Siemens Gamesa - India Electricity Grid Code & Other related Issues:

Impact and existing Grid code condition pertaining to Forecasting and scheduling

MP:

- No approved procedure for DSM Regulations Required approved procedure to change software and procedure as per the Regulation
- 2. Number of revisions to be finalized currently most of the states following 16 revision per day
- 3. Need 3 month time frame to implement the procedure after approval
- 4. IF the customer not provided consent also, with the current regulation QCA need to pay for them.
- 5. QCA cannot able to make payment behalf of customer, required proper payment mechanism
- 6. QCA need to provide aggregated day ahead and week ahead forecast for each pooling station- but aggregation should be done for all pooling station under QCA reduce DSM charges for generator

Maharashtra:

- 1. As per the regulation, Scheduling charges of every day and Revision in schedule charges need to be exempted, these charges affect financial viability of the project.
- QCA have complete control over wind/solar injection feeder connected to the pooling station with round the clock service - Required clear roles and responsibility of the of QCA
- 3. QCA request to deposit corpus to maintain payment mechanism
- 4. Need 13 weeks time frame to implement the procedure after approval
- QCA need to provide aggregated day ahead and week ahead forecast for each pooling station- but aggregation should be done for all pooling station under QCA reduce DSM charges for generator

Tamilnadu:

- QCA have complete control over wind/solar injection feeder connected to the pooling station with round the clock service – Required clear roles and responsibility of the of QCA
- 2. If Curtailment communicated by TNSLDC to QCA, QCA should curtail the generation at site and also amend time block.

- 3. QCA need to provide aggregated day ahead and week ahead forecast for each pooling station- but aggregation should be done for all pooling station under QCA reduce DSM charges for generator
- 4. Required portal to upload all PSS revision in a single file.
- 5. Need monthly settlement instead of weekly settlement
- 6. Installation of energy meter is not in the scope of QCA
- This IEGC has been enumerated as applies to all entity ie CTU, STU's, IPP's
 using or involving ISTS. All state has come out with individual state Electricity
 Grid coide. Ie KEGC in Karnataka. Whether can we have common grid code for
 all INDIA irrespective of entity is having involved in ISTS.
- 2. In case of LTA require strengthening beyond ISTS, applicant has to coordinate with STU for strengthening. As CTU does interaction with STU periodically & it has to be carried out by CTU instead of asking STU to interact with STU.
- 3. It is mentioned as based on the plans prepared by CTU, STU shall plan their system accordingly to evacuate power from ISTS to optimise the infrastructure.

There are two important points to be noted.

- a) Whey only based on CTU plan, STU shall plan their system why cannot be based on STU plans, CTU can plan to optimise.
- b) There is clear mismatch can be seen in the current network condition between CTU & STU.

It is evident that there is a greater degree of mismatch in planning where optimisation has not taken place.

4. Despite there is a clear instruction that

(h) The Inter-State Transmission System and associated intra-State transmission system are complementary and inter-dependent and planning of one affects the other's planning and performance. Therefore, the associated intra-State transmission system shall also be discussed and reviewed before implementation

Even though discussion might have happened between CTU & STU while planning, but can see the visible difference of non-optimisation of infrastructure.

- 5. With respective to Reactive Power, IEGC has to refine its points & provide more clarity from the practical aspects. Many SERC have not taken in the right spirit on reactive power & penalties are being levied when wind farms are supporting the grid.
 - It is highly essential to bring more clear guidelines in this IEGC on reactive power absorption / production.
- 6. In regard to the DSM, there is a requirement of integration of RE source deviation calculation. Any deviation above +/- 30 %, currently each individual project wise is deviations are being considered & penalty is levied. However in the integrated grid, at least state wise total deviation vs actual can be considered for levying penalty rather project wise.
- 7. Conditions laid in the fault ride through capability are stringent in the present context. Hence to be provided with technical minimum after having comparison with all other countries grid code.