

Detailed Procedure for aggregation of pooling station for the purpose of combined scheduling and deviation settlement through Qualified Coordinating Agency (QCA) for wind or solar or renewable hybrid generating stations that are regional entities

Prepared in Compliance to Central Electricity Regulatory Commission (Indian Electricity Grid code) Regulations, 2023

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1. Scope & Applicability

□ This Procedure shall be followed by National Load Despatch Centre (NLDC), all Regional Load Despatch Centre (RLDCs), Regional Power Committees (RPCs), Regional entity ***Wind/Solar/Wind-Solar Hybrid*** generating stations ***with or without storage*** including ***renewable power park*** developers.

□ This procedure shall be applicable to :

- i. Any Generating Station(s) or Projects based on a renewable source of energy or an hybrid of two or more renewable source(s) of energy with or without Energy Storage System (ESS), ***connected at same Inter State Transmission System (ISTS)*** substation with an ***installed capacity of 50 MW and above individually or with an aggregate installed capacity of 50 MW and above represented through a lead generator.***
- ii. ***Lead generator or any authorized agency*** on behalf of Renewable Energy Generating Station or Renewable Hybrid Generating Station.

□ ***No more than one QCA will be appointed per Pooling Sub-station.***

(In case of any conflictual scenario where more than one QCA applies for a single pooling station, the QCA representing majority capacity will be accepted by RLDC)

2. Qualifying Criterion for the QCA

- ❑ QCA shall have coordination centres *functioning round the clock*, manned by *qualified personnel* for operational coordination with the concerned load despatch centres and generating stations.
- ❑ QCA shall be appointed by the regional entity renewable energy generating station(s) or Projects based on energy storage system(s) connected at a particular ISTS substation on their behalf to coordinate and facilitate scheduling for such generating stations or energy storage system(s).
- ❑ For appointment as QCA, it *shall provide agreement signed with the Generators* connected in the Pooling Sub-Station in terms of their combined installed capacity.

3. Roles and Responsibilities of QCA

- ❑ QCA shall submit a ***copy of agreement signed between QCA & consenting RE generators*** to the concerned RLDC, certifying that QCA shall undertake all ***operational and commercial responsibilities*** on behalf of generating stations as per the CERC Regulations. A format of model agreement is attached as [Annexure-I](#).
- ❑ QCA shall represent the ***entire capacity of that RE generator***.
- ❑ QCA shall be ***registered as a user*** with the concerned RLDC.
- ❑ QCA shall invariably contain the ***mechanism for internal dispute resolution*** in the contract between the generating stations and the QCA, and any disputes arising between the generating stations and QCA shall be settled in accordance with the said mechanism.
- ❑ The QCA, ***within seven (07) working days***, shall submit ***revised agreement or supplementary agreement*** (as applicable) and inform the details to concerned RLDC ***in case there is any change*** in:
 - i. Generating Station Capacity (in case of individually connected generator),
 - ii. Pooling Sub-Station Capacity,
 - iii. Individual generators in the Pooling Sub-Station,
 - iv. Notice issued by any Generator for withdrawal of Authorization.
 - v. Change in authorization from generators connected to ISTS pooling station.
 - vi. Modification of PPA details of Generators to whom it is representing.

3. Roles and Responsibilities of QCA

- ❑ The *change of QCA would need a notice period of fifteen (15) days* and the changeover shall take place with effect from 00:00 hours of a Monday, the first day of weekly settlement cycle.
- ❑ QCA registered with the concerned RLDC, on behalf of wind, solar or renewable hybrid generating stations or Energy Storage System shall:
 - i. Be responsible for *metering and data collection*, transmission, and co-ordination with RLDC, SLDC, RPC, CTU and other agencies as per IEGC and extant CERC Regulations.
 - ii. Undertake *commercial settlement of deviations* with the concerned RLDC in accordance with the DSM Regulations.
 - iii. Undertake commercial settlement for *reactive energy charges* and charges for all other pool accounts as per applicable CERC Regulations.
 - iv. Furnish the *contract rate(s)/PPA rate along with a copy of the contract(s)*, for the purpose of deviation charge account preparation, to respective RPC.
 - v. *Ensure availability of data telemetry* at the turbine/inverter level to the concerned RLDC and shall ensure the correctness of the real-time data and undertake the corrective actions, if required.
 - vi. *Provide real time data* at turbine/inverter level and generation data at pooling station level as per [Annexure-II](#)
 - vii. Provide monthly data:
 - a) For wind plants- average wind speed, average power generation for 15-min time block for each turbine.
 - b) For solar plants - average solar irradiation, average power generation at 15-min time block level for all inverters ≥ 1 MW at string block level

3. Metering

- ❑ Interface Energy Meters at the ISTS Pooling Sub-Stations shall be installed by the Central Transmission Utility as per the IEGC 2023 and CEA (Installation and Operation of Meters) Regulations, 2006 and amendments thereof.
- ❑ ***Interface meters shall be installed for individual RE generator*** connected at an intermediate pooling station for segregation of actual injection of individual RE generator irrespective of if the generator is represented by QCA or not.
- ❑ QCA shall take ***approval of the same metering scheme from the respective RLDC.***
- ❑ QCA on behalf of individual RE generators which are represented by it ***shall submit the interface meter data*** to respective RLDCs by Tuesday noon on weekly basis.
- ❑ The concerned RLDC will be responsible for processing the interface meter data and computing the net injections at pooling station represented by each QCA as specified in [Annexure-III](#).

4. Forecasting

- ❑ QCA shall *provide the forecast* to the concerned RLDC which may be based on their own forecast or RLDC's forecast as per [Annexure-IV](#).
- ❑ QCA shall *share the forecasting model* with the RLDC.
- ❑ QCA may prepare their schedule based on the forecast done by RLDC or their own forecast.
- ❑ Any commercial impact on account of deviation from schedule based on the forecast chosen by the QCA shall be borne by the respective QCA.

5. Scheduling & Despatch

- ❑ QCA shall submit the aggregate available capacity of the pooled generation and aggregate schedule along with contract wise breakup for each time block for 0000 hours to 2400 hours of the 'D' day, by 6 AM on 'D-1' day.
- ❑ QCA shall also *furnish the source wise breakup of aggregate available capacity* of the pooled generation.
- ❑ The availability declaration of the generating station shall have a resolution of two decimal (0.01) MW and three decimal (0.001) MWh.
- ❑ The concerned RLDC shall be responsible for scheduling, communication, coordination with QCA.
- ❑ The QCA shall provide Available Capacity, Day Ahead forecast (based on their own forecast or on the forecast done by RLDC) and Schedule (aggregated along-with individual generator-wise and contract-wise) as per Annexure-IV, *through web-based energy scheduling platform maintained by RLDCs in accordance with the scheduling timelines defined in IEGC.*

5. Scheduling & Despatch

- ❑ QCA shall promptly *revise the schedules* in the events of dedicated Transmission line Outages and Grid Disturbances in accordance with IEGC and GNA regulations.
- ❑ QCA *shall promptly intimate the beneficiaries* regarding revision in schedules done during the day.
- ❑ If schedule is curtailed by RLDC in the event of contingencies, transmission constraints, congestion in the network, threat to system security etc., RLDC will intimate the same to QCA. QCA shall further intimate the same to beneficiaries of RE plants represented by it.

5. Accounting of Deviation Settlement (DSM)

- ❑ QCA (on behalf of generators), in a region *shall be a member of the regional pool* and shall be *accountable for deviation settlement*.
- ❑ QCA shall be *responsible for de-pooling of DSM charges* for all those REGS that mutually agreed to appoint the QCA.
- ❑ In case of any *payment default* by the QCA in any pool account charges or RLDC Fees and Charges, *the generators shall be liable to pay the charges in proportion to their MW capacity*.
- ❑ QCA shall provide *a mutually signed agreement* with all generators represented by it mentioning the contract rate (rounded off up to two decimal places) to be considered for DSM computation of that QCA. This contract rate may be derived using capacity weighted average methodology.

5. Accounting of Deviation Settlement (DSM)

- ❑ Infirm power segregation from total generation shall be done using ***proportional methodology*** as described below:
 - a) ***Infirm power = [Actual generation of plant] x (Un-commissioned capacity/total charged capacity) MW***
 - b) ***Firm power = [Actual generation of plant] x (Commissioned capacity/total charged capacity) MW***
- ❑ If QCA is responsible for some REGS connected at Intermediate pooling station, then the QCA shall be responsible for coordination of scheduling and de-pooling of DSM charges for all those REGS that mutually agreed to appoint a QCA.
- ❑ ***The other REGS shall be required to submit their schedule as well as be liable to pay their DSM charges.***
- ❑ QCA shall ***submit the statement of de-pooling*** to RPC and RLDC.

6. De-pooling of energy deviation as well as deviation charges

- QCA serving the generators shall de-pool the energy deviation as well as deviation charges to each generator connected at a respective pooling station as per any one of the following principles as mutually agreed among QCA & RE generators –
- QCA may de-pool the energy deviation as well as deviation charges to each generator connected at a respective pooling station -
 - I. In proportion to energy injected in each time block by each generator or,*
 - II. In proportion to energy scheduled in each time block by each generator or,*
 - III. In proportion to actual deviation in each time block by each generator or,*
 - IV. Based on the mechanism developed within themselves*

7. De-pooling of reactive energy charges

□ QCA serving the generators may de-pool the reactive energy charges to each generator connected at a respective pooling station -

- I. In proportion to the installed capacity of each generator Or,*
- II. In proportion to energy scheduled in each time block by each generator Or,*
- III. In proportion to actual deviation in each time block by each generator Or,*
- IV. Based on the mechanism developed within themselves.*

8. Payment of RLDC Fees & Charges

- ❑ QCA shall be *registered as User under category "Others", with the respective RLDC* as per CERC (Fees and Charges of Regional Load Dispatch Centres and related matters) Regulations, 2019 or Amendment or Enactment.
- ❑ *All RE generators* connected to the pooling station *shall register with RLDC for the purpose of payment of RLDC Fees and Charges.*
- ❑ *Individual RE generators shall pay* the monthly RLDC Fees and Charges.

9. Payment Security Mechanism

- ❑ Individual regional entity RE generators shall open *Payment Security Mechanism(PSM)/ Letter of Credit (LC)* with respective RLDCs as per Central Electricity Regulatory Commission [\(Deviation Settlement Mechanism and Related Matters\) Regulations, 2022.](#)

10. Model Agreement – Salient Features

Annexure: I

Model Agreement format between [Names of Parties] i.e. [QCA] and [RE Generators]

It is clarified that these guidelines for Model Agreement between QCA and RE Generators are only indicative and suggestive. The same may be considered only for guidance purpose to facilitate evolution of a standard contract framework. RE Generators will be free to deviate or formulate their own commercial agreement based on terms to be mutually decided between parties. Principles/broad contours covered under this Model Agreement guidelines are in no way binding on the parties concerned.

Key Provisions	Principles or broad contours of the provisions
Premise <ul style="list-style-type: none"> Parties to Agreement Project Details Premise for Appointment 	<ul style="list-style-type: none"> The Agreement is being executed between [Names of Parties] i.e. [QCA] and [RE Generators] Shall cover Project Details [Site details / Pooling S/S / Location / Capacity/ Generator] Reference to Authorisation by Generator Company(ies) for appointment of selected QCA and Board Resolution thereof [Standard Documents] Reference to Consent of QCA to discharge functions of the QCA as per the Agreement
Objective / Purpose of Agreement	<ul style="list-style-type: none"> Reference to Governing Regulations [CERC/SERC] and [RLDC/SLDC] Procedures Purpose is to outline conditions for appointment of QCA and to enable such QCA to undertake, act, co-ordinate and discharge functions as QCA, for and on behalf of the concerned RE Generators at Pooling S/S(Sub-stations).
Important Definitions <ul style="list-style-type: none"> Effective Date Absolute Error Pooling Sub-station Inter-connection Point 	<ul style="list-style-type: none"> From the date of Execution of the Agreement subject to satisfaction of conditions of mobilisation, but not later than [2months or period to be specified], whichever is later. Standard Definitions to be in conformity with Definitions covered as per [CERC/SERC] Regulations and Procedures, with[site specific details] to be incorporated, as appropriate.

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- I. **Authorisation** by Generator Company(ies) for appointment of selected QCA & **Consent** of QCA to discharge functions
- II. Outlining of **De-Polling mechanism**
- III. To establish **24x7 Control Centre**
- IV. To act as '**single point of contact**' between [RLDC] and RE Generators
- V. Payment modalities for **settlement and Treatment for delay** in payment/part payment
- VI. RE Generators to establish **Payment Security arrangement** with the QCA
- VII. Commercials for **QCA Fees and Charges**
- VIII. Term and **Termination**
- IX. Dispute Resolution

Thank You...