



Procedure to recover ‘Increment in Generation (VSE)’ charges while availing outages proposed for Third party ORC works in Maharashtra Grid.

In accordance with
The Maharashtra Electricity Regulatory
Commission
(State Grid Code) Regulations, 2020

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Version-0
Jan 2025

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Procedure to recover 'Increment in Generation (VSE)' charges while availing outages proposed for Third party ORC works in Maharashtra Grid.

1. INTRODUCTION:

1.1. This procedure is herein after called 'Procedure to recover 'Increment in Generation (VSE)' charges while availing outages proposed in Maharashtra Grid for Third party ORC works agency which is not State Entity as per MERC (DSM & related Matters) Regulations, 2019.

1.2. This procedure has been developed by MSLDC in co-ordination with State OCC & as per the directives in 6th State OCC, in compliance of Clause 28.2(f) of MEGC 2020 which is quoted as below:

28.2 SLDC, in coordination with OCC, shall develop, document, and maintain detailed operating procedures for managing the InSTS. These operating procedures shall include the following:

a) Black start procedures;

b) System restoration procedures for partial grid failure;

c) Load curtailment procedures;

d) Renewable energy curtailment procedures;

e) Islanding procedures; and

f) Any other procedure considered appropriate by the SLDC.

Provided that such procedures shall be developed in consultation with Users, licensees, renewable energy developers and WRLDC with three months from the date of notification of these Regulations.

Provided further that such procedures, after consulting in GCC, shall be provided to all the Users. A copy of the same shall be uploaded on SLDC's website and submitted to the Commission for information.

1.3. This procedure shall be approved by GCC and shall be provided to all users of InSTS.

1.4. This procedure shall be kept on the website of MSLDC.

2. SCOPE & OBEJCTIVES:

The Maharashtra Demand is increasing day to day basis around 30GW & more, hence to avail outages on transmission elements, generation support is required to maintain the reliability & security of the Maharashtra grid, particularly Mumbai & Mumbai Metropolitan Region (MMR)/ Pune region / Nashik region Grid.

During outages for Third Party ORC (Out Right Contract) works in the state of Maharashtra a system constraint/s may arise and the costlier Mumbai embedded generation, Nasik generation & Koyna hydro is required to be picked up as per requirement, to maintain system 'N-1' compliant and to resolve the system constraints.

The objective of this procedure is to avoid socialization of third-party ORC works outage cost and hence reduce the burden on Intra State DSM pool & thereby on State Entities because of 'Increment in Generation (VSE) on account of outages for Third Party ORC (Out Right Contract) works in the state of Maharashtra.

The procedure is formulated with following objectives: -

- a) To maintain the reliability & security of Maharashtra grid during outages for Third Party ORC (Out Right Contract) works.
- b) To maintain the system under N-1 compliant during the above said outage period.
- c) To avoid socialization of third-party ORC works outage cost and hence reduce the burden on Intra State DSM pool & thereby on State Entities.
- d) To recover the Increment in Generation (VSE) Charges from third party ORC works agency which is not State Entity as per MERC (DSM & related Matters) Regulations,2019 as the work is proposed for the benefit of non-stake holders of Maharashtra power system.

3. APPLICABILITY:

3.1. This procedure shall be applicable to all third-party agencies/ utilities which is not State Entity as per MERC (DSM & related Matters) Regulations,2019 (other than power sector utilities) such as MMRDA, PMRDA, NHRCL, DFCCIL, Metro, Railways,

Construction agencies, etc. aspiring outages on Transmission elements to complete their infrastructure project works.

3.2. This procedure shall be applicable to the EHV transmission elements where system becomes N-1 non-compliant and requires incremental generation (VSE), to maintain the reliability of transmission grid system.

4. DEFINITIONS: -

4.1. **“Third Party Agency”**: All agencies which is not State Entity as per MERC (DSM & related Matters) Regulations, 2019 (other than power sector utilities) such as MMRDA, PMRDA, NHSRCL, DFCCIL, Metro, Railways, Construction agencies etc. aspiring outages on Transmission elements to complete their infrastructure project works.

4.2. **“VSE charges”**: Virtual State Entity charges for this procedure means additional incremental generation charges incurred for maintaining State Grid reliability.

4.3. **“Transmission Licensees”**: Transmission Users notified by CERC / MERC.

4.4. **“State OCC”**: - State Operational Co-ordination Committee formed as per MEGC 2020. The Committee responsible for the implementation of provisions of Operation Code and Scheduling and Despatch Code of MEGC.

4.5. **“MOCM”**: - Mumbai Outage Coordination Meeting conducted by MSLDC for Transmission elements outage coordination in Mumbai & MMR.

4.6. **“GCC”**: - Grid Co-ordination Committee formed as per MEGC 2020. The committee responsible for planning and monitoring timely execution of transmission projects in the Maharashtra state including Mumbai area.

4.7. **“DSM”**: - Deviation Settlement Mechanism as per MERC regulations, 2019.

4.8. **“ORC”**: - Out Right Contract.

5. GUIDELINES & PROCEDURE: -

5.1 Submission of Third-party ORC outages on Transmission elements to MSLDC / WRLDC: -

The third-party agencies/ utilities which is not State Entity as per MERC (DSM & related Matters) Regulations,2019 (other than power sector utilities) such as MMRDA, PMRDA, NHSRCL, DFCCIL, Metro, Railways, Construction agencies, etc. aspiring outages on Transmission elements to complete their infrastructure project works, shall propose the required transmission element outages through the concern transmission licensee (asset owner) to MSLDC / WRLDC as per the Standard Operating Procedure of Outage Planning.

Hon'ble Commission has approved DSM procedure dated 11.11.2019. As per the clause 13 of the approved DSM procedure Hon'ble Commission has given directions for commercial Settlement of the Power transacted on account of MSLDC actions for Grid Management.

During real time operation, MSLDC may require Generation ramp Up (Increment)/ Generation ramp down (Decrement) to maintain the drawl of State within permissible limits at State Periphery or to comply with RLDC instructions or to adhere to any other condition specified in the Scheduling and Despatch Code or IEGC or State Grid Code.

Such a generation which is ramped Up (Increment)/ Generation ramped down (Decrement) is accounted in Virtual State Entity (VSE) and these generators receive from / pay to Intra State DSM pool for the VSE quantum respectively.

A) Identification of Constraints:

MSLDC shall identify whether the outage given on account of third-party ORC agency is violating N-1 constraints in the System. MSLDC in addition to this will also identify the generators to whom Increment in generation shall be given on account of such outages given to Third Party ORC work agency.

SLDC will identify & monitor such constraint region where possibility of over loading of grid elements will take place. In order to ensure grid stability & keep the network parameters within safe operating limits SLDC shall take suitable & appropriate actions

of taking additional (more than schedule) generation on bar at suitable generating station.

B) Triggering of VSE operation:

As per real time System monitoring/observations, SLDC shall issue VSE increment schedules in real time to generators to ensure the grid security & stability.

5.2 Assessment of VSE charges applicability for required Third party ORC outages: -

MSLDC reliability section shall identify the outage which may need Increment in Generation (VSE) during Third-party ORC outage period. MSLDC operation department shall send correspondence to the Transmission Licensees for their in-principal approval and NOC from the ORC agency before processing the outage proposal.

The generator/generators support in relieving the constraint will be identified along with its applicable VSE rate/s shall also be intimated by SLDC through the online outage portal.

The tentative amount of VSE charges will be calculated by reliability section based on the period of outage and VSE rate/s which are available on mahaslDC.in website. The VSE rate in case of hydro generator for computation of tentative amount, the latest weekly VSE bill rate available shall be utilized.

These charges are to be paid by Third Party ORC agency to the concerned Transmission Licensees in advance after approval of the outage but prior to availing the outage. The concerned Transmission Licensees on the same day shall transfer the advance payment received from the Third-Party ORC agency to “MSLDC Third Party ORC Works Account”.

Reliability section should intimate all entities (third party agency/utility/generators) and control room regarding ORC outage on day ahead.

5.3 In-principal consent by third-party agencies/ utilities for required ORC outages: -

Third-party agencies shall convey their in-principal approval for

processing the required third-party outage proposal to MSLDC through the transmission licensees at whom they have applied for transmission element outage.

5.4 Processing of outage: -

After receiving the in the principal consent and receipt of advance payment to Transmission Licensee (as calculated in clause 5.2 above) from third-party agencies/ utilities for increment in generation (VSE) and after receiving NOC from the transmission licensee, the outage shall be processed by SLDC Operations department. On receiving this confirmation, the outage will be approved in day ahead outage plan on D-1 basis, and the outage will be issued by SLDC Control Room on the outage day, subject to real time system condition and considering system loading parameters.

5.5 Records of real time VSE: -

In real time condition, after availing the outage, SLDC Control room Engineers shall punch the quantum and period of increment in generation (VSE) issued to the required generators, during the outage period, in intrastate web-based power scheduling software. There shall be clearly mentioning the VSE given for ORC work with constraint.

The shift in charge control room shall ensure punching of VSE quantum of concerned generator with detail comment/reason for increment in generation and should clearly specify whether generation increased for deviation control or ORC related outage.

5.6 Submission of increment in generation (VSE) data from Intrastate DSM scheduling system to Billing Module:

After the completion of outage, the operation team will derive the increment in generation (VSE) data from the data punch in the Intrastate web-based power scheduling software will be submit following information to Billing module within 5 working days after completion of the outage period or on weekly basis (on Monday to Sunday basis) if the outage period involves multiple weeks.

- Total period of outage on from to basis at time block level,

- name of generator/generators,
- Variable rate of respective generator/generators and MOD stack of concern period available on mahasldc.in website.
- Already schedule and VSE data is transferred online from scheduling module to billing module of DSM software for normal VSE bill i.e. VSE operations for maintaining State Periphery drawl.

5.7 Invoicing of Final VSE generation charges to Third Party agencies:

Energy Accounting department of SLDC will process the data in the DSM billing software as per the data punch by control room grid operator in the scheduling software and energy accounting section shall issue the invoice for VSE (increment in generation) along with the weekly VSE bill for that week. This VSE invoice on account Third party ORC works shall be raised on “Concerned Transmission Licensee”. The Concerned Transmission Licensee shall make the payment to “MSLDC Third Party ORC Works Account” within 07 days of issuance of invoice. However, if the advance amount transferred by the Concerned Transmission Licensee to MSLDC Third Party ORC Works Account is more than the invoice amount it shall be adjusted against the advance amount.

5.8 Payment of VSE Charges Bill /Advance payment: -

- a) The advance payment shall be made by the third-party ORC agency/ utility to Concerned Transmission License as per the bank details provided by the Concerned Transmission Licensee.
- b) The concerned Transmission Licensees on the same day shall transfer the advance payment received from the Third-Party ORC agency to “MSLDC Third Party ORC Works Account”.

Following are the details of SLDC bank :

Beneficiary Name: - MSLDC Third Party ORC Works Account
Name of Bank: - -----
Account No.: - -----
ISFC code: - -----

Mode of payment: - Online

- c) The difference between final VSE charges and advanced payment made by the Concerned Transmission Licensee to MSLDC shall be settled through above account.
- d) The shortfall amount shall be paid by Concerned Transmission Licensee to MSLDC to the above account and vice versa.
- e) The concerned Transmission Licensee shall be responsible for the final settlement of all VSE Bill/s amount on account of availing of the outage by the Third-Party ORC Agency as per the Final Settlement Bill raised by MSLDC.

5.9 LPS system in case of Default in Payment: -

If the concerned Transmission Licensee fails to pay the invoice amount within 07 days from the date of issue of ORC VSE Bill, the Concerned Transmission Licensee shall pay simple interest @ 0.05 % per day on the shortfall amount.

5.10 Payment Security Mechanism: -

The Third-Party ORC Agency shall make advance payment equivalent to the charges discovered above in Clause no.5.2 as a Payment Security Mechanism (PSM) or alternatively may open Irrevocable Revolving Letter of Credit amounting equivalent to the charges discovered in favour of the Concerned Transmission Licensee as per format enclosed as Annexure-I.

MSLDC or “the Concerned Transmission Licensee” shall not be liable to pay any interest whatsoever on this amount paid as a Payment Security Mechanism until final settlement.

Provided further that the Third-Party Agency may have to pay or receive, as the case may be, depending upon VSE charges payable and the amount deposited under Payment Security Mechanism to the Concerned Transmission Licensee.

5.11 Treatment of generation charges in DSM pool: -

During real time operation, MSLDC may require Generation ramp Up (Increment)/ Generation ramp down (Decrement) to maintain the drawl of State within permissible limits at State Periphery or to comply with RLDC instructions or to adhere to any other condition

specified in the Scheduling and Despatch Code or IEGC or State Grid Code.

Such a generation which is ramped Up (Increment)/ Generation ramped down (Decrement) is accounted in Virtual State Entity (VSE) and these generators receive from / pay to Intra State DSM pool for the VSE quantum respectively and these charges may get collected from the Intra-State Entities by the way of deviation charges in the DSM bill though may not be on zero sum basis.

If MSLDC has to ramped up the generation exclusively on account of such outage on transmission network or any such other reason, then the ramped-up generation shall come in VSE and Intra-state pool shall have to pay these charges and these may not get collected from Intra-State Entities as they are not causer for this ramped up generation.

In view of the above, the VSE charges paid by Intra-State Deviation pool to VSE generators exclusively on account of such outage on transmission network or any such other reason shall be collected from the Third-Party (ORC) agency so that the Intra-State entities shall not be burdened by these charges.

Methodology for Collection of Ramp up (Increment) generation charges on account of outages on transmission network due to Outright Contract (ORC) works:

- 1) Identification of Ramped up generation exclusively on account of outages on transmission network due to Outright Contract (ORC) works with name of generator/s, quantum in VSE, VSE rate, and duration.
- 2) The above information to flow from Scheduling module to DSM module.

a. n

3) VSE charges = $\sum_{i=1}^n x_i \times y_i$

Where x_i = VSE quantum of i^{th} Generator

y_i = Variable rate (MoD) of i^{th} Generator and for Hydro generator the rate shall be as per MERC Suo-Motu order dated 02.08.2022 (i.e. Higher of the variable rate of Hydro generator or State periphery rate.)

6. GRIEVANCE REDRESSAL: -

- 6.1 In case of any disputes between constituents, the decision of The Executive Director, MSLDC shall be final.
- 6.2 The events of default in payment, non-following of timelines, non-availing outages etc. mentioned in above procedure by any constituent/(s) shall be taken up in OCC/GCC meeting if required.

7. REMOVAL OF DIFFICULTIES:

The procedure has been prepared by taking in to account all the possible aspects. However, some issues might be observed during the implementation of the procedure. Hence, such issues observed during implementation, shall be reviewed by OCC which shall be implemented with the approval of GCC.

8. REVIEW OF THE PROCEDURE:

This procedure shall be reviewed in OCC on yearly basis.