CENTRAL ELECTRICITY REGULATORY COMMISSION

3rd & 4th Floor, Chanderlok Building, 36, Janpath, New Delhi-110001

Minutes of Meeting: Constitution of Expert Group to review "Indian Electricity Grid Code and other related issues"- 7th Meeting thereof.

1. Seventh meeting of Expert Group to review "Indian Electricity Grid Code and other related issues" was held on 22nd July, 2019 at 1:30 pm in Upper Ground Floor, Conference Room, 36, Janpath, Chanderlok Building.

2. During the meeting, Chairman and Members of the Expert Group, CERC staff, Representatives from SECI, Adani Power, Tata Power Delhi Distribution, BSES Rajdhani, Adani Electricity, Torrent Power, GE, Representatives from POSOCO and Representatives from Mercados were present.

3. Key points made during the presentation of SECI:

    a. Substantial reduction in tariff has been witnessed

    b. Models being followed:

        i. Solar parks

        ii. Owing to difficulty in land acquisition, another model is being followed wherein the developer can connect to the ISTS network from anywhere in the country

    c. Implementation Period:

        i. Solar Parks: 15 months from PPA

        ii. Direct Connection to ISTS: 18 months from PPA

    d. Grid Security and Stability is the priority. Recommendations are:

        i. Mandating Solar PV inverters for Projects over 10 MW to utilize inherent functions such as reactive power support and voltage ride through for forthcoming Projects

        ii. Incentivizing Solar PV for grid support

        iii. Technical Minimum for conventional plants

    e. Rapid Augmentation of Transmission network is needed. Recommendation:

i. To issue bids as per transmission network infrastructure in the country

ii. Requirement of LTA for starting construction of transmission system to be done away with

iii. To encourage states for faster off take of RE power, a single tariff based on the all India average tariff of the past year to be prescribed.

f. Recommendation for Scheduling and Dispatch

i. Optimal scheduling and dispatch of available generation to be done with the objective of minimizing total production costs subject to physical, operational, & market constraints. Reasons:

1. Forecasting of RE generation involves forecasting of local weather conditions.

2. While thermal plants always incur fixed cost charges, losses incurred by RE plants due to curtailment or grid congestion leave no recourse for recovery of losses.

ii. Centralized forecasting and aggregation

iii. Harmonizing DSM regulations across states

iv. Linking DSM with tariff

v. Deviation band should be based on Forecasting Technology, capabilities and weather data available.

vi. Maintenance of reserves

vii. Removal on number of revisions allowed

g. Energy Storage resources to be included

h. Regulation with regards to Commissioning of RE to be introduced

4. Key points made by Adani Power:

a. Three key inputs: Weather Forecast, Energy Forecast and Generation Schedule

b. Weather is the major source of inaccuracy

c. Accuracy of weather forecast reduced beyond 15-30 minutes

d. Satellite based forecasting lead to inaccuracies, Statistical weather prediction have a better accuracy; new technologies being explored to improve forecast

e. Biggest deviation in a site is caused by clouds

f. Lack of uniformity in DSM regulations across the country. Recommendations:

    i. RLDC's/SLDC's to bifurcate net DSM account at State/Regional level due to:

        1. Deviation on the demand side

        2. Deviation on the generation side

    ii. Deviation on account of renewable plants can be apportioned as per below mechanisms-

        1. Weighted based on Connected capacity (MW)

        2. Weighted based on Actual generation (kwh)

        3. Weighted based on the %Error in schedule (% Error)

        4. Weighted based on the frequency based DSM charges applicable at plant level.

    iii. Centralized Forecasting instead of decentralized forecasting

    iv. Separate DSM Methodologies for RE

        1. Centralized Forecasting to be adopted

        2. Harmonizing DSM Regulations across states

        3. Rationalization of error bands on the concept of achievable accuracy

        4. Incentivizing RE to support the grid

        5. Removing restrictions on number of revisions on RE generation

        6. Exclude time blocks where grid was unavailable due to certain reason

        7. DSM charges should be made applicable one year after the COD

5. Key Points made by Tata Power

    a. Force majeure considered in IEGC are applicable for performance indices calculation, however force majeure is not considered in power scheduling and dispatching activity. Tripping of transmission line, STU /CTU equipment should be considered as force majeure for Distribution companies.

    b. Pro-rata corridor allocation should be implemented in place of e-bidding of corridor as being done earlier. This will reduce the burden of additional charges

    c. Discoms to be consulted with STU to understand their requirements and put up their issues in Regional standing committee meeting.

    d. SLDC to implement online system of Demand

    e. Timely execution of transmission projects to ensure optimum utilization of CAPEX

    f. Strong IT infrastructure to ensure timely dissemination of information to all Discoms and open access consumers

    g. Discoms need to be authorized to disconnect Distributed Energy resources to ensure grid security

    h. Provision to curtail consumer generation to ensure grid security

    i. Post facto revision of schedule should not be allowed in circumstances as real time power management is done as per drawl schedule. Hence final drawl schedule of the day should be used for all commercial and operational purpose.

    j. Centralized web-based scheduling and power optimization software for all the entities. It shall ensure the transparency and minimize the risk of grid security.

    k. Utilization of PSDF fund for intra state ancillary, battery storage, expansion of transmission corridors

    l. Introduction of Intra state ancillary services, Battery Storage for maintaining grid stability

    m. Transmission utilities, and concerned Load Despatch centers should also be a part of DSM regulations as they are also responsible for grid stability

6. Key points mentioned by GE are as follows:

a. Coal Generation is expected to provide most of the flexible generation

b. Batteries have been found to be more expensive than coal flexibilization. Viable option once capital costs come down

c. AGC should be implemented

d. Overall economics should define merit order instead of variable cost only

e. Synchronous condenser- Best suited to provide Dynamic reactive support.

f. Utilization of retiring units for reactive power support

g. Commercial mechanism for reactive power support

h. Thermal Energy storage can be used as alternative options for flexible grid support

i. Implementation of cyber security standards. Necessary provision in the grid code

7. Key points by Adani Electricity

    a. Compensation Mechanism for part load operations to be based on time block basis

    b. Discoms should be a part of transmission planning

    c. AMR data to be made available on real time basis

8. Key points by Torrent Power

    a. Commercial mechanism for SUGEN plant to be relooked because of ability to provide quick response. Should be placed in RRAS

    b. Commercial mechanism should be developed for providing reactive power support

9. Key decisions made by the expert group:

    a. Members of expert group to meet Chairman CEA on Governor Mode of Operation, LVRT and MVRT

    b. All comments received from stakeholders to be uploaded on CERC website

    c. The drafting of chapters 1 – 4 to be commenced

The meeting ended with a vote of thanks to the chair