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KPTCL/B28(a)/CEE/RT&R&D/KCO-78/459/2016-17/44

Date: 4/9/17

AMENDMENT

Sub: Amendment to the Circular dated 11.01.2017 issued regarding Providing Low Voltage Ride Through (LVRT) Protection to Wind Generators- reg.

- Ref:**
- 1) T.O Circular of even no. dated 11.01.2017.
 - 2) CEA [Technical Standards for Connectivity to the Grid] Regulations-2007, (amendment dated 15.10.2013).
 - 3) Hon'ble CERC Order in Petition No. 420/MP/2014 dated 05.01.2016.
 - 4) Minutes of special SRPC meeting held on 17.06.2016 and special TCC meeting held on 02.08.2016.
 - 5) Note no CEE/RT&R&D/KCO-78/45908/2016-17/38 dated 07.07.2017 of the CEE (RT&R&D), KPTCL approved by DT, KPTCL on 18.07.2017.

A Circular cited under reference(1), was issued by KPTCL to ensure only wind machines having Low Voltage Ride Through(LVRT) feature will get connected to the grid. For ensuring all the technical requirements of the grid including implementation of LVRT feature by all upcoming wind machines, checks and balances to be exercised by various officers associated with the process of allowing connectivity of Wind generators was also stream lined through the Circular dated 11.01.2017.

Now, MNRE has noticed that the KPTCL Circular dated 11.01.2017 is being interpreted as "it permits stall type wind turbines and also wind turbines of capacity less than 500kW to connected to grid without the provision of LVRT" and has given the feedback to issue necessary amendment in the said Circular.

EE (IT)	
EE (MIS)	
DCA (IT)	
SEE (IT&MIS)	

AE-4/AE-1
5/9/2017

CERC while finalizing the Petition No. 420/MP/2014 had stipulated that LVRT must be implemented for every Wind Turbine in the grid. LVRT should be implemented for Wind turbines(except Stall types) commissioned before 15.04.2014 having installed capacity equal to or more than 500kW. In case of wind turbines of capacity less than 500kW installed prior to 15.04.2014(except Stall type), CEA was directed to conduct study regarding technical feasibility of installation of LVRT in these turbines and submit a report.

It is concluded that, LVRT is mandatory for any type and capacity of wind turbines connected to the grid on or after 15.04.2014.

Considering the above and as directed, the following Amendment is issued with immediate effect:

	Existing	Amended
Para-2, Sl. No.1 of the Circular dated 11.01.2017	LVRT should be implemented for all WTG's (except Stall types) commissioned before 15.04.2014, having installed capacity equal to or more than 500kW irrespective of voltage category. In case of WTG's of less than 500kW and installed before 15.04.2014, Central Electricity Authority has been directed to conduct a study regarding technical feasibility of installation of LVRT in these turbines and submit a report to the Commission within 6 months of issue of this order.	LVRT should be implemented for all WTG's (except Stall types) commissioned before 15.04.2014, which are not technically feasible to be retrofitted with LVRT) having installed capacity equal to or more than 500kW irrespective of voltage category. In case of WTG's of less than 500kW and installed before 15.04.2014, Central Electricity Authority has been directed to conduct a study regarding technical feasibility of installation of LVRT in these turbines and submit a report to the Commission within 6 months of issue of the CERC order. LVRT is mandatory for any type and capacity of wind turbines connected to the grid on or after 15.04.2014.

<p>Para-5 of the Circular dated 11.01.2017</p>	<p>In view of the above and to adhere strictly with the directives narrated above, strict monitoring shall be ensured to see that the Wind Generators (except stall type) of capacity 500kW and above connected to the grid prior to and on or after the date of this Circular shall only be allowed to get connected with the Grid provided they have LVRT capability. The checks and balances to be exercised by various officers associated with the process of allowing connectivity of Wind Generators with the Grid is appended below for strict compliance.</p>	<p>“In view of the above and to adhere strictly with the directives narrated above, strict monitoring shall be ensured to see that LVRT should be implemented for all Wind turbines commissioned on or after 15.04.2014. Wind Generators of capacity 500kW and above connected to the grid prior to 15.04.2014(except stall type wind generators which are not technically feasible to be retrofitted with LVRT) shall be allowed to get connected with the Grid provided they have LVRT capability. CEA will come up with the report regarding wind generators having installed capacity less than 500kW commissioned prior to 15.04.2014. The checks and balances to be exercised by various officers associated with the process of allowing connectivity of Wind Generators with the Grid is appended below for strict compliance.</p>
<p>Para-5, of the Circular dated 11.01.2017.</p>	<p>In Table, point No. 4: To ensure that the Wind Generators of 500kW and above (except stall type) connected to the Grid prior to the date of this order are equipped with LVRT features. This shall be implemented through mutual discussion with the generator and allow them sufficient time for the implementation.</p>	<p>In Table, point No. 4: To ensure that all the Wind Generators of 500kW and above (except stall type connected prior to 15.04.2014 which are not technically feasible to be retrofitted with LVRT) connected to the grid prior to the date of this order are equipped with LVRT features. This shall be implemented through mutual discussion with the generator and allow them sufficient time for the implementation.</p>

The other contents of the KPTCL Circular under reference(1) shall remain unaltered.


Deputy General Manager (Tech.)
KPTCL

To:

1. The Managing Director, BESCOM, HESCOM, MESCOM, CESC, GESCOM,
2. The Director(Technical), BESCOM, HESCOM, MESCOM, CESC, GESCOM.
3. All Chief Engineers (Electy)., KPTCL.
4. All Superintending Engineers (EI), W & M/Works Circles, KPTCL.
5. All Executive Engineers (EI), RT/MWD/TL&SS Divisions, KPTCL.
6. PS to the Managing Director, KPTCL, Kaveri Bhavan, Bengaluru.
7. PS to the Director(Transmission), KPTCL, Kaveri Bhavan, Bengaluru.

Copy to:

8. The Superintending Engineer (EI), IT & MIS with a request to arrange to upload this Amendment in the KPTCL website for view of the officers of KPTCL.