

Agenda for 51st NR constituents meeting regarding Connectivity/LTA Applications in NR to be held on 28.10.2021

1.0 Proposal for grant of Connectivity to the applications received in Sep'21 from Renewable Energy Sources

Following 05 Nos. of Stage-I Connectivity applications have been received in the month of Sep'21 and are proposed to be granted as per details below:

TABLE 1

Sl. No.	Application ID	Applicant	Project Location	Date of Application	Connectivity Sought Date/(MW)	Nature of Applicant	Location requested for Grant of Stage-I Connectivity	Proposed Tr. System for Grant of Stage-I Connectivity
1.	1200003443	ReNew Solar (Shakti Three) Private Limited	Barmer, Rajasthan	14.09.2021	01.07.2023/ 300	Generator (Solar)	Fatehgarh-IV PS (New)	<p>ReNew Solar (Shakti Three) Private Limited Solar Power Project – Fatehgarh-IV PS 220 kV S/c line (Suitable to carry minimum 300 MW at nominal voltage)</p> <p>Common Transmission system for Connectivity (under ISTS):</p> <ul style="list-style-type: none"> • Establishment of 1x500 MVA 400/220 kV pooling station at Fatehgarh-IV PS. • Fatehgarh-IV PS - Fatehgarh-III PS 400 kV D/c (Quad) line • 1x1500 MVA 765/400 kV ICT at Fatehgarh-III PS • Establishment of 1x1500MVA 765/400kV Substation at suitable location near Beawar • Fatehgarh-III– Beawar 765 kV D/c line • LILO of both circuits of Ajmer-Chittorgarh 765 kV D/c line at Beawar substation or LILO of 400kV Kota –Merta line at Beawar substation
2.	1200003455	Grian Energy Private Limited	Bikaner, Rajasthan	21.09.2021	30.06.2023/ 100	Generator (Solar)	Bikaner-II PS (New)	<p>Grian Energy Private Limited Solar Power Project – Bikaner-II PS 220 kV S/c line* (Suitable to carry minimum 300 MW at nominal voltage)</p> <p><i>*220 kV line shall be Common for Application Nos. 1200003455, 1200003458 & 1200003453</i></p> <p>In addition to above, Common Transmission system for Connectivity (under ISTS) mentioned at (A) shall also be required.</p>

Sl. No.	Application ID	Applicant	Project Location	Date of Application	Connectivity Sought Date/(MW)	Nature of Applicant	Location requested for Grant of Stage-I Connectivity	Proposed Tr. System for Grant of Stage-I Connectivity
3.	1200003458	Onevolt Energy Private Limited	Bikaner, Rajasthan	21.09.2021	30.06.2023/ 100	Generator (Solar)	Bikaner-II PS (New)	Onevolt Energy Private Limited Solar Power Project – Bikaner-II PS 220 kV S/c line* (Suitable to carry minimum 300 MW at nominal voltage) *220 kV line shall be Common for Application Nos. 1200003455, 1200003458 & 1200003453 In addition to above, Common Transmission system for Connectivity (under ISTS) mentioned at (A) shall also be required.
4.	1200003453	Amplus Ages Private Limited	Bikaner, Rajasthan	21.09.2021	30.06.2023/ 100	Generator (Solar)	Bikaner-II PS (New)	Amplus Ages Private Limited Solar Power Project – Bikaner-II PS 220 kV S/c line* (Suitable to carry minimum 300 MW at nominal voltage) *220 kV line shall be Common for Application Nos. 1200003455, 1200003458 & 1200003453 In addition to above, Common Transmission system for Connectivity (under ISTS) mentioned at (A) shall also be required.
5.	1200003462	JSW Renew Energy (Raj) Limited	Bikaner, Rajasthan	22.09.2021	30.03.2023/ 500	Generator (Solar)	Bikaner-II PS (New)	JSW Renew Energy (Raj) Limited Solar Power Project – Bikaner-II PS 220 kV D/c line (Suitable to carry minimum 300 MW per circuit at nominal voltage) In addition to above, Common Transmission system for Connectivity (under ISTS) mentioned at (A) shall also be required.

A. Common Transmission system for Connectivity at Bikaner-II PS (under ISTS)

- Establishment of 400 KV Bikaner-II PS

- 1x500 MVA, 400/220kV ICT at Bikaner-II PS
 - 400 kV Bikaner-II PS – Khetri D/c line or 400kV
 - Bikaner-II PS- Bikaner D/c line
- It is to mention that the grant of Stage-I Connectivity shall not create any right in favour of the grantee on ISTS infrastructure including bays. Stage-I Connectivity grantee shall be required to update the development of their generation project and associated transmission infrastructure as per format RCON-I-M (available on CTU website>>Stage-I / Stage-II Status Monitoring Portal) by 30th day of June and 31st December of each year.
- Further Stage-I Connectivity grantee is required to secure the Stage-II Connectivity for physical connectivity with the ISTS grid within 24 months. The Stage-I Connectivity grantees who fail to apply for Stage-II Connectivity within 24 months from grant of Stage-I Connectivity shall cease to be Stage-I Grantee and their Application fees shall be forfeited.

Members may deliberate.

A. Stage-II Connectivity applications

Following 1 No. Stage-II Connectivity application has been received in the month of Sep'21 and is proposed to be granted as per the details below:

TABLE 2

Sl. No.	Application No.	Applicant	Location	Date of Application	Application/Quantum of Stage-I (MW)	Nature of Applicant	Generation Schedule	Stage-II Connectivity Sought (MW)/date	Quantum won / Land & Auditor Basis	Location requested for Grant of Stage-II Connectivity	Proposed Tr. System for Grant of Stage-II Connectivity
1.	1200003447	ReNew Solar (Shakti Three) Private Limited	Jaisalmer, Rajasthan	14.09.2021	1200003443 /300	Generator (Solar)	01/07/2023	300/ 01.07.2023	(L&A)	Fatehgarh-IV PS	ReNew Solar (Shakti Three) Private Limited Solar Power Project – Fatehgarh-IV PS 220 kV S/c# line (Suitable to carry minimum 300 MW at nominal voltage) Common Transmission system for Connectivity (under ISTS):

Sl. No.	Application No.	Applicant	Location	Date of Application	Application/Quantum of Stage-I (MW)	Nature of Applicant	Generation Schedule	Stage-II Connectivity Sought (MW)/date	Quantum won / Land & Auditor Basis	Location requested for Grant of Stage-II Connectivity	Proposed Tr. System for Grant of Stage-II Connectivity
											<ul style="list-style-type: none"> • Establishment of 1x500 MVA 400/220 kV pooling station at Fatehgarh-IV PS. • Fatehgarh-IV- Fatehgarh-III PS 400 kV D/c (Quad) line • 1x1500 MVA 765/400 kV ICT at Fatehgarh-III PS • Establishment of 1x1500MVA 765/400kV Substation at suitable location near Beawar • Fatehgarh-III– Beawar 765 kV D/c line • LILO of both circuit of Ajmer-Chittorgarh 765 kV D/c line at Beawar substation or LILO of 400kV Kota –Merta line at Beawar substation

Applicant may confirm about tower configuration

- Applicants are requested to note the various provisions applied w.r.t. grant of Connectivity to ISTS Grid as provided at Annexure-I. In this regard, it is emphasized that for optimization of ROW, the transmission towers of various dedicated lines, up to 2-3 km periphery from the entry of the respective ISTS pooling station may be of Multi-circuit type (refer Sl. (iii) of **Annexure-I**).

Members may deliberate.

B. Conventional Connectivity application

Following 1 No. of Conventional Connectivity application has been received in the month of Sep'21. The application details are mentioned below:

TABLE 3

Sl. No.	Application ID	Name of the Applicant	Connectivity Application Type	Submission Date	Project Location	Quantum (MW)	Connectivity Sought Date	Location requested for Grant of Connectivity
1.	1200003437	M/s JB Rolling Mills Ltd	Bulk Consumer	09/09/2020	Sirmour, HP	100	01/01/2022	Kala Amb (ISTS) substation

- M/s JB Rolling Mills Ltd. (JBRML) has applied for connectivity to the ISTS for 100 MW as a bulk consumer located at Sirmour, Himachal Pradesh from 01/01/2022. As per the application, the bulk consumer entity is located close (about 6 Kms) to the existing Kala Amb (ISTS) substation.
- M/s JB Rolling Mills Ltd. may inform regarding details of their existing power supply network depicting the proposed connectivity schematic at their switchyard along with configuration of loads and embedded generation (if any) (existing and future projection).
- It may be noted that there is no provision in the Electricity Act or in the 2009 Connectivity Regulations for construction of a dedicated transmission line by a bulk consumer. The same has also been noted by the Hon'ble Commission in order dated 29.01.2020 in petition no. 299/MP/2018 (filed by M/s BALCO). In a similar application made by M/s Reliance Industries Limited as Bulk Consumer at Jam Khambhaliya PS, the applicant has already filed Petition No. 124/MP/2021 before CERC to obtain connectivity for oil refinery located at Moti Khavadi, Jamnagar, Gujarat to the ISTS network. The petition of M/s RIL was admitted by the Hon'ble Commission and vide RoP dated 13/07/2021 had directed the CTU to undertake a study as per the 2009 Connectivity Regulations for identifying the infrastructure required for the purpose of providing connectivity to the M/s RIL and the financial implications, if any.
- On similar lines, following transmission system is proposed for Connectivity to M/s JBRML for 100 MW as Bulk Consumer in Sirmour, H.P:
 - JBRML– Kala Amb (ISTS) 220kV D/c line along with associated line bays at both ends- Cost about Rs 20 Cr
- In view of the Petition filed by M/s RIL which is pending before the Hon'ble Commission, Connectivity shall be granted in this regard, would be subject to directions of the Hon'ble Commission w.r.t. modalities for implementation of transmission system for connectivity.

Members may deliberate.

C. Proposal for grant of LTA to the application received from RE/Conventional Energy Sources

The following LTA application has been received in the months of Jul'21. Details are as below:

TABLE 4

Sl. No.	Application No.	Applicant	LTA Application date (online)	Connectivity Injection Point	Connectivity Application	Drawl Point	Quantum of LTA (MW)	Start Date of LTA	End date of LTA
Received in Jul'21									
1	1200003333	NTPC Limited	06.07.2021	NTPC Rihand TPS (NR)	1200002527	UPPCL	20 (Firm)	25.01.2022	14.06.2046
2	1200003348	Adani Renewable Energy Park Rajasthan Limited (Renewable Power Park Developer)	15.07.2021	Fatehgarh PS, Rajasthan	1200000287	Adani Electricity Mumbai Ltd – Distribution (WR)	700 (Firm)	01.10.2021	01.10.2046

➤ **For Application at Sl. No.1 (Table 4) (NTPC Limited):**

This application was received in the month of July'21, however, NTPC Ltd. vide their email dated 18/08/2021, requested that due to COVID, problems being faced in execution of the project, the agenda point may be deferred to the next meeting regarding Connectivity & LTA applications in NR. Further, during 50th meeting of NR Connectivity & LTA applications, NTPC again requested to defer the agenda, however, it was deliberated that their LTA application shall be discussed in the next LTA/Connectivity meeting of NR without further deferment. Accordingly, the LTA application is being taken up in the present meeting.

It may be noted that Stage-II Connectivity (1200002527, 20 MW) was granted vide CTU letter dated 14/09/2020 at 400 kV switchyard within the premises of NTPC Rihand TPS in Uttar Pradesh through existing ISTS connected from Rihand TPS and the same is being considered for present LTA. Now, NTPC Limited has applied for LTA of 20 MW on firm basis for (NR-U.P) 20MW. Applicant may confirm the same.

As the proposed Solar PV (20 MW) project is to be connected at switchyard of principal generator i.e. NTPC Rihand TPS Switchyard, it is proposed to grant LTA to M/s NTPC Ltd. for 20 MW Solar PV from NTPC Rihand to UPPCL, NR(Firm) with existing

ISTS system connected at Rihand TPS. The existing transmission system beyond Rihand TPS shall be adequate for evacuation of 20 MW of power.

Members may deliberate.

➤ **For Application at Sl. No.2 (Table 4) (M/s Adani Renewable Energy Park Rajasthan Limited):**

It may be noted that M/s AREPRL was granted 1000 MW (250MW+750MW) LTA on Target (NR) basis at Fatehgarh PS with following details:

- i. 250MW w.e.f. 31.12.2017 or availability of transmission system whichever is later vide CTU intimation no. C/CTU-PIg/LTA/N/2016/AAREPRL/Fatehgarh-I/Pokaran dated 09.08.2016
- ii. 750MW w.e.f. 31.12.2017 or availability of transmission system whichever is later vide CTU intimation no. C/CTU-PIg/LTA/N/2016/AAREPRL/Fatehgarh-II/Pokaran dated 09.08.2016

The transmission system associated with above LTAs (i) & (ii) is already commissioned and LTA was also been made effective. Out of 750 MW, 296 MW was already relinquished on request of M/s AREPL and drawl region was changed on firm basis from NR (target) to SR (TSSPDCL & TSNPDCL). Now, the present application is regarding change in region for 700 MW from target (NR) to Adani Electricity Mumbai Ltd.– Distribution (AEMLD) (WR) on firm basis from 01.10.2021 to 01.10.2046.

Further, applicant has relinquished 700 MW LTA (250 MW & balance 450 MW from 750 MW) from NR vide letter dated 03/07/2021 submitted along with application. However, remaining 4 MW allocation out of 750 MW shall remain for Northern region on Target basis. In addition, the effective date of start of LTA in the changed region is the same as date of relinquishment in original region and the change in region is sought for entire capacity relinquished, thereof, no relinquishment charges are leviable in line with CERC order in Petition 92/MP/2015. It was also noted that LTA sought date is from 01.10.21, which indicates that application is applied at a very late stage and such practice should be avoided.

The above application was also discussed in 49th & 50th meeting of NR for Connectivity & LTA Applications held on 27/08/2021 & 29/09/2021 respectively, wherein it was deliberated that for transfer of 700MW power from the generation project to AEML, Banaskantha – Sankhari 400kV D/c line was envisaged to be critically loaded after commissioning of Banaskantha Solar Park (700MW). The same may be overcome with the commissioning of following system, already under implementation:

- LILO of the second circuit of Zerda – Ranchodpura 400 kV D/c line at Banaskantha (PG) PS (expected by Jul'22)
or

- Bhuj-Lakadia-Vadodara 765kV D/c corridor (expected by Dec'21).

In the earlier meetings WRLDC stated that apart from the issue of Banaskantha-Sankhari overloading, the import capability of Maharashtra also needs to be discussed which involves transfer of 700MW power from NR to AEML (Mumbai). The application was also discussed in Meeting of WR constituents for Connectivity & LTA Applications (63rd) wherein it was informed that LTAs with about 1500 MW drawl by Maharashtra (based on STU NOCs) have already been granted which are pending operationalization. Representative of WRLDC stated that the existing ATC for Maharashtra is 9760MW out of which 8745MW has already been booked under LTA/Central Sector Allocation. In addition to the above, new LTA applications were included in agenda of the said meeting of about 800 MW. Hence, a margin of only 1015MW is available against the operationalization requirement of 1500MW to Maharashtra. In view of the same, import capability of Maharashtra may not be sufficient to accommodate the additional power transfer requirement from the new LTA applications.

After deliberations, it was decided that MSETCL needs to review the STU NOCs mentioned above and intimate regarding validity of the already issued STU NOCs for further processing of the above applications latest by 01.10.2021. MSETCL agreed to the same. However, MSETCL is yet to revert on the issue. Further, applicant was also requested to coordinate with MSETCL in this regard. Accordingly, it was decided that the applications shall be taken up again in the next Conn/LTA meeting of Western/Northern Region.

Members may deliberate.

D. Proposal for grant of LTA to applications received in other regions for Injection/drawl in Northern region

Following LTA application has been received in Southern region for drawl in NR:

Sl. No.	LTA Application No.	Applicant Name	Nature of Applicant	Location	LTA Quantum (MW)	Injection point	Drawl point	Start date of LTA (as per application)	End date of LTA (as per application)
1.	12000023459	Adani Renewable Energy Holding Fifteen Limited	Generator (Wind)	Lakundi, Gadag, Karnataka	300	Koppal PS, Karnataka	On Target basis : i) Jaipur Vidyut Vitaran Nigam Limited, Rajasthan – 120.81 MW ii) Ajmer Vidyut Vitaran Nigam Limited, Rajasthan – 81.42 MW iii) Jodhpur Vidyut Vitaran Nigam Limited, Rajasthan – 97.77 MW	10.03.2023	10.03.2048

Regarding above application of M/s Adani Renewable Energy Holding Fifteen Limited (AREHFL) seeking grant of LTA for 300MW on target region basis from 10.03.2023 to 19.03.2048 with injection at Koppal PS and drawl in Rajasthan in Northern Region. Presently, LTA of 600 MW has been agreed at Koppal PS with establishment of 400/220kV Koppal PS and Koppal PS – Narendra (New) 400kV (quad) D/c line. With the present proposal of grant of LTA to M/s AREHPL for 300 MW LTA, the total LTA quantum at Koppal PS become 900MW. With the proposal, total LTA at Koppal and Gadag REZ shall be 1360 MW (Koppal – 900 MW + Gadag - 460 MW), which shall be evacuated through Narendra New (GIS) S/s.

System studies has been carried out along with reconductoring of Kolhapur (PG) – Kolhapur (MSETCL) 400kV D/c line with minimum capacity of 2100MVA / ckt. at nominal voltage which has already been agreed as Regional System Strengthening scheme. Accordingly, it is proposed to grant LTA to M/s AREHPL for its proposed 300MW wind power project at Lakundi, Gadag, Karnataka on target basis with start date of LTA as 10.03.2023 or availability of common transmission system & common system strengthening scheme, whichever is later.

Common Transmission System for LTA

- i. Establishment of 2X500 MVA, 400/220kV Koppal Pooling station near Munirabad/suitable location in Koppal distt.
- ii. Koppal PS – Narendra (New) 400kV (quad) D/c line
- iii. 2x125 MVAr, 400kV bus reactor at Koppal PS

Common System Strengthening Scheme

- i. Kolhapur (PG) (GIS) - Kolhapur (MH) 400kV D/c line reconductoring with HTLS conductor with capacity of at least 2100MVA at nominal voltage along with bay upgradation at both ends (as required)

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Annexure-A

The following provisions shall be applied with respect to grant of connectivity to **RE projects** to the ISTS Grid:

- i. The grant of Stage-I Connectivity shall not create any vested right in favor of the grantee on ISTS infrastructure including bays. Stage-I Connectivity grantee shall be required to update the quarterly progress of development of their generation project and associated transmission infrastructure/dedicated line as per format **RCON-I-M** by 30th day of June and 31st day of December of each year. Further, Stage-I Connectivity grantees who fail to apply for Stage-II Connectivity within 24 months from grant of Stage-I Connectivity shall cease to be Stage-I grantee and their Application fees shall be forfeited.
- ii. If the capacity of the Stage-I Connectivity location is allocated to other Stage-II grantees, the balance Stage-I grantees shall be allocated Stage-II Connectivity to an alternate location.
- iii. For optimization of ROW, it is proposed that transmission towers of various dedicated lines, up to 2-3 km periphery from the entry of the pooling station may be of **Multi-circuit type**. The generation developers/applicants associated with the various pooling stations may coordinate amongst themselves for implementation of such span/stretches of the dedicated connectivity lines with M/C towers.
- iv. The grant of Stage-I / Stage-II Connectivity shall not entitle an applicant to interchange any power with the grid unless it obtains LTA/MTOA/STOA for power transfer requirements. As grant of LTA may require transmission system strengthening, the applicants are advised to apply for LTA immediately, to enable timely transfer of power to the beneficiaries. Also as per the prevailing Transmission Planning Criteria of CEA, "N-1" contingency criteria may not be applied to the immediate connectivity of wind/solar farms with the ISTS/Intra State grid.
- v. Stage-II Connectivity Grantee shall sign the Transmission Agreement for Connectivity and submit the Connectivity Bank Guarantee (**Conn-BG1 and Conn-BG2**) to CTU within 30 days of issue of intimation. No extension of time shall be granted and in case of failure to sign the Agreement and / or to furnish the requisite bank guarantee, Stage-II Connectivity shall be cancelled under intimation to the grantee without any prior notice.
- vi. Two or more Applicants may apply for Stage-II Connectivity at a common bay along with an agreement duly signed between such Applicants for sharing the Dedicated Transmission Line. The Stage-II Connectivity shall be granted to such Applicants

subject to availability of capacity in the Dedicated Transmission Line. In such cases, **Conn-BG1 and Conn-BG2**, as applicable as per Clause 10.8 of the Revised RE Procedure, shall be submitted by each such Applicant.

- vii. The Stage-II Connectivity grantee shall furnish progress of the monitoring parameters on quarterly basis in the format given at **FORMAT-RCON-II-M** by the last day of each quarter. Failure to update progress of the monitoring parameters shall be considered as adverse progress and in such case CTU shall approach the Commission for appropriate directions. Further, the Stage-II Connectivity grantees shall be required to complete the dedicated transmission line(s) and pooling sub-station(s) as defined under para 11.2(A) of the Revised Detailed Procedure for RE. If the grantee fails to complete the dedicated transmission line within the stipulated period, the Conn-BG1 & Conn-BG2 of the grantee shall be encashed and Stage-II connectivity shall be revoked.
- viii. Applicants after grant of Stage-II Connectivity to the grid shall have to furnish additional details to CTU for signing of “Connection Agreement” as per format given at **FORMAT-CON-4**. The finalized template of generation data for Solar and Wind based generation projects has been appended as additional sections at Para F (Details of Connection – Solar PV Station) and Para G (Details of Connection – Wind Generating Station) in the existing FORMAT-CON-4. The modified FORMAT CON-4 is available on our website (www.powergridindia.com >> CTU Open Access). The Applicants are advised to furnish such details as early as possible for enabling them have lead time for any type of access.
- ix. The CTU will process the above information and will intimate the Connection details as per format given at **FORMAT-CON-5**. Pursuant to such Connection details, the applicant shall have to sign “Connection Agreement” with CTU prior to the physical inter-connection as per format given at **FORMAT-CON-6**. In case the connectivity is granted to the ISTS of an inter-State transmission licensee other than the CTU, a tripartite agreement shall be signed between the applicant, the Central Transmission Utility and such inter-State transmission licensee, in line with the provisions of the Regulations.
- x. Applicants are required to submit the test reports supported vide undertaking as well as compliance certificate from manufacturer for all applicable provisions under the CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007 (as amended) (including the provisions of LVRT/HVRT, active power injection control, dynamically varying reactive power support, limits for Harmonic & DC current injection, Flicker limits etc.) from labs accredited by Govt./NABL/other recognized agencies. In case any discrepancies / incompleteness are found in the documents / test reports submitted to CTU, the connection offer (CON-5) / connection agreement (CON-6) shall not be processed further.

- xi. CEA vide order dated 09.11.2020, has mandated all power generating stations of 0.5 MW or above capacity to register themselves on CEA e-portal and get a **Unique Registration Number (URN)**. The same is required as per Regulation 11 of Technical Standards for Connectivity with the Grid Regulations, 2007 prior to physical inter-connection of the Generating station with ISTS Grid.