

**To,**  
**The Secretary,**  
Central Electricity Regulatory Commission,  
3<sup>rd</sup> and 4<sup>th</sup> Chanderlok Building,  
36, Janpath Road,  
New Delhi - 110001

**Subject:** Comments and Suggestions on the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2021 (hereinafter referred to as "**Draft Regulation**").

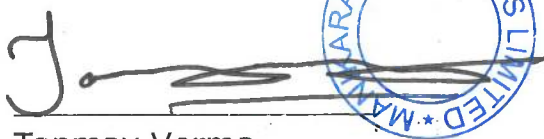
Respected Sir,

We, Manikaran Analytics Limited, are engaged in providing the services of Forecasting, Scheduling and Deviation Settlement Mechanism in various states and are acting as a QCA for major renewable energy generators including both wind and solar, all across the country. Further, we are also involved in providing forecasting services for CTU connected renewable energy projects, accordingly, we have few comments and suggestion on the Draft Regulation provided on your web-site.

This is in reference to the above cited subject and we as a concerned party and a stake holder have few comments and suggestion on the Draft Regulation provided on your web-site. Accordingly, please find the Comments and Suggestions on the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2021.

We shall be grateful if this Hon'ble Commission considers our succinctly drafted comments and suggestions in this regards and the same are attached herewith for your perusal.

Thanking You,  
For and on behalf of **Manikaran Analytics Limited**  
Regards,



Tanmay Verma  
Legal Officer

**MANIKARAN ANALYTICS LIMITED**

**Comments and suggestions on the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2021:**

- 1. In reference to the table provided under Regulation 8 (charges for deviation) of Draft Regulation which exempts entitlement over the claim for over injection of renewable energy into the Grid for wind and solar selling entity:**

**Rationale:**

We would like to apprise this Hon'ble Commission that the energy generated via. wind and solar sources is entitled with must run status considering the intermittent nature of wind and solar projects, however, exemption of claiming additional amount for the over injected quantum of electricity by Generator is in defiance with the must run status rule and the same would also cause a quandary for the Generators and other stake holders involved in generation of electricity via. renewable energy means, furthermore, in order to provide clarity in this regards point wise explanations are made below for this Hon'ble Commission's ready referencing:

- A.** Clause 11 of sub-clause 6.5 (Scheduling and Despatch Procedure) of Indian Grid Code, 2010 is provided herein for this Hon'ble Commissions' ready reference:

*"Chapter 6 (Scheduling and Despatch)*

*6.5 Scheduling and Despatch procedure*

*11. Since variation of generation in run-of-river power stations shall lead to spillage, these shall be treated as must run stations.*

***All renewable energy power plants except for biomass power plants with installed capacity of 10 MW and above, and non-fossil fuel based cogeneration plants ,whose tariff is determined by the CERC shall be treated as 'MUST RUN' power plants and shall not be subjected to 'merit order despatch' principles."***

Considering the above mentioned segment it is clear that the intention of the appropriate authority to entitle wind and solar energy plants the must run status was to promote renewable energy generation, keeping in mind the intermittent / variable nature of energy generation via. wind and solar generators,



- however, it will demotivate the generators and investors to get involved in renewable energy sectors' project if they are not paid for the energy generated above schedule;
- B.** Clause 2 (Objective & Scope) of Model regulations on forecasting, scheduling and deviation settlement of wind and solar generating stations published by Forum of Regulators states as follow:

*2. Objective & Scope*

*The objective of these regulations is to facilitate large-scale grid integration of solar and wind generating stations while maintaining grid stability and security as envisaged under the Grid Code, through forecasting, scheduling and commercial mechanism for deviation settlement of these generators. It is essential that the grid operator has visibility into how much renewable energy (RE) is expected to be injected into the grid. This is especially critical for variable and uncertain sources such as wind and solar. Forecasting and scheduling of these generators is critical to anticipate balancing requirements and procure requisite reserves to maintain load-generation balance and grid reliability. **At the same time, due to the intermittent nature of these sources, special provisions must be made so that the generators are not unduly penalized.***

- C.** Accordingly, taking in to consideration the above referred stance of Forum of Regulators it is clear that the grid stability is to be maintained bearing in mind the fact that the Generators are not unduly penalized, however, needless to mention that the ideology behind such abovementioned clause will be in clear denial if the Generator loses entitlement over the amount to be received by the Generator for additional quantum injected in grid after deduction of applicable deviation charge;
- D.** In furtherance it is submitted that if there will be no incentive in case of over injection, the RE generators might intentionally send the high schedules so that there can't be any occurrence of over injection scenario at any cost, subsequently, resulting in high probability of inflated schedule submission, gradually making grid more unstable. Further, the herein mentioned scenario might have 2 repercussions, firstly, the Grid won't be efficiently utilized considering the inflated schedules punched via. Generator and secondly, the instability caused in Grid by inflated schedules will





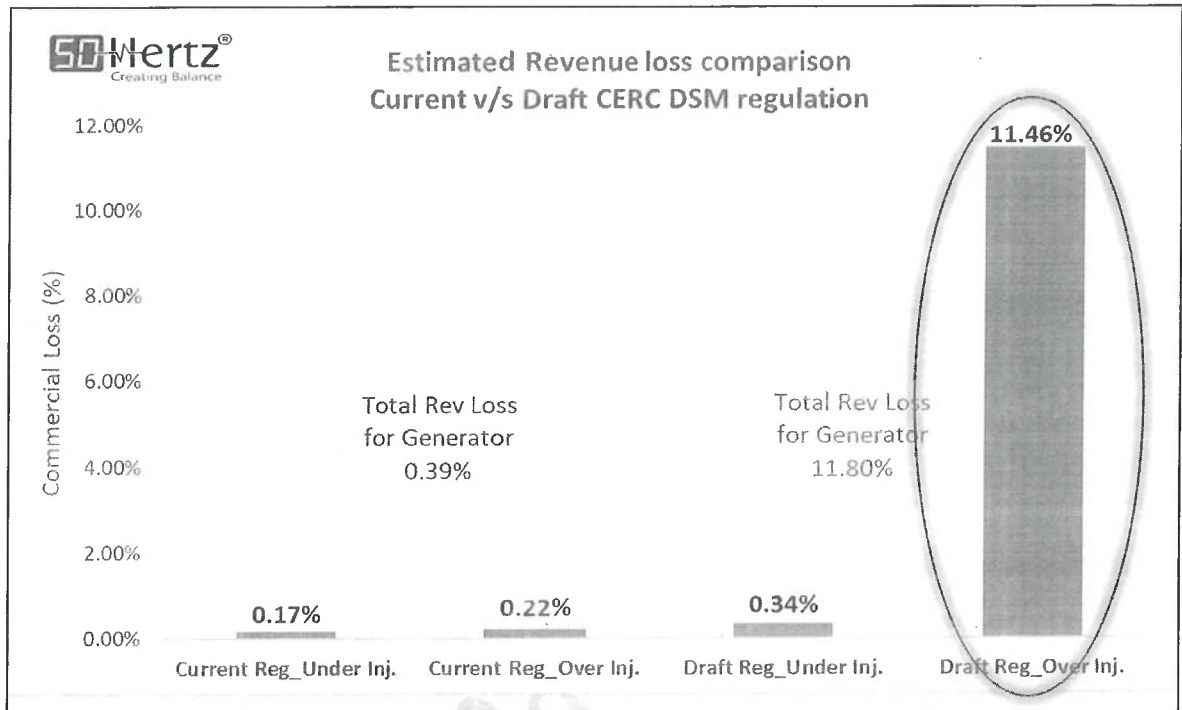
result in defiance of the very purpose of all the Regulations implemented to assure grid safety;

- E.** Additionally, we would like to put forth before this Hon'ble Commission that Draft Regulations clearly suggests that the entire despatch of power will only rest on the system operator thus prohibiting the market entities to deviate from schedule in any circumstances even in cases of grid frequency balancing purpose and the same shall be carried out under the instruction of the system operator under ancillary services. However, needless to mention that as per CERC (Ancillary Services Operations) Regulation, 2015 **the Wind and Solar power projects are to exempted from its purview considering the fact that renewable energy generators won't be able to participate due to inability of ramping up/down in such a short time.** Therefore, from renewable energy generators' point of view the generator is not properly incentivized under scope of Ancillary Services and nor can they avail such incentives as per this Draft Regulation considering the fact that they will not be entitled for any charges in case over injection is done; and
- F.** Furthermore, we would like to put forth before this Hon'ble Commission that Indian Government is trying to promote the green power by providing different types of rebates and incentives. However, as per this Draft regulation, the Renewable Energy generator has to bear zero incentive in case of over injection during Interstate sale. Therefore, it is assumed that no private generator would be attracted for selling power outside the state or to be connected with CTU because after getting the payment as per schedule generation if they can't get any incentive for unplanned over injection, then it will be a burden on them. **So, RE capacity addition in India might be a big challenge, though Indian government has a target to set up 300 GW RE project by 2030.**
- G.** Furthermore, we would like to put forth before this Hon'ble Commission that the commercial impact on Renewable Generators would be very high in case this draft regulation is come in force, considering the current forecasted schedule which is balanced as per weather information and the same will result in over injection scenarios which will make gradually lay a impact on the overall revenue of Generators by around 11.5% per annum i.e.



Generators will lose around 11.5% of their revenue just because of non-payment of power injected above the schedule. Please refer the graph vide Illustration 1 for reference sake:

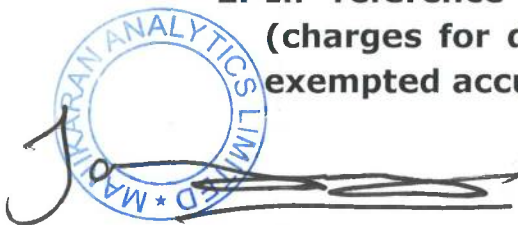
**Illustration 1:**



**Suggestions:**

Therefore, considering the above mentioned issues it is requested from this Hon'ble Commission that the understanding regarding treatment of over injected quantum shall be revised in order to serve the better interest of all the stake holders in energy sector by keeping the existing regulation in place which allows balanced scheduling considering both over and under injection with minor suitable amendments like tightening the exemption band by 1% or 2% or by making any revisions which this Hon'ble Commission may deem fit, further, it is suggested that this Hon'ble Commission may please to prevent Renewable energy generators from paying unjust penalty which in this case is the whole additional quantum injected due to various reasons. Furthermore, needless to mention that the above mentioned issues have to be resolved in order to assure improved efficiency and stability of Grid.

**2. In reference to the table provided under Regulation 8 (charges for deviation) of Draft Regulation which sets the exempted accuracy band as 10% instead of 15% band as per**



**Regulation governing terms of engagement for inter-state projects in order to provide grid stability before this Draft Regulation:**

**Rationale:**

We would like to apprise this Hon'ble Commission that the energy generated via. wind and solar sources is entitled with must run status considering the intermittent nature of wind and solar projects, therefore, needless to mention that the must run status and exemptions from certain amount of deviation from schedules was allowed bearing in mind the variable / ever-changing nature of wind and solar generation, however, we would like to put forth before this Hon'ble commission that reducing exempted band from 15% to 10% would discourage the Generators from investing in renewable energy sector considering the fact that as per stats the 15% band itself is hard enough to abide let alone 10% band. Accordingly, in order to provide clarity in this regards point wise explanations are made below for this Hon'ble Commission's perusal:

- A.** That recent studies indicate that the variances in climate are impacting weather forecast, specifically **changes in windiness, seasonal diurnal variability sudden changes in direction of, gust and sheer, thereby, impacting badly on weather forecast based on which the schedules are prepared,** further, we would like to put this forth before this Hon'ble Commission that for the purpose of grid integration, near to accurate forecast and scheduling is necessary for renewable power which poses a great challenge to the renewable energy generators. Further, we would like to apprise this Commission that during various seasons, there might be huge deviation from schedule due to several environmental & weather factors (cannot be accurately forecasted till date) which can have a serious impact in real time generation thus leading to deviation causing over-injection. Present CERC DSM regulations for RE generators mandates to keep the forecast within exemption limit of i.e. +- 15%, crossing which generators are liable to pay in case of under-injection or to receive less than Generator's signed PPA's rate in cases of over-injection. In the present scenario, generators are finding it tough to keep the forecasting results within present exemption limits thus paying huge deviation charges, therefore, bringing the exemption limit to 10% would further add revenue loss which is unreasonable, furthermore, it will also have a cost

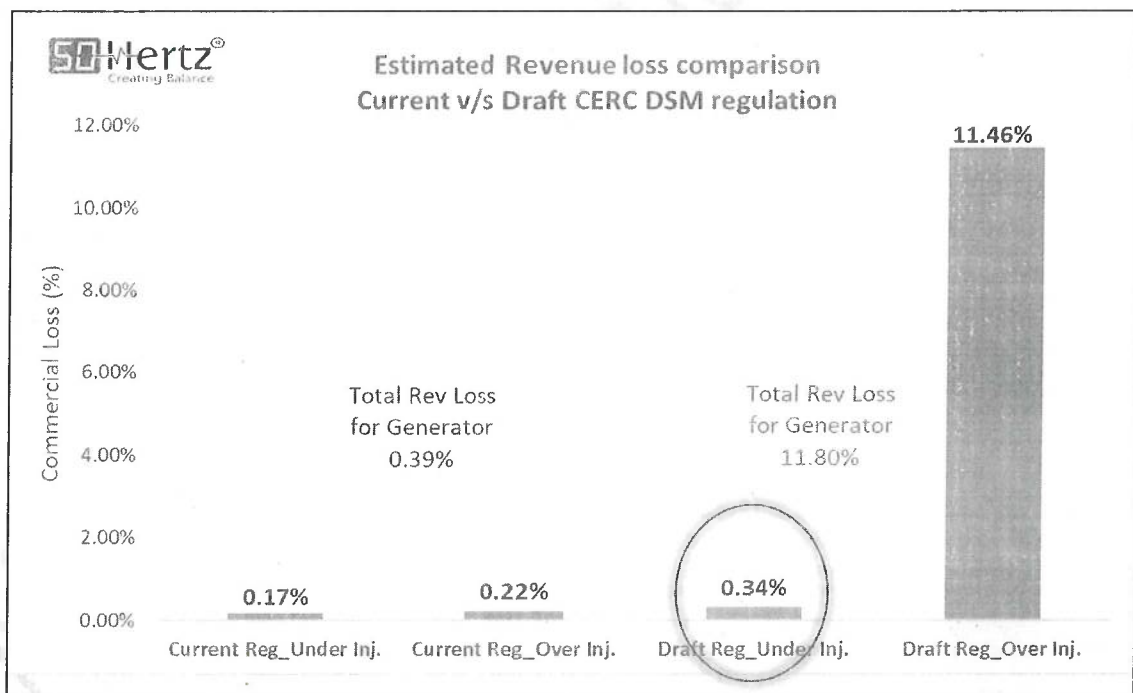




impact on those old Generators who at the time of installation of their project analyzed the cost considering the 15% exemption band; and

**B.** In furtherance, we would like to put this forth before this Hon'ble Commission that even though the stakeholders like forecasting agencies try to run raw data in different models to further refine forecasts, still that's not enough to predict weather accurately, therefore, the forecast / schedules submitted based on such forecasts cannot be as accurate as required under this regulation considering the fact that as per the stats provided below achieving accuracy within the 15% permitted exemption band is cumbersome let alone 10% exemption band. Further, kindly, refer to Illustration 2 provided hereunder for this Hon'ble Commission's ready referencing

**Illustration 2:**



**Suggestions:**

After bearing in mind the above made contentions it is requested from this Hon'ble Commission that there is no reasonable explanation to reduce exemption band from 15% to 10% considering the fact that the climate changes are impacting the weather forecast which in turn impacts the schedules and the same can be clearly depicted from the above provided illustration, furthermore, in this regards we would



also like to suggest that this Hon'ble Commission may be revised in order to serve the better interest of all the stake holders in energy sector by keeping the existing regulation in place with minor suitable amendments like tightening the exemption band by 1% or 2% or by making any revisions which this Hon'ble Commission may deem fit or this Hon'ble Commission may direct stake holders to maintain certain level of predictabilities like P50, P70, etc., however, the band reduction to 10% to be reconsidered.



Manikaran Analytics Limited