



Ref. No. 01:CD:MA-01

Date: 15.07.2021

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

Sub: Submissions of NTPC on Draft Central Electricity Regulatory Commission (Ancillary Services) Regulations, 2021.

Sir,

Hon'ble Commission vide its notification dated 29.05.2021 has published the Draft Central Electricity Regulatory Commission (Ancillary Services) Regulations, 2021 inviting views/ comments/ suggestions/ objections from various stakeholders on the proposed Draft Ancillary Services Regulations, 2021.

In this regard, please find enclosed comments/ suggestions of NTPC on the Draft Central Electricity Regulatory Commission (Ancillary Services) Regulations, 2021.

Thanking you,

Yours sincerely,

(Anil Nautiyal)

ED (COMMERCIAL)

NTPC's Submissions on
Draft (Ancillary Services) Regulations 2021

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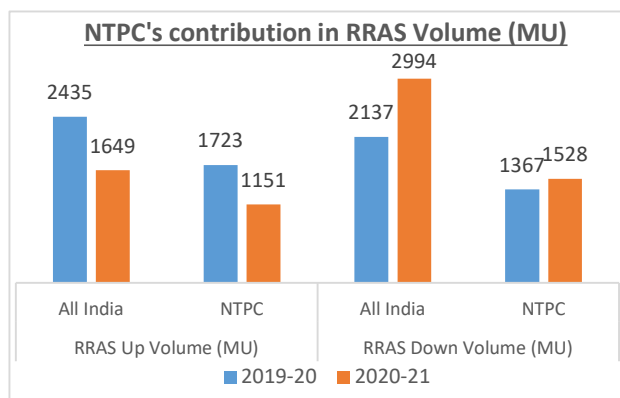
1.0 Introduction:

Ancillary Services are among the most important aspects of any Power System Operation. Maintaining the Demand-Supply balance and ensuring adequate Reserves in the Power Systems are extremely crucial to maintain the reliability and security of Grid Operation.

Several steps have been taken in the recent past to take care of this important aspect of Power System Operation. Hon'ble Commission passed an important order on 13.10.2015 which laid down a "Roadmap for Operationalization of Reserves in the Country".

The Ancillary Services Operations Regulations 2015 was issued on 13.08.2015 and the Detailed Procedure for Ancillary Services Operations were issued in March 2016 and updated on 21.11.2016. The RRAS mechanism of the Ancillary Services Operations Regulations 2015 along with various other orders of Hon'ble Commission with regard to implementation of AGC and RGMO/ FGMO operation have been quite successful in meeting the Ancillary Services requirements of the Indian Grid. Subsequently, the staff of the Commission issued the discussion paper on "Re-Designing Ancillary Services Mechanism in India", which provided a roadmap for introduction of Market based Ancillary Procurement in the country. Subsequently, the Draft Central Electricity Regulatory Commission (Ancillary Services) Regulations 2021 has been issued on 29.05.2021.

NTPC on its part has been at the forefront of providing Ancillary Services support in the country. As shown in the adjacent figure NTPC has been contributing nearly 70% of the total RRAS requirement of the Indian Grid. As a stakeholder of the Power Sector, it is also important for us to see that the Power System of the country is operated in a reliable and secure manner. It is our submission that the proposed mechanism should allow continuous participation of NTPC and other CPSUs for providing Ancillary Services.



2.0 Preliminary submissions on the proposed Ancillary Mechanism

The proposed mechanism in the Draft Ancillary Services Regulations 2021 aims to introduce a new mechanism for procurement of Ancillary Services in the country, particularly w.r.t. meeting the Tertiary Reserve requirement. The following are our general observations/submissions on the proposed Mechanism, which may be considered in the design of this mechanism:

- 2.1 **The Mechanism should facilitate large scale participation:** In the proposed Market based mechanism for TRAS, advance procurement will be done on Day Ahead basis and incremental procurement will be done in the Real Time Market. It is expected that there could be tendency

to secure the requirements at the earliest i.e. DAM and not leave it to RTM so as to reduce the uncertainty.

In this process, NTPC and other CPSUs/ CGS whose power is tied upto 100% will have limited opportunity to participate, which might not be in the interest of System requirement. As Hon'ble Commission is aware, all the power of NTPC is tied up with beneficiaries and the schedule of beneficiaries are prepared in the evening of the previous day. Considering the sensitivity of the issue of Right to Recall, it may not be possible for most NTPC stations to participate in the mechanism. From the experience of sale of URS power in the Energy market, it has been seen that the surplus capacity is generally kept as a reserve for meeting contingency requirements of the beneficiaries. It is only after introduction of the Real Time Market, we have seen substantial spurt in sale of URS power, as the same is happening after closure of the right for scheduling the power. Similar situation is expected to happen in the case of Ancillary Services Market also.

Thus, NTPC's participation may get limited to the Real Time market only, which by definition is only for meeting the incremental requirement. **In the process, NTPC's power with an average variable cost of Rs 2.15/unit will be excluded to a large extent from participating in the Ancillary Services Market.** Since cheaper URS will not be available on DAM for TRAS, costlier power from generating stations having merchant capacity would only be eligible for participation leading to increase in cost of procurement of AS and increase the system operation cost.

- 2.2 **Cost of Procurement:** In the present mechanism, the cost is paid to the Ancillary Service provider only when the same is deployed. If there is no deployment, nothing is paid, whereas in the proposed mechanism, due to advance procurement, a commitment charge of 10% of MCP (with cap of 20 paise) is proposed to be paid when the services are not deployed.

At the same time, as mentioned in paragraph (a) above, the construct does not allow largescale participation of ISGS stations which are among the cheapest sources of power in the country.

It is also expected that to meet the responsibility of meeting the requirement of reserves, there could be over procurement of Ancillary Services capacity in the Day Ahead Market. Secondly, it is also dependent on the robustness of estimation of Ancillary services requirement on Day Ahead basis.

All these factors may lead to higher procurement cost of TRAS in DAM which could increase the cost of balancing and reserves in the country.

One of the ways to ensure lower cost of Ancillary Service could be to utilise all the cheaper URS power available at the time of deployment. Hence the cost of URS power should be compared with the Market discovered price and the same should be deployed first.

In the same breadth, a mechanism should be developed to dispatch any RSD power which is cheaper than the market discovered price of the Ancillary Services to reduce the overall cost of Reserves in the System.

2.3 Adequacy on incentives vis-à-vis risks of Ancillary Service Providers:

In the Draft Regulations, payment for SRAS and emergency deployment of TRAS has been proposed to be done at the Variable Charge offered on a monthly basis without any scope for adjustment/ revision.

The risks for the AS providers can come in the form of revision in Variable charge which can happen due to reasons such as variation in coal price, freight charges, change in coal blending, adjustment billing etc. Additionally, the units will be exposed to additional wear & tear and increased Part Load operation of the plant increasing its actual cost of generation. As the payment are to be done based on the declared VC, these factors need to be covered in the payment additionally.

The Hon'ble Commission recognised all the above factors in the Ancillary Services Operations Regulations 2015 and this has been covered in the Statement of Reasons, as below:

Quote

7.4 (i) CEA has highlighted that because of ramping up and ramping down of generation, may be a number of times a day, the efficiency and wear and tear of the power plant is likely to be affected adversely. These power plants may then have to be compensated for the same.....

xxx

7.5 (ii) The Commission shall decide the same based on factors such as age & ramp rate, loss of efficiency, additional wear & tear of the unit, etc. Mark-up shall be communicated from time to time through a separate order.

Unquote

The Hon'ble Commission recognised all the above factors while deciding the Mark-up of 50 paise vide their order in Petition No. 01/SM/2016 (Suo-Motu) dated 29th Feb 2016 as below-

Quote

5.1 Statement of Reasons accompanying Ancillary Services Operations Regulations explained that "mark-up shall be applied to fixed cost, and shall be decided based on factors such as age, ramp rate, loss of efficiency, additional wear and tear of the unit, etc." It is clarified that both the generating station and the original beneficiary (ies) are being remunerated through payment of fixed and variable charges for providing Regulation Up service. The mark-up seeks to only compensate for the additional wear and tear, if any, that may be caused due to increased ramp up and ramp down cycles under Ancillary Services scheduling...

5.5 Based on the above rationale, the Commission sets the mark-up for participation in Regulation UP Ancillary Services at 50 paise/kWh....

Unquote

Considering the above it is submitted that:

- a) As per the intention of the Draft Regulations, in case of SRAS, the risks of the providers are supposed to be mitigated through the incentive scheme. Hence the design of the incentive scheme becomes important and the scheme should not only mitigate the

risk but also encourage participation. It is felt that the proposed incentive scheme may not be able to achieve these because of the issues associated with performance measurement. These are described in detail in our comments to Regulation 12 at page no 7. As the Performance Measurement scheme is being introduced for the first time, it is submitted that Hon'ble Commission may actually design the incentive slabs/ rate based on the actual performance data of around 6 months. Till that time, mark-up of 50 paise may be continued.

- b) In case of TRAS, though the risks of the selected providers can be factored in the bids submitted by them, but there is no mechanism to take care of the risks of the Section 62 generators when the URS power is used for deployment. Hence a mark-up of 50 paise should be paid to the Sec 62 generators when their URS power is deployed to meet the Ancillary service requirements.

2.4 SRAS Deployment Process:

As proposed in the Draft Regulations, deployment of SRAS will be apportioned among all the SRAS providers based on the normalised Custom Participation Factor, where it is directly proportional to the Ramp Rate.

It is submitted that in this formulation the resources having higher Ramp-rate is getting preference irrespective of their cost. While deploying the resources, ultimately it should boil down to the Cost of procuring resources and the question should be whether resources having higher Ramp rate than actually required for the Power System be preferred.

Secondly, instead of apportionment of the total requirement among all the resources, it should be done on basis of stacking order, based on cost considerations.

2.5 Transparency and Accountability:

Transparency in the implementation of the entire scheme is an important factor, particularly in respect of the following:

- i. Estimation of Ancillary requirement: since the costs would be directly proportional to the estimation of requirement, the procedure has to be carefully designed. We submit that this aspect will be covered clearly in the IEGC and the Detailed Procedure to be prepared.
- ii. Cost of Deployment: The information regarding cost of procurement and deployment should be published in a transparent manner on Daily and Monthly basis.

2.6 Bidding Mechanism in Tertiary Reserve Ancillary Service (TRAS): The Tertiary Reserves are proposed to be procured through Market mechanism in the Day Ahead Market (DAM) and Real Time Market (RTM). The following are submitted wrt the Bidding Mechanism:

- i. Bidding for Energy and Ancillary Services are being proposed to be done in the same Market i.e DAM (10-12 Hrs of Previous day) and RTM windows on the date of delivery. This process makes it incumbent on the providers to decide which market to participate, which can lead to inefficient results, as the participants may not be in a position to efficiently decide this. It is possible that the participant chooses the Ancillary Services Market but does not clear the Market but would have cleared in

the Energy Market or vice versa. In case of Section 62 generators also, even if Discoms give convey their consent, it is not very clear how the decision regarding participation in either of these Markets would be chosen. The following options may be explored to address this:

- a) The process of Co-optimisation practised in the Power Market of US resolves this issue where, the provider places a single offer and the Market Engine decides how much to be procured for the Energy market and how much for Ancillary Services Market. This was the original process proposed in the Staff Paper issued on 06.09.2018.
 - b) Alternatively, as per the practice of many European Markets, the Bidding windows can be different from the Energy Market, which can be run by the Nodal Agency separately. This can provide more flexibility to the Nodal Agency and would also address the issue of uncertainty wrt participation by the AS providers to choose between different Market.
- ii. It is proposed that Uniform Market Clearing Price (UMCP) method would be used for TRAS- Up bidding whereas Pay-as-Bid would be followed for TRAS-Down bidding. As per the Explanatory Memorandum, the TRAS-Down Market segment is expected to be smaller and the concept of SMP might not be relevant, hence Pay-as-Bid would be a better choice. But it has been observed based on the data of FY 2020-21 and in the recent months that the RRAS-Down volume is almost double of RRAS-UP is expected to increase going forward due to large scale integration of RE power in the Grid. Hence UMCP may be applied for both the Market segments.

2.7 Use of Gas power station for Ancillary Services

- a) Gas stations with quick start-up time and higher ramp rates are considered ideal for balancing the variability of RE generation and therefore are best suited for providing Tertiary Reserve Ancillary Services (TRAS). Gas stations of NTPC are presently used widely for the purpose of meeting RRAS requirements. However, in the proposed TRAS mechanism utilization of Gas plants would be minimal.
- b) It is suggested that to enable the gas stations to continue to be utilized to provide grid stabilities, NLDC may coordinate the operations of the Gas stations of NTPC. NLDC based on the expected requirement may enter into customized gas supply arrangements with gas suppliers. The FC liability of these stations may be paid from the Pool.
- c) In this way, gas stations can be utilized for meeting the Peaking requirements of the country.

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Clause-wise Submissions are attached as below:

3.0 Submissions on General clauses of Draft Regulation.

3.1 Regulation 4 of the Draft Regulation:

Scope: These regulations shall be applicable to regional entities, including entities having energy storage resources and demand side resources qualified to provide Ancillary Services and other entities as provided in these regulations.

Submissions of NTPC:

Energy Storage: To promote energy storage in the country, the existing generators should be encouraged to set up such facilities within their premises also, including utilisation of existing transmission infrastructure etc and should be allowed to provide Ancillary Services.

Demand Side Resources: As the Demand Side resources are being allowed to provide Ancillary Services, it is to be seen how the Discoms can participate in this. With their Universal Service Obligation, any offer to provide Ancillary Down service may lead to load shedding, which could be contrary to the main responsibility of the Discoms. A suitable mechanism needs to be developed to ensure that this does not lead to depriving the general consumers of any power.

4.0 Part-I : Secondary Reserve Ancillary Services (SRAS)

4.1 Regulation 7: Eligibility of SRAS Providers

(e) is capable of responding to SRAS signal within 30 seconds and providing the entire SRAS capacity obligation within fifteen (15) minutes and sustaining at least for the next thirty (30) minutes.

Submissions of NTPC:

After implementation of the concept of Gate Closure and introduction of RTM, the position of URS is firm only for a period of 2 blocks at any point of time as Schedules get revised after 2 blocks and availability of URS of the station may get changed from 3rd block and thereafter. As described in the above clause, in case of requirement the availability is being assess for a period of 3 blocks (15 minutes + 30 minutes). This may have to relook into and may be changed to 15 minutes + 15 minutes to avoid any overlap in the schedule of the station.

For example:

A station might be having URS of 50 MW at the start of a Block-1, which can be zero at Block-3, due to some rescheduling or increase in schedule from some other sources like rescheduling, RTM sale etc. So, while sending SRAS signal, the visibility that needs to be considered is for 2 blocks i.e. Block-1 and 2 only. SRAS cannot be sustained in Block-3 here, which otherwise can be reflected as under performance by the provider.

4.2 Regulation 8: Activation and Deployment of SRAS

(1) SRAS shall be activated and deployed by the Nodal Agency on account of the following events to maintain or restore grid frequency within the allowable band as specified in the Grid Code and replenish primary reserves:

- a) Area Control Error (ACE) of the region deviating from zero (0) and going beyond the minimum threshold limit of ± 10 MW;

Submissions of NTPC:

The minimum threshold limit is too narrow to trigger a SRAS signal for any Regional grid as large as 50000-60000 MW. It may lead to too frequent SRAS corrections ultimately causing wear and tear in machines affecting useful life. Considering 5% droop +/-10 MW deviation in a typical 50k grid will affect only 0.0005 Hz change so this band can be suitably increased.

4.3 Regulation 9: Procurement of SRAS

(8) In case of the generating stations whose tariff is determined by the Commission under Section 62 of the Act, the Nodal Agency shall identify the generating stations for providing SRAS,

- (a) on day-ahead basis, based on the capacity available after the schedule has been communicated at 2300 hrs for the next day; and
- (b) on real-time basis *before the gate closure* for incremental SRAS requirement.

Submissions of NTPC:

It is not clear about the requirement of this step, as the actual availability of URS power from Section 62 Generators can be known only after the completion of auction and finalisation of results in the Real Time Market. Hence identification of stations can happen only after the results of RTM are finalised.

4.4 Regulation 12: Performance of SRAS Providers and Incentive

(1) The actual response of SRAS Provider against the secondary control signals from the Nodal Agency to the control centre of the SRAS Provider shall be monitored by the Nodal Agency, as per the procedure stipulated in the Detailed Procedure.

(2) All measurements of secondary control signals from the Nodal Agency to the control centre of the SRAS Provider and actual response of SRAS Provider shall be carried out on post-facto basis using SCADA data. Performance of the SRAS Provider shall be measured by the Nodal Agency by comparing the actual response measured against the secondary control signals for SRAS-Up and SRAS-Down sent every 4 seconds to the control centre of the SRAS Provider. The methodology for measurement of performance of SRAS Provider shall be as specified in Appendix-II of these regulations.

(3) SRAS Provider shall be eligible for incentive based on the performance measured as per 11 clause (2) of this Regulation and the 5-minute MWh data calculated for

SRAS-Up and SRAS Down as per clause (11) of Regulation 10 of these regulations and aggregated over a day, as under:

Submissions of NTPC:

The provision of mark-up provided in the existing AGC mechanism has been removed and a separate incentive mechanism has been proposed. In the absence of any mark-up, incentives are the only means to take care of any risks or the AS provider. Hence the criteria of incentives should be achievable and at the same time the design and implementation of incentives should be done in such a manner that parameters on the basis of which incentives are given are achievable.

The following are some issues which needs to be considered in the proposed incentive mechanism, which are as follows:

- Segregation of AG with respect to different components of SG (like ISGS Schedule, URS Rescheduling, PX Sale in DAM & RTM, SCED, RRAS/TRAS, AGC /SRAS) is difficult. As per the draft Regulations, actual output against AGC corrections would be quantified every 4 seconds for measuring performance. It would be very difficult to handle the enormous data produced and there may be various practical operational difficulties in quantifying the data so it is suggested to cumulate the above data in each 5 minutes time block and the response may be seen on 5 minute interval basis. This would ease the implementation and machine output would be a better representation of the performance.
- After the rollout of Pilot AGC in five NTPC stations, it has been observed that at times RGMO correction and AGC correction sent by POSOCO can be opposite to each other, negating each other's correction. This is because RGMO is triggered by variation in frequency, while SRAS is triggered by ACE taking in account both frequency variations and the regional power interchange. In such a case, station would appear to be delivering inadequate response at both fronts during assessment by Nodal agencies. This needs to be taken care in the assessment procedure. *(Sample response curves indicating opposite actions of RGMO/ AGC is attached at Annexure-1)*

Considering the difficulties above, a better and error free approach for measurement performance against the SRAS signals may be explored. Currently the mark-up of 50 paise is linked to the AGC signal. Since the performance measurement concept is being introduced for the first time, it may be more appropriate to devise the incentive table based on the actual data of the SRAS providers for a period of 6 months.

It is also submitted that till such time, the existing practice of mark-up of 50 paise for AGC response may be continued.

5.0 Part II: Tertiary Reserve Ancillary Services (TRAS)

5.1 Regulation 16: Procurement of TRAS

(1) Buy Bid: The Nodal Agency shall communicate to the power exchange(s), the quantum of requirement of TRAS-Up and TRAS-Down on day-ahead basis before commencement of the Day Ahead Market and incremental requirement, if any, over

and above the procurement in the Day Ahead Market, on real-time basis, before the commencement of the Real Time Market: Provided that the quantum of requirement on day-ahead basis shall be communicated after considering the TRAS resources likely to be available on real-time basis.

(2) Sell Bid: The TRAS Providers shall submit bids in the following manner:

(a) Bids for TRAS-Up and TRAS-Down shall be submitted for each time block or for a minimum of two consecutive time blocks in the Day Ahead Market or in the Real Time Market.

(b) For TRAS-Up, Energy-Up bid in Rs/MWh shall be submitted for the offer volume in MW.

(c) For TRAS-Down, Energy-Down bid in Rs/MWh shall be submitted for the offer volume in MW.

(3) The capacity offered, as a sell bid in power exchange(s) for providing TRAS-Up or TRAS-Down from a resource in the same time-block, shall be separate and non-overlapping.

(4) The power exchanges shall collect the bids for TRAS-Up and TRAS-Down and share the same with the Nodal agency for price discovery in terms of Regulation 17 of these regulations.

(5) TRAS Provider cleared in the Day Ahead Market may place incremental bids in the Real Time Market. TRAS Provider not cleared in the Day Ahead Market or which has not participated in the Day Ahead Market, may also place bids in the Real Time Market.

Submissions of NTPC:

A look at the proposed bidding mechanism indicates that it will consist of flow of information among the stakeholders multiple times as follows:

Step 1: Demand is given by NLDC to Power Exchanges

Step 2: Power Exchanges shall collect the bids for TRAS-Up and TRAS-Down.

Step 3: Power Exchanges shall share the same with the Nodal agency for price discovery.

Step 4: Nodal agency will run the engine to discover prices for TRAS-Up & TRAS-Down.

Step 5: Information in respect of the TRAS-Up and TRAS-Down cleared for the Day Ahead Market and the Real Time Market to be published on the website of the Nodal Agency, and shall be simultaneously communicated to the concerned power exchanges for onward communication to the selected TRAS providers.

Because of multiple flow of information which will happen in a short span of time, there are chances of loss of information leading to aborting the bidding sessions. It may be pertinent to submit that in the last 11 months' time since the start of RTM, there are already loss of communication in 122 blocks, due to which prices have not been discovered in those blocks.

To avoid such issues which can affect price discovery in some blocks, it may be better to conduct the bidding through the portal of the Nodal Agency directly, avoiding the route of Power Exchanges.

As such, the roles of Power Exchanges are limited in this process and there is no counterparty risks taken by them. Hence there should not be any fees of Power Exchange in this transaction.

5.2 Regulation 18: Scheduling and Despatch of TRAS

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(b) In case the actual requirement for deployment of TRAS-Up is less than the total TRAS-Up cleared in the market, the Nodal Agency shall issue despatch instructions to the TRAS Providers in the following manner:

- (i) In the event of the MCP-Energy-Up-DAM being equal to the MCP-Energy-Up-RTM, TRAS-Up shall be despatched on pro-rata basis;
- (ii) In event of the MCP-Energy-Up-DAM and MCP-Energy-Up-RTM not being equal, TRAS-Up with lower MCP-Energy-Up shall be despatched first followed by the TRAS-Up with higher MCP-Energy-Up

Provided that if the actual requirement of deployment of TRAS-Up is less than the cleared volume in the market with lower MCP-Energy-Up, TRAS-Up cleared in the said market shall be despatched on pro-rata basis.

Provided further that if the actual requirement of deployment of TRAS-Up is more than the cleared volume in the market with lower MCP-Energy-Up, TRAS-Up cleared in the market with lower MCP-Energy-Up shall be despatched in full and the TRAS-Up cleared in the market with higher MCP-Energy-Up shall be despatched on pro-rata basis.

Submissions of NTPC:

It is possible that at the time of deployment, there could be some URS power available with the Section 62 generators whose cost is less than the MCP of TRAS discovered in the DAM or RTM. Hence while preparing the stacking order for deployment of Ancillary Service Providers, the cost of URS power should also be factored in.

In case of availability of cheaper URS power, they should be first dispatched before coming to the selected AS providers in the Market. This will result in least cost supply of Ancillary Services and would benefit all the stakeholders by lowering the cost of procurement of Ancillary Services.

6.0 Part III : Shortfall in Procurement of SRAS and TRAS or Emergency Conditions

6.1 Regulation 20 : Shortfall in Procurement of SRAS and TRAS or Emergency Situation

(1) All generating stations, whose tariff is determined by the Commission under Section 62 of the Act and having URS power after Gate Closure, shall be deemed to

be available for use by the Nodal Agency for SRAS-Up or SRAS-Down or TRAS-Up or TRAS-Down, subject to technical constraints of such generating stations

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(4) The generating stations as referred to in clause (1) of this Regulation, whose URS is despatched for TRAS-Up, in the event of short-fall in procurement of TRAS-Up through the Market, shall be paid at the rate of their variable charges for the quantum of TRAS-Up despatched.

(5) The generating stations as referred to in clause (1) of this Regulation, if despatched for TRAS-Down, shall pay back at the rate of their variable charges, corresponding to the quantum of TRAS-Down despatched.

Submissions of NTPC:

Regulation 20 (1):

Gate Closure as defined in the CERC (Power Market) Regulations 2021 refers to the end time of the Auction block for Real Time Market. The actual availability of URS power, which can be used for the purpose of SRAS can be known only after the RTM Auctions are completed and results of RTM are finalised.

Accordingly, the statement “*and having URS power after Gate Closure*” should be replaced with “*and having URS power after RTM*”, as the availability of URS power may change depending on its participation and clearance in the Real Time Market.

Regulation 20 (4) and (5):

W.r.t. the Clause (4) and (5) of Regulations 20, it is submitted that whenever the Section 62 generators are asked to support the Grid Operation for TRAS Up and TRAS Down service, they should be paid some mark-up along with the Variable Charge.

The reasons for this has already been covered in our submission at clause 2.3 of this submission at Page no 4 above, which are essentially to cover the additional costs due to wear & tear, loss of efficiency, part load compensation and risk of revision in variable charge.

The Hon’ble Commission recognised all these factors in the Ancillary Services Operations Regulations 2015 and this has been covered in the Statement of Reasons, as below:

Quote

7.4 (i) CEA has highlighted that because of ramping up and ramping down of generation, may be a number of times a day, the efficiency and wear and tear of the power plant is likely to be affected adversely. These power plants may then have to be compensated for the same.....

xxx

7.5 (ii) The Commission shall decide the same based on factors such as age & ramp rate, loss of efficiency, additional wear & tear of the unit, etc. Mark-up shall be communicated from time to time through a separate order.

Unquote

The Hon'ble Commission recognised all the above factors while deciding the Mark-up of 50 paise vide their order in Petition No. 01/SM/2016 (Suo-Motu) dated 29th Feb 2016 as below-

Quote

5.1 Statement of Reasons accompanying Ancillary Services Operations Regulations explained that "mark-up shall be applied to fixed cost, and shall be decided based on factors such as age, ramp rate, loss of efficiency, additional wear and tear of the unit, etc." It is clarified that both the generating station and the original beneficiary (ies) are being remunerated through payment of fixed and variable charges for providing Regulation Up service. The mark-up seeks to only compensate for the additional wear and tear, if any, that may be caused due to increased ramp up and ramp down cycles under Ancillary Services scheduling...

5.5 Based on the above rationale, the Commission sets the mark-up for participation in Regulation UP Ancillary Services at 50 paise/kWh....

Unquote

Hence the payment in case of TRAS Up should be the Variable Charge (VC) + 50 Paise or the MCP during that block, whichever is higher.

Similarly, during TRAS Down service, the generating stations would be subjected to Part Load operation. To compensate for the increased costs due to Part Load Operation, the station may be allowed to keep 25% of the Variable Charge of the running month, similar to the existing provisions.

7.0 Part IV: Accounting and Settlement of SRAS and TRAS

7.1 Regulation 21: Accounting and Settlement of SRAS and TRAS

(3) Deviation of AS Provider in every 15 minutes time block shall be calculated as under and settled as per the procedure of DSM Regulations:

MWh Deviation for AS Provider = (Actual MWh of AS Provider) – (Scheduled MWh of AS Provider including TRAS MWh) – (SRAS MWh of AS Provider)

Provided that deviation from schedule by the AS Provider shall be settled first against the Ancillary Services schedule.

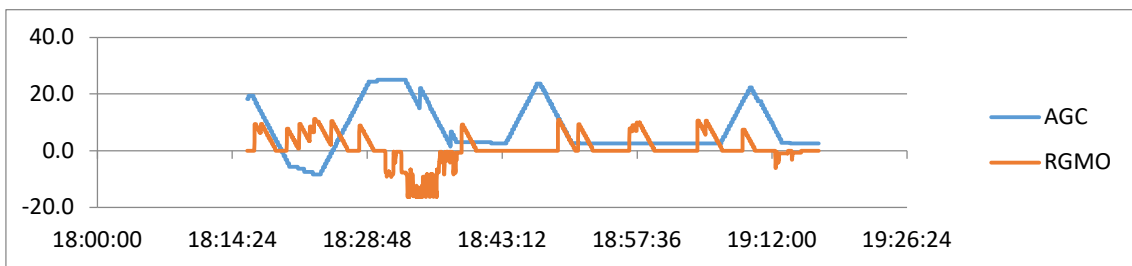
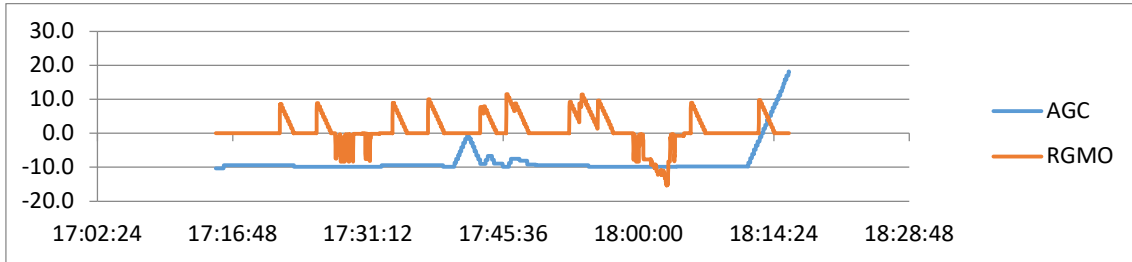
Submissions of NTPC:

It is submitted that the above provision of deviation from schedule to be settled first against the AS schedule is likely to result in a situation where any deviation from Schedule gets attributed to SRAS first. This can affect the performance evaluation drastically, particularly w.r.t. SRAS and hence the incentive payment also.

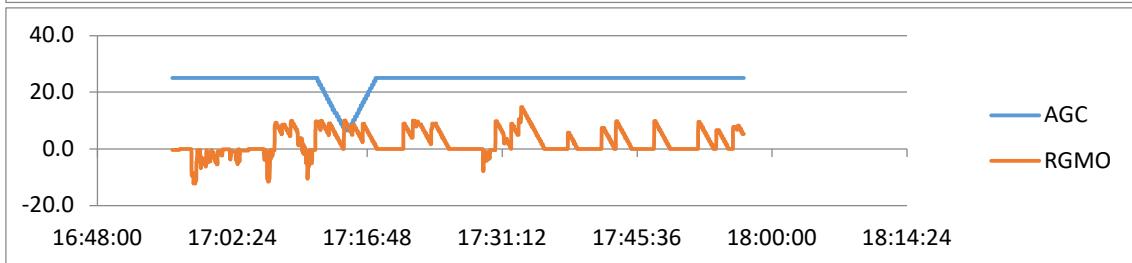
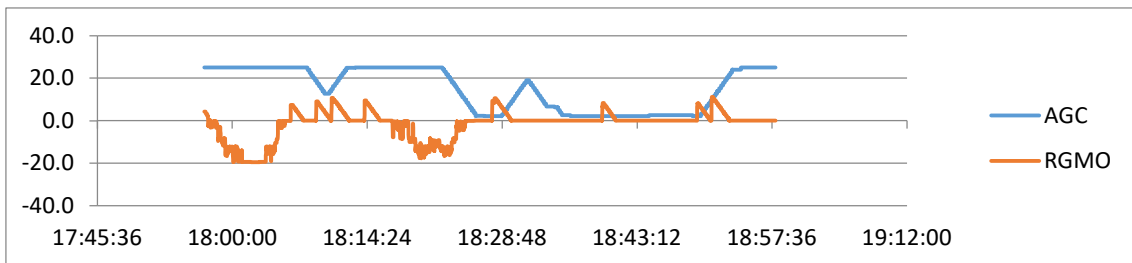
A generator's schedule is a combination of various schedules and the final generation can deviate due to any reasons including inadvertent deviations. Hence settling all the deviations first against AS schedule will affect negatively the incentive payments of SRAS provider. This provision may be reconsidered.

XXX

8.0 Annexure: Barh U#4 & U#5 Graphs for RGMO Vs AGC Corrections

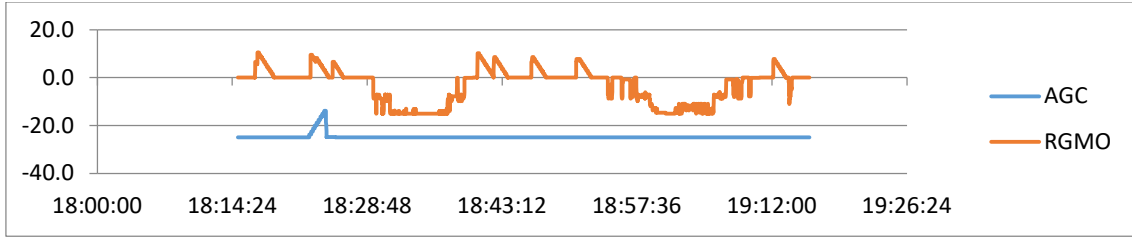


Barh U#4 on 15.06.2021

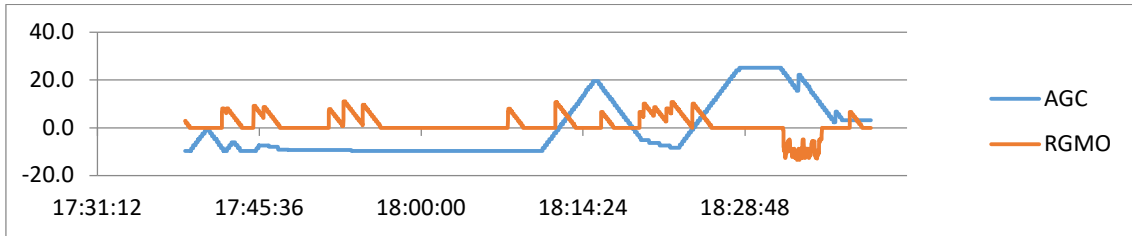


Barh U#4 on 16.06.2021

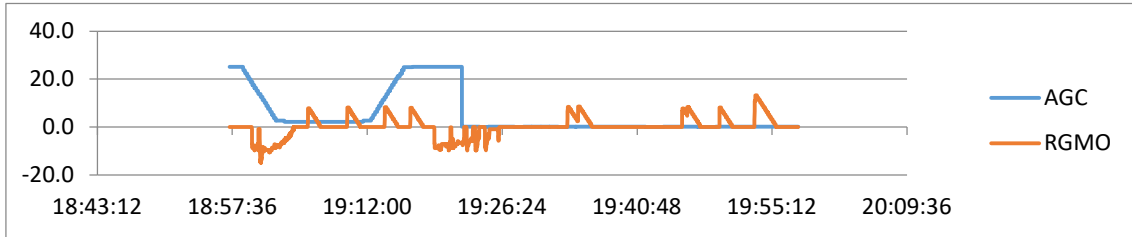
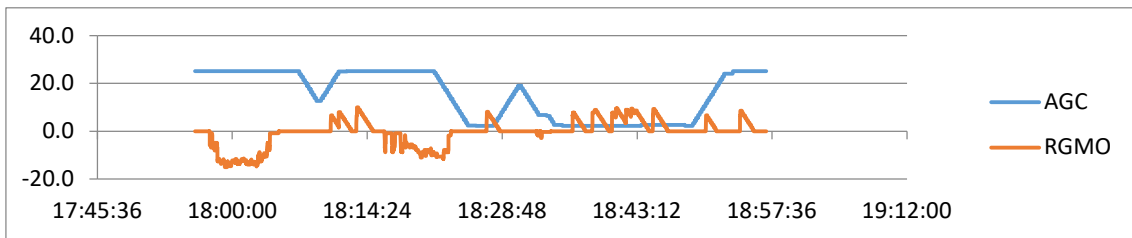
NTPC Comments on Draft (Ancillary Services) Regulations 2021



Barh U#5 on 14.06.2021



Barh U#5 on 15.06.2021



Barh U#5 on 16.06.2021