

CHHATTISGARH STATE POWER GENERATION COMPANY LIMITED
(A Govt. of C.G. Undertaking)

Chief Engineer (C&RA) Raipur



No. 03-09/823

Raipur, dtd. 29.12.2023

To,

The Secretary,

C.S. Electricity Regulatory Commission

New Shanti Nagar,

Raipur



Sub: Draft CSERC (Intra-State Deviation Settlement Mechanism and Related Matters)
Regulations, 2024. - comments/ Suggestion thereof

Respected Sir,

On the subject matter following comments/ suggestions are being submitted for
kind consideration please: -

1. The basic premise of the CSERC DSM Regulations, that thermal generators can operate at a constant load without any deviation ("No Deviations") from the schedules is neither possible nor rational. Thermal Generation is a complex system where the machine output at a particular point of time depends on many factors and most of these factors are beyond the control of the Generator, leading to natural/ inadvertent variations in generation. This causes some variation in generation from the machine set point, even if the command is set at the Scheduled Generation of the unit/ station. Most of the time, these deviations happen due to unforeseen and uncontrollable factors.
2. Differential treatment is proposed between Buyer (Distributer) and seller (Generator) for any deviation. The proposed Penalty mechanism would be very harsh on the thermal generators. Small deviation in either direction from the Scheduled Generation will lead to heavy penalty on the thermal generators.

Additionally, differential treatment would be applied for over injection and under injection by Seller.

Clause 1.3 Effective date of Regulations.

Draft Regulation: *“These Regulations shall be effective from 01.02.2024.”*

CSPGCL Observation/Comment: As per prevailing practice any regulation is enacted after notification in the official Gazette.

The normal frequency band proposed in the draft is reduced to 49.95Hz-50.03Hz from 49.7 Hz -50.10 Hz. The normal frequency band squeezed 5 times from 0.40 Hz to 0.08 Hz. It is big challenge for a Generator to implement under the stringent DSM rates. To implement such scenario minimum three months are required modify the C&I and train operation personnel to follow the regulations.

Proposed Regulation: ‘These regulations shall be effective from the first day of the month succeeding three months of publication in the official Gazette of the State of Chhattisgarh.’

Clause 3.37 Reference Charge Rate .

Draft Regulation: - *“Reference Charge Rate” means (i) in respect of a general Seller whose tariff is determined under Section 62 or Section 63 of the Act, energy charge in Rs/ KWh as determined by the Appropriate Commission, or (ii) in respect of a general Seller whose tariff is not determined under Section 62 or Section 63 of the Act, the reference charge rate shall be equal to the reference charge rate as considered by WRPC in the DSM Statement, as available in WRPC website;*

CSPGCL observation/Comment:-It is to humbly submitted that energy charge rate (ECR) for respective CSPGCL’s thermal plants are determined for entire tariff control period (normally 3-5 years). During the period significant change in ECR take place, to negate the future financial implications of such cost, FCA mechanism is specified by

the Commission. Therefore, it would be prudent to consider actual energy charge rate billed to beneficiary as 'reference charge rate' for the purpose.

In case of Hydro plants of CSPGCL, it is submitted that ARR of the hydro plants are recovered by 'tariff rate' as specified in relevant orders. As no hydro plants of CSPGCL are being covered under 'reference charge rate' (Energy Charge rate) Therefore, considering the above, the proposed clause may be modified as under as under: -

Proposed Regulation: "Reference Charge Rate" means (i) in respect of a general Seller whose tariff is determined under Section 62 or Section 63 of the Act, energy charge in Rs/ KWh as specified by the Appropriate Commission, and Fuel and Power Purchase Adjustment surcharge (FPPAS) in Rs/KWh as applicable, or (ii) in respect of a general Seller whose tariff is not determined under Section 62 or Section 63 of the Act, the reference charge rate shall be equal to the reference charge rate as considered by WRPC in the DSM Statement, as available in WRPC website; (iii)) in respect of a Hydro Seller whose tariff is determined under Section 62 or Section 63 of the Act, Tariff in Rs/ KWh as determined by the Appropriate Commission.

Clause 5.1 (c) & last proviso of 5.1(f) Renewable Energy Based Generating Plant

Draft Regulation: - 5.1(c) "Renewable energy based generating plant: *All renewable energy based power generating stations covered under the relevant Regulation, of installed capacity more than 5 MW located in the State and who have contracted to supply long-term and medium-term power to distribution licensees in State at tariff determined under"*

Last Proviso of 5.1(f)" *Provided that any exemption in deviation to generators allowed under CSERC (Renewable Energy Tariff Regulations), 2020 shall not be applicable from the date of notification of these Regulations."*

CSPGCL observation/Comment: - It is humbly submitted that above provisions are in clear contradiction to CSERC RE Regulation 2022, Regulation 11.2 it states as:-

“Notwithstanding anything contained in any regulation framed under the Electricity Act 2003, all renewable energy power plants except biomass power generating station, biogas based power project and non-fossil fuel based co-generation projects shall not be subjected to scheduling and deviation settlement.

Provided that in case of supply of power to multiple beneficiaries within the State, scheduling and deviation settlement shall be applicable”.

Proposed Regulation: “All renewable energy based power generating stations except those exempted under the CSERC RE Regulations 2022, located in the State and who have contracted to supply long-term and medium-term power to distribution licensees in State at tariff determined under Section 62 or Section 63 of the Act.

Provided that in case of supply of power to multiple beneficiaries within the state scheduling and deviation settlement shall be applicable”

“It is also requested to drop the last proviso of 5.1(f).”

It is further submitted that even if above submissions of CSPGCL is not considered CSPGCL prays that Hydro plants of CSPGCL i.e HBHPS:Bango, SHP Sikasar and SHP Gangrel are built on Irrigation Dam owned by the State Govt. The power station runs as per the discharge desired by WRD for irrigation and potable water requirement. Discharge of water is prerogative of WRD:GOOG. Further WRD do not adhere to their schedule of water discharge, hence scheduling of these plant is not possible for CSPGCL as we do not have control over the release of water from Dam. In view of the above it is humbly requested to exempt the SHP Sikasar and SHP Gangrel from ambit of proposed DSM regulations.

CSPGCL prays to suitably modify 5.1(a) as under: -

“5.1(a) **State Generating Stations:** To all generating stations owned by Chhattisgarh State Power Generating Company Ltd (CSPGCL) except Hasdeo Bango Hydel power plant, Gangrel:SHP and Sikasar:SHP.”

Clause 6.1(2)

Draft Regulation: *“Any deviation shall be managed by the Load Despatch Centre as per the State Appropriate Regulations as notified by the Commission and the computation, charges and related matters in respect of such deviation shall be dealt with as per the following provisions of these regulations.”*

CSPGCL observation/Comment: - It is submitted that bare reading of this clause, intent of the clause cannot be understood. Without specifying express provision this may not serve any purpose, hence it is requested to drop this provision.

Proposed Regulation: Clause 6.1(2) may be dropped.

Clause 6.2(1) and 6.2(2): Computation of Deviation

*“(1) Deviation in a time block for General Sellers shall be computed as follows:
Deviation- general Seller (in MWh) = [(Actual injection in MWh) – (Scheduled generation in KWh)].*

Deviation-general Seller (in %) = 100 x [(Actual injection in MWh) – (Scheduled generation in MWh)] / [(Scheduled generation in MWh)].

*(2) Deviation in a time block for WS Sellers/QCA shall be computed as follows:
Deviation-WS Seller (in MWh) = [(Actual Injection in MWh) – (Scheduled generation in KWh)].*

Deviation-WS Seller (in %) = 100 x [(Actual Injection in MWh) – (Scheduled generation in MWh)] / [(Available Capacity)].”

CSPGCL observation/Comment: - By typo error, in place of mwh, denominator of both the clause has been mentioned as kwh.

Proposed Regulation: 'kwh' in denominator may be replaced by 'mwh'. It is further requested that above computations may be extended upto six decimal like WRPC for better precision.

Clause 6.4 (5) Table:

Draft Regulation:

<i>Entity</i>	<i>Charges for deviation payable to State Deviation Pool Account</i>	
<i>Seller</i>	<i>Deviation by way of over injection</i>	<i>Deviation by way of under injection</i>
<i>Hydro Seller</i>	<i>Zero: Provided that such Seller shall be paid back for over injection @ 50% of reference charge rate for deviation up to 10% of schedule or 50 MW, whichever is less.</i>	<i>(i) @ 50% of reference charge rate up to 10% of schedule or 50 MW, whichever is less; (ii) @ the normal rate of charges for deviation by way of under injection beyond 10% of schedule or 50 MW, whichever is less and up to 15% of schedule or 75 MW, whichever is less; and (iii) @ 110% of the normal rate of charges for deviation beyond 15% of schedule or 75 MW, whichever is less.</i>

CSPGCL observation/Comment: Pay back and payable amount for seller is proposed on 50% of reference charge rate for deviation up to 10% capped upto 50 MW. It is humbly submitted that any Generator operating under normal band of frequency 100% of reference charge rate is 'just and reasonable'. It is requested to modify the clause accordingly by replacing 50% reference charge rate with reference charge rate in above table

Clause 7.1(b) &(a)

Draft Regulation:

When $f < 49.95\text{Hz}$

(a) The General Seller other than generating station based on municipal solid waste shall be paid back for deviation by way over injection

(i) @ 120% of reference rate of charge for deviation when grid frequency is greater than 49.90 Hz and less than 49.95 Hz [$49.90 < f < 49.95$] and

(ii) @ 150% of reference rate of charge for deviation when grid frequency is less than and equal to 49.90 Hz [$f \leq 49.90$];

(b) The general Seller other than generating station based on municipal solid waste shall pay for deviation by way under injection

(i) @ 150% of the reference rate of charge for deviation, or @ 120% of the normal rate of charge for deviation, whichever is higher, when grid frequency is greater than 49.90 Hz and less than 49.95 Hz [$49.90 < f < 49.95$] and

(ii) @ 200% of the reference rate of charge for deviation, or @ 150% of the normal rate of charge for deviation, whichever is higher, when grid frequency is less than and equal to 49.90 Hz [$f \leq 49.90$];

CSPGCL observation/Comment: - It is humbly submitted proposed penalty is very harsh on the thermal Generator under small bandwidth of normal frequency band of 0.08Hz, even a single Kwh of under injection may impose a penalty of market rate up to Rs 10/- whereas for over injections of the same only ECR is receivable. It is submitted that quantum of incentive and penalty always goes symmetrical, particularly when the variation of frequency is uncontrollable for Generator. A comparative table of both the scenario is as under: -

Current Regulation	Draft Regulation
Under Frequency < 49.7	Under Frequency < 49.95
Over Injection	Over injection – Receivable
Receivable @ 8/	(i) 120% of ECR upto Freq 49.90
Under Injection	(ii) 150% of ECR below Freq 49.90
Payable @ 16/	Under Injection – Payable
	Upto Freq 49.90
	(i) Higher of 150% of ECR or 120% of Market rate.
	Below Freq 49.90
	(ii) Higher of 200% of ECR or 150% of Market rate.

Proposed Regulation: Looking to the uncontrollable condition for the generator the it is proposed to amend the clause as under:

When $f < 49.95\text{Hz}$

(a) The General Seller other than generating station based on municipal solid waste shall be paid back for deviation by way over injection

(i) @ 120% of reference rate of charge for deviation when grid frequency is greater than 49.90 Hz and less than 49.95 Hz [$49.90 < f < 49.95$] and

(ii) @ 150% of reference rate of charge for deviation when grid frequency is less than and equal to 49.90 Hz [$f \leq 49.90$];

(b) The general Seller other than generating station based on municipal solid waste shall pay for deviation by way under injection

(i) @ 120% of the reference rate of charge for deviation, when grid frequency is greater than 49.90 Hz and less than 49.95 Hz [$49.90 < f < 49.95$] and

(ii) @ 150% of the reference rate of charge for deviation, when grid frequency is less than and equal to 49.90 Hz [$f \leq 49.90$];

Clause 7.5

Draft Regulation:

Clause 7.5 states as:

“Notwithstanding anything contained in Clause (1) of Regulation 6 of these Regulations, in case of forced outage of a seller, the charges for deviation shall be @ the reference charge rate, for a maximum duration of four time blocks.”

CSPGCL observation/Comment: It is humbly submitted that forced outage of a plant unit is dependent on many internal and external factors, and it is uncontrollable for a generator therefore similar to Central regulations the proposed clause 7.5 may be amended as under:

Proposed Regulation: “Notwithstanding anything contained in table of Clause (5) of Regulation 6 of these Regulations, in case of forced outage of a seller, the charges for deviation shall be @ the reference charge rate, for a maximum duration of eight time blocks or until the revision of its schedule, whichever is earlier.”

Looking to the importance and significance of the issue, humbly leave is craved for making additional submissions during the proceedings.

Submitted for kind consideration please.



**Chief Engineer (C&RA)
CSPGCL: Raipur**

