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Date: 08 OCT 2021

No.CEE/SLDC/SEE/ -6932

To

The Secretary,
Central Electricity Regulatory Commission,
3rd & 4th Floor, Chandralok Building,
36, Janpath, New Delhi-110001.

Respected Sir,

Sub:Comments/suggestions/objections on the draft CERC (Deviation Settlement Mechanism and related matters) Regulations 2021-Reg.

Ref: No. L-1/260/2021/CERC Dated: 07.09.2021.

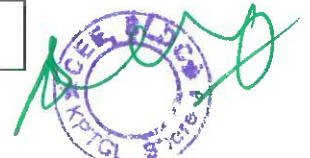
With reference to above subject, the Comments /Suggestions/ Remarks/ Objections on the draft CERC (Deviation Settlement Mechanism and related matters) Regulations 2021 made by SLDC KPTCL are detailed as follows.

This is for kind consideration and to issue necessary changes in the draft regulation.

Preamble:

Karnataka is one of the largest producers of green energy mainly from Solar and Wind sources. The state has 7471MW of Solar and 4967MW of Wind power besides 2774MW of other RE Sources. The total installed capacity of RE is 15211MW out of 31087MW of overall capacity generation marking RE Power at 50% of capacity.

Source	Installed Cap of RE in MW
Wind	4967
Solar	7471
Small Hydro(ROR)	903
Bio-mass	139
Co-generation	1731
RE Total	15211



Other than RE sources state is having State thermal (5020MW), State hydro (3798MW out of which 772MW-ROR), IPP (1200MW), DVC(450MW) and CGS share (4415MW-in CGS share 779MW from Nuclear plant(Must run)), totaling of 15876MW. Karnataka is having all variants of generation and load.

Integration of such large RE Power into the grid is definitely a challenge for load managers in the State as these sources vary due to natural instincts.

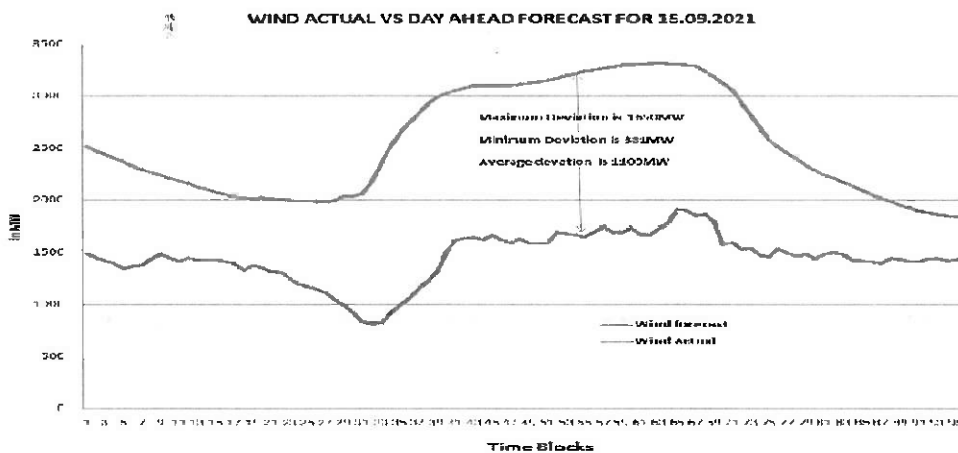
The wind generation varies from 500MW to 3200 MW in a day and sometimes solar power generation varies to an extent of 800MW in a time block of 15 minutes itself.

Out of total 35040 time blocks in a year, in 20846 time blocks the wind day ahead forecast error is more than 25% and in 5804 time blocks it is more than 15% against the actual generation during the year 2021.

Similarly, during the year 2021, the day ahead solar forecast error is more than 25% against the actual generation in 6405 time blocks and it is more than 15% in 4072 time blocks (out of 14847 time blocks-solar period).

As we have noticed that forecasting tool is not matured enough to reduce the forecast error as minimum as possible both in load and RE generation (Wind and Solar), it is difficult for the system operators to maintain the deviation.

The deviation of wind forecast Vs actual for 15.09.2021 is shown below



During high Renewable energy injection, RE is utilized to maximum extent by keeping thermal unit to technical minimum (55%) and also on Reserve Shutdown.

SLDC KPTCL comments on:

Clause (8) of draft DSM regulation 2021 has proposed the following:

1. Charges for Deviation

(1) Charges for deviation in a time block by a seller shall be payable by such seller as under:

Entity	Charges for deviation payable to Deviation and Ancillary Service Pool Account	
Seller	Deviation by way of over injection	Deviation by way of under injection
For a general seller other than an RoR generating station or a generating station based on municipal solid waste	<p>(i) Zero up to 2% Deviation-general seller (in%);</p> <p>(ii) @ 10% of the normal rate of charges for deviation beyond 2% Deviation-general seller (in %)</p>	<p>(i) @ normal rate of charges for deviation up to 2% Deviation-general seller (in%);</p> <p>(ii) @ 110% of the normal rate of charges for deviation beyond 2% Deviation-general seller(in %).</p>
For a general seller being an RoR generating station	Zero	<p>(i) @ normal rate of charges for deviation up to 12% Deviation-general seller (in%);</p> <p>(ii) @ 110% of the normal rate of charges for deviation beyond 12% Deviation-general seller (in%).</p>
For a general seller being a generating station based on municipal solid waste	Zero	<p>(i) Zero up to 20% Deviation-general seller (in %);</p> <p>(ii) @ normal rate of charges for deviation beyond 20% Deviation-general seller (in%). limit.</p>
For WS seller	Zero	<p>(i) Zero up to 10% Deviation-WS seller (in%);</p> <p>(ii) @ 10% of the normal rate of charges for deviation beyond 10% Deviation-WS seller (in %):</p> <p>Provided that such seller shall pay back to the Deviation and Ancillary Service Pool Account for the total shortfall in energy against its schedule in any time block due to under injection, (a) at the contract rate at which it has been paid based on schedule, or (b) in the absence of a contract rate at the rate of the Area Clearing Price of the Day Ahead Market for the respective timeblock.</p>



The image shows a handwritten signature in green ink over a circular purple stamp. The stamp contains the text 'APRIL 2014' and 'K.P. G.I.' around the perimeter. The signature is written across the stamp and extends to the right.

SLDC KPTCL comments:

For a general seller being RoR generating station/ For a general seller being a generating station based on municipal solid waste/ For WS seller, there is **no penalty** for over injection. Hence it is requested to allow buyer to **under draw** for absorbing the over injected generation by RoR / from municipal solid waste/ from **WS seller** in case of Renewable rich States with RE(Solar and Wind) installed capacity of more than 10000 MW. The total deviation from schedule in a time block shall not be in excess of +/-15% (excluding STOA transactions) or +/-500MW for the drawee entities@ normal rate of charges for deviation. And also this is to accommodate the variation in RE generation as +/-15% deviation which is permitted in the state for wind and Solar plants and there is no deviation charges if the deviation is within the specified limits of +/- 15%, as per the State Commission (Forecasting, scheduling, Deviation settlement and related matters for Wind and Solar Generation sources) Regulations 2015.

For a **general seller** other than RoR generating station the deviation by way of over injection is Zero up to 2%. Cumulative of 2% deviation of individual general sellers will force the buyer to under draw power from the grid due to which the buyer has to pay the energy charges which is over injected by the seller which may lead to the uneconomical grid operation. Hence it is requested to allow buyer to under **draw** in case of Renewable rich States with RE(Solar and Wind) installed capacity of more than 10000 MW. The total deviation from schedule in a time block shall not be in excess of +/-15% (excluding STOA transactions) or +/-500MW for the drawee entities@ normal rate of charges for deviation and to allow deviation to 1% instead of 2% for the generators.

Similarly for under injection by a general seller being a generating station based on municipal solid waste the deviation penalty is Zero up to 20% and for WS seller the deviation penalty is Zero up to 10%. But the buyer is allowed to over draw up to only 12% or 250MW whichever is less. The variation in RE generation up to +/- 15% is permitted for wind and Solar plants and there is no deviation charges if the deviation is within the specified limits of +/- 15%, as per the State Commission (Forecasting, scheduling, Deviation settlement and related matters for Wind and Solar Generation sources) Regulations 2015. It is difficult for the system operator to maintain deviation limit within 12% or 250MW, whichever is less, hence deviation limit shall be allowed up to +/- 15% or +/-500MW (excluding STOA transactions)@ normal rate of charges for deviation.

A handwritten signature in green ink is written over a circular official stamp. The stamp contains the text 'SLDC KPTCL' and '9.06.2015'.

(2) Charges for deviation in a time block by a buyer shall be payable by such buyer as under:

Entity	Charges for deviation payable to Deviation and Ancillary Service Pool Account	
Buyer	Deviation by way of under drawal	Deviation by way of over drawal
<i>Buyer (other than the buyer with schedule less than 400 MW and the RE-rich State)</i>	Zero	(i) @ normal rate of charges for deviation up to 12% Deviation-buyer (in %) or 150 MW Deviation-buyer (in MWh) in a time block, whichever is lower; (ii) @110% of normal rate of charges for deviation beyond the above limit.
<i>Buyer (with schedule up to 400 MW)</i>	Zero	(i) @ normal rate of charges for deviation up to 12% Deviation-buyer (in %) whichever is lower; (ii) @110% of normal rate of charges for deviation beyond the above limit.
<i>Buyer (being an RE Rich State)</i>	Zero	(i) @ normal rate of charges for deviation up to 12% or 250MW Deviation-buyer (in %) in a time block, whichever is lower; (ii) @110% of normal rate of charges for deviation beyond the above limit

SLDC KPTCL comments:

For a general seller being a generating station based on municipal solid waste charges for deviation payable for under injection is Zero up to 20% deviation and Zero up to 10% Deviation for WS seller, due to which the buyer will be penalized @110% of normal rate of charges for deviation beyond the 12% or 250MW Deviation (in %) in a time block, whichever is lower, which may lead to uneconomical grid operation. Hence it is requested to allow buyer to over draw for accommodating the permitted deviation of generation from municipal solid waste(20%)/generation from WS seller(10%) for Renewable rich States with RE(Solar and Wind) installed capacity of more than 10000 MW. The total deviation from schedule in a time block shall not be in excess of +/- 15% or +/-500MW (excluding STOA transactions)@ normal rate of charges for deviation for the drawee entities. And also this is to accommodate the variation in RE generation up to +/-15% deviation which is permitted for wind



and Solar plants and there is no deviation charges if the deviation is within the specified limits of + /- 15%, as per the State Commission (Forecasting, scheduling, Deviation settlement and related matters for Wind and Solar Generation sources) Regulations 2015.

For a general seller other than an RoR generating station or a generating station based on municipal solid waste, the Deviation charges for under injection is at normal rate of charges for deviation up to 2%. Cumulative of 2% deviation of all the general sellers will force the buyer to over draw power from the grid due to which the buyer will be penalized @110% of normal rate of charges for deviation beyond the 12% or 250MW Deviation (in %) in a time block, whichever is lower, which may lead to uneconomical grid operation. Hence, it is requested to allow buyer to **over draw** in case of Renewable rich States with RE(Solar and Wind) installed capacity of more than 10000 MW. The total deviation from schedule in a time block shall not be in excess of +/- 15% (excluding STOA transactions) or +/-500MW for the drawee entities@ normal rate of charges for deviation and allow deviation to 1% instead of 2% for the generators.

Similarly for over injection by a general seller being a generating station based on municipal solid waste the deviation penalty is Zero up to 20% and the deviation penalty is Zero up to 10% for WS seller. But the buyer is allowed only up to 12% or 250MW, whichever is less. The variation in RE generation up to +/- 15% is permitted for wind and Solar plants and there is no deviation charges if the deviation is within the specified limits of +/- 15%, as per the State Commission (Forecasting, scheduling, Deviation settlement and related matters for Wind and Solar Generation sources) Regulations 2015. It is difficult for the system operator to maintain deviation limit within 12% or 250MW, whichever is less. Hence, the deviation limit shall be allowed up to +/- 15% or 500MW (excluding STOA transactions)@ normal rate of charges for deviation.

With regard to Clause (5) of the draft regulation regarding Schedule of payment of charges for deviation:

- a) *As per draft Regulation , the payment of charges for deviation shall have a high priority the concerned regional entity shall pay the due amounts within 7 days of issue of statement of charges for deviation by the RPC, failing which late payment surcharge @ 0.04% shall be payable for each day of delay.*

SLDC KPTCL Comments: To revise the no. of days for payment of dues to 10 (ten) days and also revise the late payment surcharge to @0.02%.



b) *Further, in case of failure to pay into the Deviation and Ancillary Service Pool Account within 7 days from the date of issue of statement of charges for deviation, the RLDC shall be entitled to encash the LC of the concerned regional entity to the extent of the default.*

SLDC KPTCL Comments: To revise the no. of days mentioned to 10 (ten) days instead of 7 days.

Hence, it is requested to the Hon'ble commission to kindly consider the SLDC KPTCL comments/suggestions on the draft Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2021.

Yours faithfully



Chief Engineer (Electy)
SLDC, KPTCL, Bangalore.

