Minutes of the meeting held in CERC on Grid Connectivity to Solar Power Plants

VENUE: 3rd Floor, Conference Hall, CERC
Chanderlok Building, 36, Janpath, New Delhi

DATE: 10.6.2010

The meeting was chaired by Dr. Pramod Deo, Chairperson, CERC. The list of participants is at **Annexure-I**.

2.0 Secretary, CERC welcomed the participants and requested for their attention to the issues raised in the background note circulated prior to the meeting. A copy of the document is enclosed at **Annexure-II**. Secretary, CERC added that the issue of exempting or minimizing the transmission charges and losses for solar energy was deliberated in the Forum of Regulators and 'there was a broad consensus in the Forum that the transmission charges and losses for wheeling renewable energy on the state level transmission and distribution networks should either be exempted or kept at a minimal level keeping in view the fact that electricity from decentralized generation facilities based on renewable energy would in fact relieve the burden on the transmission and distribution networks. Accordingly, SERCs would take appropriate decision in this regard taking into account any special local condition and after consulting the various stakeholders.'

3.0 The following views were expressed by the participants:

i) The representatives from Rajasthan said that it would be desirable to provide connectivity to solar power plants at 132/33 KV sub-stations. The State Transmission Utilities should construct the necessary transmission lines for evacuation of power from the solar power plants. They added that the Rajasthan Electricity Regulatory Commission had decided to waive the transmission charges for such solar power plants which are of upto 50 MW size and are commissioned by March, 2013, subject to the condition that electricity is sold to the distribution company of the states. STU was expected to recover the due amount from such solar power developers from its Annual Revenue Requirement.

ii) The representatives of Gujarat STU said that they had 66 KV system in place of 33 KV and the 66/11 sub-stations are with STU. The availability of such sub- stations was more than 99%. They said that Gujarat Electricity Regulatory Commission had decided to levy full transmission charges and losses on any renewable energy if it is exported to outside the state. It was said that STU has made detailed investment plan for building the transmission lines to evacuate power generated by solar power developers, most of which are located in Kutch area. There was no possibility of local consumption of such electricity due to lack of demand in Kutch area. In response to a query, they clarified that losses being levied were about 4.27% and the transmission charges were Rs. 2720/- per MW per day. They expressed difficulty in exempting the exported solar electricity from transmission charges and losses in view of the financial difficulties of the STU/DISCOMS. They were requested to provide the details of their investment plans for evacuation facilities for the planned solar power projects.

iii) Member, DERC said that evacuation of solar power would not cause any additional burden on the state grid because such generation was likely to be consumed within the state and it would ultimately reduce the drawl by state from Central Sector Stations. He said that the transmission losses on any associated evacuation facility would not exceed beyond .25% to 0.5% .

iv) The representative from U.P said that according to the SERC's regulations, any load of 10 MW and above is to be connected to 132 KV level. It was clarified to them that there was a need to suggest amendment to these regulations because technically a generation of upto 20 MW can be evacuated on 33 KV transmission line.

v) The representative of NDPL said that there was a need to assess the incremental burden on the state grid, if any, due to solar power plants and it may be considered whether such incremental burden should be socialized across the country through a regulatory commercial mechanism. They also requested that the guidelines for roof-top solar PV installations should be issued expeditiously.

vi) The representative of M/s ABPS said that the connectivity should be preferably at 132/133 KV or 66/11 KV sub-stations to avoid any stranded generation.

4.0 After in-depth discussions on the various suggestions received in the meeting, there was a consensus on the following:

i) STU concerned should provide evacuation facilities to solar power developers for connecting its output at 33 KV to 66/11 KV or 132/33 KV sub-stations. Such an arrangement is necessary to avoid any stranded generation due to non-availability of transmission facilities in case of load-shedding by distribution utilities. This would also obviate need for any provision for deemed generation.

ii) In view of the statutory mandate under the Electricity Act for promotion of renewable energy and specifically the statutory function of SERC to provide suitable measures for connecting renewable sources of energy with the grid, only the incremental burden on state grid (financial or transmission losses) should be levied on the solar power developers if they are exporting generation out of the host state. There was no justification at all to impose statewide transmission charges and losses on solar energy.

iii) CEA would undertake a study to assess such normative incremental burden on state grid within a period of one month. The study team should include representatives of utilities of Rajasthan, Gujarat and Delhi & also the representative from MNRE & the staff of CERC. Shri Ravinder, Chief Engineer, CEA assured to undertake study within the desired time frame.

iv) Once the normative incremental burden due to export of solar electricity becomes available from the proposed study, CERC would consider socializing such incremental burden in respect of inter-state export of solar electricity through appropriate national level regulatory commercial mechanism.

v) JS, MNRE agreed to expedite the guidelines for roof-top solar PV installations on the basis of the recommendations of CEA regarding metering, and available international standards regarding grid connectivity to such roof-top installations

5.0 The meeting ended with a vote of thanks to the Chair.

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ANNEXURE - I

LIST OF THE PARTICIPANTS ATTENDED THE MEETING ON 'GRID CONNECTIVITY TO SOLAR POWER PLANTS' HELD ON 10TH JUNE, 2010 AT CERC, NEW DELHI

S.NO.	NAME & DESIGNATION	ORGANIZATION
1	Dr. Pramod Deo, Chairperson	CERC
2	Sh. V.S. Verma, Member	CERC
3	Sh. Alok Kumar, Secretary	CERC
4	Sh. Vijay Menghani, Joint chief (Engg.)	CERC
5	Sh. S.C. Srivastava, Joint Chief (Engg.)	CERC
6	Sh. S.K. Chatterjee, DC (RA)	CERC
7	Ms. Gauri Singh, JS	MNRE
8	Sh. Ajay Talegaonkar, Director	CEA
9	Sh. Ravinder, Chief Engineer	CEA
10	Sh. S.R. Sethi, Member	DERC
11	Sh. A.K. Singh, Chief Engineer (Trans.)	UPPCL
12	Ms. Veena Birappa, Dy. Engineer	GETCO
13	Sh. Jangid, Chief Finance Manager	GUVN
14	Sh. A.K. Sharma, Dy. C.E	Jaipur Discom
15	Sh. S.K. Bansal, Director (Technical)	AVVNL, Rajasthan
16	Sh. A.K. Goyal, CEO	NVVN
17	Sh. Vijay Gulati, Addl. GM (SO)	NVVN
18	Sh. Balwant Joshi, Director	ABPS
19	Sh. Sunil Wadhwa, CEO	NDPL
20	Sh. Vijay Singla, GM	NDPL
21	Sh. Vineet Taneja, AM	NDPL

ANNEXURE - II

Issues for deliberations in the meeting on 'Grid Connectivity to Solar Power Plants' being held in CERC on 10th June, 2010.

1. It is being envisaged that solar power plants aggregating to capacity of 1000 MW would be developed under the Phase-I of National Solar Mission. The electricity from these power plants is proposed to be purchased on the basis of CERC determined tariff by NVVN (trading arm of NTPC) for sale to distribution companies along with matching megawatt capacity of coal based power plants. These power plants are envisaged to be connected to the grid at 33 KV and above through substations of distribution utilities or state transmission utilities.

2. It is expected that a significant quantity of electricity so purchased by NVVN from solar power plants would be sold to distribution utilities of States other than where the plant is located. A question has arisen regarding the extent of 'deemed generation' that could be made available to the solar power generators in case the distribution network of the utility where a power plant is connected or the state transmission utility grid is not available and the generation from solar power plants get stranded. This issue assumes importance in view of the feedback being received from some States that rostering is being done on many occasions by switching off supply to the 33 KV substation itself. This aspect becomes very significant when the power is being purchased by a distribution utility of a different state than the state where the power plant is located because the purchaser distribution utility would be somewhat reluctant to agree to deemed generation for the non-availability of grid or distribution network in some other States.

3. Keeping in view the above, it may perhaps be desirable that grid connectivity to solar power plant is extended at 132 KV level by the state transmission utility in discharge of their statutory functions under the Electricity Act, 2003 as solar power plant developers cannot be expected to construct long dedicated transmission lines to connect their power plant to 132 KV substations. But most of the state transmission utilities are facing scarcity of capital for network expansion. It is proposed to discuss the possible alternatives to provide loan funds to STUs to take up grid expansion for connectivity to solar power plants.

4. Another important issue is the transmission wheeling charges and losses to be levied on solar power plants. In order to promote solar power and also keeping in view the fact that these power plants are connected to tail end of the grid, the CERC has proposed to completely waive off the transmission charges and transmission losses applicable to solar power developers for use of inter-state transmission system. This facility is proposed for those solar power plants for whole of their project life which are commissioned in the next three years. A similar dispensation is required for solar power plants in respect of the usage of state level transmission network and distribution networks. This issue needs to be taken with the state utilities and they need to be convinced on the basis of rationale that local injection of electricity from solar power plants would bring down the transmission losses and also reduce the burden on transmission systems/ distribution networks. Such a dispensation is considered necessary for promotion of solar energy in the absence of which the burden of transmission losses in kind on solar energy for use of state transmission networks and distribution networks would make the electricity from such plants even more expensive and difficult to sell.

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