent authority:

- i) Amount of upfront payment from RE generation developers at the time of bidding and grant from Government.
- ii) Finalization of transmission system implementation mode and transmission implementing agency i.e. TBCB or RTM.
- iii) Site specific bidding for RE generation addition in accordance to the transmission plan.
- iv) CERC to expedite enabling provision in connectivity regulation so that SECI can apply for Connectivity & LTA.

2.8. CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) (Seventh Amendment dated 09.01.2019) Regulations, 2019, to Grant of connectivity, Long-term Access and Medium-term Access Regulations 2009 has enabled the Renewable Implementing Agencies to apply for the Connectivity/LTA. Accordingly, SECI/any other bidding agency may apply for

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Connectivity/LTA before taking up the bidding process and shall also sign the TSA with the BPC for facilitating the implementation of transmission system.

- 2.9. Further, para 16.4 of the detailed procedure for “Grant of Connectivity to Projects Based on Renewable Sources to Inter-State Transmission System” specifies that : *Based on consultation with MNRE, the transmission system so evolved shall be taken up for discussion in Standing Committee for Power System Planning and shall be implemented after regulatory approval.*
- 2.10. Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility) Regulations, 2010 states that these regulations shall apply to :
- (i) an ISTS Scheme proposed by Central Transmission Utility, for which generators have sought long-term access as per the Central Electricity Regulatory Commission (Grant of Connectivity, Long-Term Access and Medium-Term Open Access to the Inter-State Transmission and Related Matters) Regulations, 2009, and for which consultation with Central Electricity Authority and beneficiaries if already identified has been held for setting up the ISTS Scheme, but for which Power Purchase Agreements with all the beneficiaries have not been signed on the date of application.
  - (ii) an ISTS Scheme for system strengthening / up-gradation, identified by Central Transmission Utility to enable reliable, efficient, co-ordinated and economical flow of electricity within and across the region for which consultation with Central Electricity Authority and beneficiaries if identified has been held.
- 2.11. As far as Regulatory approval of the transmission schemes recommended by 3<sup>rd</sup> ECT for implementation is concerned, CTU has already applied for regulatory approval to CERC.
- 2.12. CTU may present the status of regulatory approval and details of the connectivity/LTA applications received as well connectivity / LTA granted to RE generation projects located in potential wind/solar zones in NR, WR and SR.
- 2.13. MNRE, Govt. of India vide its order dated 20.02.2019 has designated Solar Energy Corporation of India (SECI) as Renewable Energy Implementation Agency so as to facilitate the application of connectivity and LTA in ISTS network.
- 2.14. Members may deliberate regarding implementation of associated transmission schemes for the projects identified as potential RE projects and issues related to LTA.

### **3. Cost estimates for the transmission projects to be implemented through tariff based competitive bidding (TBCB)**

- 3.1. In the 32<sup>nd</sup> meeting of Empowered Committee on Transmission (ECT) held on 17.01.2014 in CEA, the following was decided for estimation of cost of the transmission projects to be implemented through TBCB:
- (i) A committee would be formed with the representatives from CEA, POWERGRID/ CTU and BPCs to work out a matrix for different type of transmission lines, which would consider different type of variables for estimating the project cost (for example, type of the terrains, wind zones, etc.).
  - (ii) Once the BPC is notified for a particular project, the survey should be carried out within the stipulated period (Survey report is to be provided to the prospective bidders 45 days prior to the issuance of RfP) and cost estimate should be prepared within 7 days based on the pre-defined cost matrix



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(iii) Initially, the project cost estimates indicated in the Empowered Committee would be tentative in nature and the cost committee would firm up the estimated cost based on the survey report.

3.2. In line with the decision taken in the 32<sup>nd</sup> ECT, the cost committee was formed by CEA and intimated to the members in the 33<sup>rd</sup> meeting of ECT. The composition of the committee is as given below:

1	Chief Engineer (SP&PA), CEA	Chairman
2	Director(SP&PA), CEA	Member
3	Director(SETD), CEA	Member
4	General Manager (Cost Engg), PGCIL	Member
5	AVP, PFCCL	Member
6	ACEO, RECTPCL	Member

3.3. MoP vide their office order no. 15/3/2017- Trans dated 13.04.2018 has reconstituted the Empowered Committee on Transmission and has constituted the "National Committee on Transmission" (NCT). The Terms of Reference (ToR) of ECT is consideration of recommendation of NCT and allotment of BPCs for TBCB projects. The ToR of NCT, inter-alia, includes formulation of transmission schemes and examination of cost of the schemes.

3.4. It is proposed that NCT may constitute a similar cost committee to examine the cost of the schemes, based on the survey report, which are recommended by NCT to ECT for implementation through TBCB route. The suggested composition of the committee is as given below:

1	Chief Engineer (PSPA-I), CEA	Chairman
2	Director(PSPA-1), CEA	Member
3	Director(PSETD), CEA	Member
4	General Manager (Cost Engg), PGCIL	Member
5	PFCCL representative	Member
6	RECTPCL representative	Member

3.5. Members may deliberate.

