

APP Comments on CERC Discussion Paper on Re-designing Ancillary Services Mechanism in India

Clause	Existing Point	Remarks
6.9	<p>Who can participate? Currently only the regulated CGS can participate in the Ancillary Services mechanism which has been classified as "slow ancillary". Going forward,</p> <ul style="list-style-type: none"> • All Inter-State / Intra-State generation (Public or Private) resources may be qualified to provide Ancillary Services (subject to maximum/ minimum/ emergency/ economic/ regulation limits, minrun/down times, max-run times, cold/ intermediate/ hot start/notification times and start-up costs, and ramp-rate limits). • RE resources, with appropriate retrofit, be qualified to provide energy and Ancillary Services at a later date. 	<p>Including all inter-state/intra-state generation for ancillary services is a long awaited step which has now rightfully proposed in the concept paper. Further, we propose that these generation resources should be divided into 3:</p> <ol style="list-style-type: none"> 1. Tier 1: Ramp resources = Resources that can provide energy and sustain output and can quickly ramp-up and ramp-down depending upon the requirement like Gas based projects 2. Tier 2: Ramp Limited resources = Resources that can provide energy and sustain output but take time to ramp-up and ramp-down like coal based projects 3. Tier 3: Energy-Limited Resources = Resources that can match control signals at sub-second time levels but cannot sustain energy output which depends on the state of the charge and storage capacity like batteries, Plug-in hybrid electric vehicles, hydro projects <p>Depending upon the requirement, one of the above should be preferred for AS and balancing mechanism.</p> <hr/> <p>This clause also talks about including RE resources to provide ancillary services at a later date. It is well known fact that RE resources primarily Wind and Solar are variable in nature and need balancing services form other conventional sources, hence RE sources like small hydro, biomass etc. can be included into ancillary services but every RE source needs to be reviewed vigilantly before including them in this category.</p>

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6.12	<p>Concept paper encourages a market driven price and volume discovery for ancillary market.</p> <p>Therefore, in order to ensure availability of resources on a firm basis and with a view to enlarge the ambit and bringing in greater efficiency, it is proposed that:</p> <ul style="list-style-type: none"> • The extant Ancillary Services Mechanism for "slow" tertiary reserves be replaced with markets for Ancillary Services, where all resources that can provide the defined services can participate • The markets will operate both on a Day Ahead Basis and Real Time Basis through the Market Clearing Engine of the Power Exchanges. 	<p>Ancillary services mechanism in India is in evolving stage. Power exchange market took years to evolve to this stage where approx. 10% of the volume was transacted through exchange in July 2018. Ancillary Services market should be given appropriate time to mature and hence a blend of administered & market driven mechanism should be adopted in following way:</p> <ul style="list-style-type: none"> • There can be instances where participating power plants could be recalled for serving the states that have paid capacity charges making that capacity unavailable for AS and POSOCO will need some firm commitment for meeting AS requirement to avoid any exigency. Hence, the existing mechanism of having unrequisioned surplus of generating stations should be there with a minor change that gas based plants should be given preference owing to their benefits and ability to respond quickly. An additional cost (say 50 Paisa/kWh) over and above fixed & variable cost should be ascertained to the projects who are being used for this. • A part of the total requirement to be procured from power exchange and the portion should be increased gradually after reviewing the mechanism on a periodic basis (quarterly or half yearly) • Coal based plants who have PPAs should be excluded from participating in AS market as these plants are always required to cater the base load and can be recalled at any point of time by respective states to meet the demand. <p>The above methodology will ensure the adequate supply to POSOCO and would pave way towards development of AS market.</p>
6.13	<p>For the slow tertiary, there shall be a Day Ahead Market where generators would bid simultaneously in Day Ahead Energy and Day Ahead Ancillary Services Market and the two shall be cleared together.</p>	<p>As the purpose of both the markets – Day Ahead Energy and Day Ahead Ancillary Services are different, hence there should not be any simultaneous bid and clearing together. It should be done in two timeframes-</p> <ol style="list-style-type: none"> 1. First Day Ahead Energy Market should be cleared 2. Post-closing of Day Ahead Energy Market, bid for AS should be called and cleared accordingly <p>This will give an opportunity to the generators to provide their un-tied capacity for AS in case it is left post Day Ahead Energy Market is cleared & finalized.</p> <p>In Intraday, both markets can play simultaneously as the response time is quick in an intraday mechanism.</p>

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6.19	...Offers Price (separate for Energy and AS in the Day Ahead Market, and only Energy Price offer in Real Time Market, AS Price in Real Time is set to Rs.0 / MWh)	AS price in Real time should not be set at Rs 0/MWh as this will defeat the very purpose of a market driven price determination and would be counterproductive for participation from generators.
6.19	Buyers are RLDCs (POSOCO)	RLDC should estimate the demand for AS duly considering the requirement of respective states as need for AS may be higher if calculated from down level (SLDC/Feeder) to RLDC/NLDC level.
6.30	Calculating Ancillary Services prices based on generator opportunity costs is straightforward. One illustrative example is given in the box below ...	The examples given for each scenario needs more illustrations in terms of how reserve prices have been determined, explanation for day ahead position terminology such as Econ Disp, Fully Disp etc., how the payments will be settled within the pool etc.
6.32	It deals with non-compliance part	Understand that there will be penalties involved in each non-compliance and the amount collected through this will be used towards payment for Ancillary services provided by the generators. If this is not so, what will be the source of funds for such payments?
6.36	...As the power sector in India transitions to include AS markets for tertiary services, it is proposed that initially, the charges be recovered from the Deviation Settlement Mechanism pool. Once the AS markets have stabilized, the charges be recovered as a —price adder to the NLDC/ RLDC service charges and recovered from the grid connected entities on per unit of energy basis or as price adder in UI/DSM charges.	<p>There should be a separate pool under the supervision of NLDC catering the requirement of Ancillary Services in order to have transparency and clarity in collection/usage of funds. A budgetary support should be provided by GoI for initial years or till the time AS market becomes self-sufficient.</p> <p>Also, the charges may be recovered in one or combination of the following way:</p> <ul style="list-style-type: none"> • To be calculated on a causer pays basis as done in Australia where in the amount paid by Australian Electricity Market Operator (AEMO) for the FCAS service is recovered from market participants responsible for causing the need for the service. • As done in PJM, the total cost of AS for the Operating Day is allocated and charged to the Members in proportion to their locational real-time deviations from day-ahead schedules and generating resource deviations during that Operating Day. • All generators and buyers to bear the balancing cost in proportion to the energy supplied or consumed.