



West Bengal State Electricity Distribution Company Limited
(A Government of West Bengal Enterprise)

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Regulation Cell

Memo No-REG/Legal/CERC/ 314

Dated: 29/09/2022

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

Sub: Comments on draft CERC (Indian Electricity Grid Code) Regulations, 2022.

Ref: Public Notice of CERC issued under Memo No. L-1/265/2022/CERC dated 30.08.2022.

Respected Sir,

With reference to the above, comments/ suggestions of WBSEDCL are enclosed herewith for your consideration, please.

Enclo: As above

Yours faithfully,

(S. Mukhopadhyay)
Chief Engineer (Reg)

Views on Draft CERC (Indian Electricity Grid Code) Regulations, 2022

Clause No. 46. Security Constrained Unit Commitment (SCUC)

At the outset WBSEDCL has strong reservation on this clause as with the implementation of this clause, the beneficiary of the ISGS whose tariff is determined under section 62 and 63 of IE Act 2003 will lose the right of real time revision despite paying fixed cost to the stations.

One of the major reasons for which, the DISCOMs usually goes for the long-term Power Purchase agreement is to avail the real time operational flexibility on the availability to manage:

- The dynamicity of demand according to the consumption behaviour of the consumers in their command area
- Fluctuation of the distribution network embedded renewable energy generation.
- Demand fluctuation due to weather surprise.
- Spinning reserve to assure uninterrupted power supply to the all sorts of consumers

Moreover, such relinquishment of right to revision through this regulation will cause deviation from the provision of the agreement between DISCOMs and the generating stations. Besides the said, it also may violate some relevant clauses of Indian Contract Act 1872.

The main intention of this regulation is to maximize the operational reserves in the interest of the grid security which may be alternatively assured by the untied capacity of the ISGS, Stressed Asset and Gas based Power Stations, which is now usually under continuous forced shutdown condition.

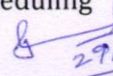
Proposal from WBSEDCL to prevent frequent RSD in real time operation.

Backdrop :-

Since the issuance of the CERC order dt. 12.09.2021 against Petition No: 60/MP/2019 filed by MSEDCL, the ISGSs whose tariff are determined under the proviso of section 62 & 63 along with its beneficiaries & RLDCs have been facing severe operational problem related to real time RSD management. For the short duration gain of some beneficiaries, other beneficiaries full shares are getting affected due to RSD during their peak period. The affected beneficiaries then compelled to procure the RSD caused shortfall power from the market at higher price with the simultaneous payment of Fixed Cost to the ISGS.

Upon assiduous study & discussion with the system operators, the below cited methodology has been framed to address the above concern.

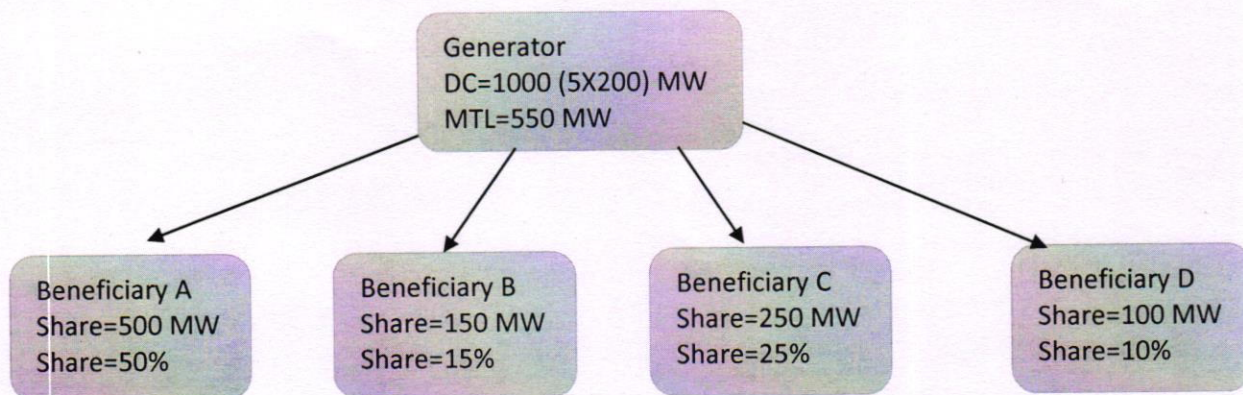
- Every beneficiary will have a flexibility to revise their schedule downward upto 45% of its entitlement.
- Above 45% downward revision is only allowed when collective schedule of that generating station is above 55% which is MTL.
- If any beneficiary's downward revision is such that it causes the collective schedule of the generating station below MTL (55%), its schedule shall be jacked up suo-moto by RLDC to maintain the schedule of the generating station at 55% with a view to keep the running machine live in Bus.
- In extreme exigency, beneficiaries can seek RSD requisition which shall be an additional provision in scheduling module.
- If the collective RSD requisition is found to be equivalent to one unit capacity for minimum downtime of 8 hrs. , RLDC shall instruct for RSD through scheduling


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procedure Otherwise the beneficiaries' schedules will be jacked up by RLDC upto 55% (MTL).

- The shares of the beneficiaries, who did not seek RSD requisition, shall not be affected by the RSD.

Illustration :

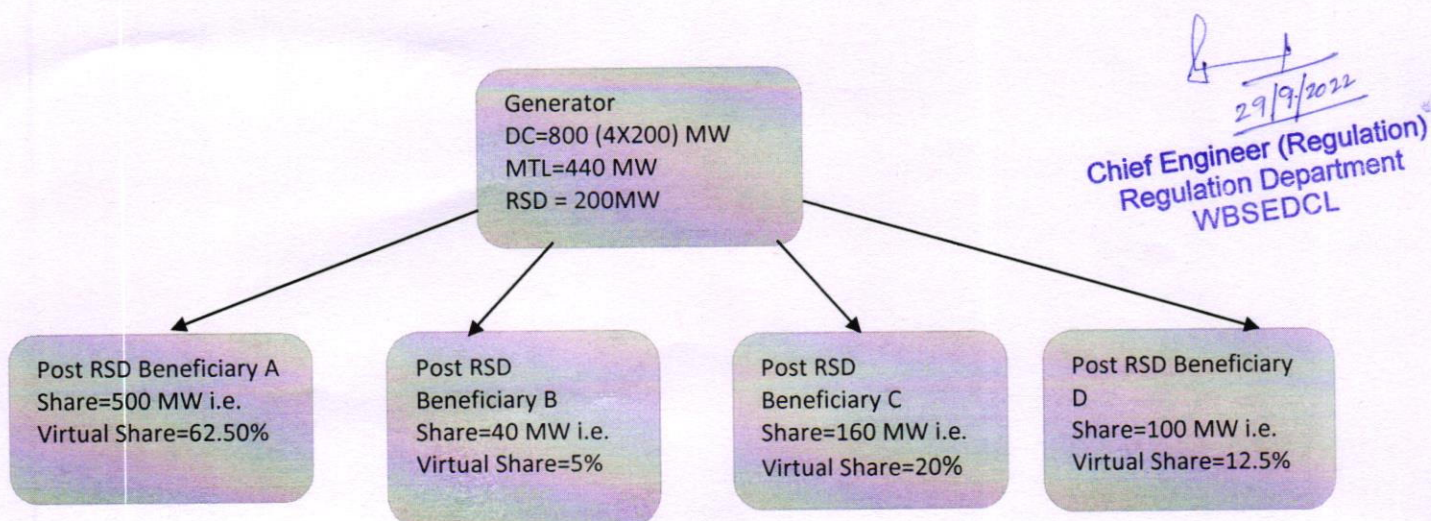


BENEFICIARY	SHARE ALLOCATION (%)
A	50
B	15
C	25
D	10

Now the following RSD requisitions are placed:

BENEFICIARY	RSD REQUISITION (MW)	ON BAR REQUISITION (MW)	Post RSD backdownable quantum (45% of requisition)
A	0	500	225
B	110	40	18
C	90	160	72
D	0	100	45
TOTAL	200	800	360 (=45% of post RSD capacity)

Now since the total RSD requisition is 200 MW, which is equivalent to one Unit capacity, the generator can go for RSD of one unit. The situation under one Unit RSD condition will be as follows:



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Hence under this RSD situation Beneficiaries B and C will get their required RSD without hampering the schedule of other beneficiaries A & D with full flexibility of downward revision upto 45%

BENEFICIARY	ORIGINAL SHARE ALLOCATION (%)	POST RSD VIRTUAL SHARE ALLOCATION (%) from the running units
A	50	62.5
B	15	5
C	25	20
D	10	12.5

Now considering the following scenario:

Case 1: Collective RSD Quantum not equal to one unit equivalent capacity but the collective requisition from the generating station is above or equal to MTL level.

BENEFICIARY	RSD REQUISITION (MW)	ON BAR REQUISITION (MW)	REVISED JACKED UP REQUISITION (MW)
A	0	500	500
B	90	60	60
C	90	160	160
D	0	100	100
TOTAL	180	820 (Above MTL)	820 (No jack up required)

Since the total RSD requisition is 180 MW which is not equal to or multiple of one unit generation equivalent, unit shutdown will not occur and the Generating station will generate 820 MW with 5 units.

Case 2: Collective RSD quantum not equal to one unit equivalent capacity but the collective requisition from the generating station is below the MTL level.

BENEFICIARY	RSD REQUISITION (MW)	ON BAR REQUISITION (MW)	REVISED JACKED UP SCHEDULE (MW)
A	0	275 (i.e. 55% of entitlement)	275
B	90	60	$(60 + 22.5) = 82.5$
C	90	47.5	$(47.5 + 90) = 137.5$
D	0	55 (i.e. 55% of entitlement)	55
TOTAL	180	437.5 (Below MTL)	550 (Jack up quantum =112.5MW)

Since the RSD requisition is less than one unit capacity equivalent quantum, the station will not go for unit shutdown or RSD. In order to maintain its MTL, that is 550 MW, requisition of Beneficiary B & C will be jacked up as shown above.

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Conclusion :

The above delineated methodology will not only give operational comfort to the system operator but also to the generators & their beneficiaries without hampering their commercial interest. Moreover, system operator can use unquestioned power as and when available for operational reserve purpose. To accommodate the above methodology some minor modification may be required in

Clause No: 29. (5) Except under an emergency, or when it becomes necessary to prevent an imminent damage to a costly equipment, no user shall cause a sudden variation in its load by more than 100 (one hundred) MW without prior permission of the respective RLDC

In large distribution system sudden rise or fall of 100 MW demand is frequent & normal phenomenon. Such rise & fall of demand to the tune of 100MW which is the nominal percentage of total demand inertia is also unpredictable & depends upon the embedded renewable generation surprise & local weather surprise. Moreover, the Discoms those who have Pump Storage system, tune their drawl through generation or pump load for befitting their schedule. So, in real time operation it is not possible to the distribution system operator to guess & intimate such minor change to RLDC. The change in Schedule for any state itself gives an idea to the RLDCs regarding the concerned matter. So, this clause shall be deleted.

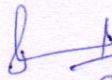
Regarding Clause No: 29 (12) Note -2: of Table -2

The existing Purulia Pump Storage Project (PPSP) was commissioned during 2007-08 by the Japanese Vendor TOSHIBA & despite aging of 15 years it is still now giving immense support to the grid during Lean as well as Peak period as a balancer. As the entire project is designed with the aid of Japanese technology, WBSEDCL engineers & the Indian vendor engaged for AMC have to take guidance from TOSHIBA for any operational deviation. So, Indian engineers have no idea regarding the post auto tripping wear & tear effect on such old machines running out of warranty.

In the backdrop of above inclusion of such units under the preview of automatic tripping may be risky as far as the machine health & age is concerned & should be avoided for the greater interest of the Grid.

Regarding Clause no : 30

In compliance with the above clause the State has to maintain secondary & tertiary reserve both at State & ISGS level by reducing the share of concerned state beneficiary Discoms from those generating stations. In turn the affected beneficiaries have to procure same amount of power from spot market to meet their such shortfall. As the market price is dynamic it may happen that the landed cost of spot market power procurement is higher than that of the SRAS & TRAS provider generating stations. Hence, the cost of ancillary power in such case shall be the landed market price or the SRAS/TRAS service provider's generation cost whichever is higher.


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