

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**No. L-1/265/2022/CERC**

**Coram:**

**Shri Jishnu Barua, Chairperson**

**Shri Ramesh Babu V., Member**

**Shri Harish Dudani, Member**

**Date of Order: 12<sup>th</sup> March 2025**

**In the matter of:**

**Approval of “Detailed procedure for moderating schedule up to minimum turndown level for Section 62 generators through SCED” under Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2023.**

**Order**

Central Electricity Regulatory Commission, vide Notification No. L1/265/2022/CERC, dated 29.05.2023, notified the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2023 (hereinafter referred to as “Principal Regulations”), effective from 01.10.2023.

2. The First Amendment to the Principal Regulations was notified on 23.10.2024, effective from 29.10.2024 (hereinafter referred to as “First Amendment Regulations”). The Principal Regulations, along with the First Amendment Regulations, including any further amendments thereof, is referred to as “Grid Code.”

3. Sub-clause (e)(v-a) of Clause (2)(a) of Regulation 49 of the Principal Regulations as introduced in the First Amendment Regulations provides as follows:

*“NLDC shall submit a detailed Procedure including the modalities of payment of charges as per sub-clause (b) of Regulation 49(2)(a)(v-a), within a month of notification of these regulations, for approval of the Commission.”*

3. Accordingly, NLDC, vide its letter dated 29.01.2025, has submitted the “Detailed procedure for moderating schedule up to minimum turndown level for Section 62 generators through SCED,” after stakeholder consultation, for approval of the Commission along with the detailed comments received from the Stakeholders.

4. The Commission has examined the Detailed Procedure along with comments of the stakeholders, and after incorporating suitable changes, the Commission hereby approves the “Detailed procedure for moderating schedule up to minimum turndown level for Section 62 generators through SCED”. The approved Detailed Procedure is enclosed as Annexure to this order, which shall be effective from 24th March 2025.

**Sd/  
(Harish Dudani)  
Member**

**Sd/  
(Ramesh Babu V.)  
Member**

**Sd/  
(Jishnu Barua)  
Chairperson**

## **Detailed procedure for moderating schedule up to minimum turndown level for Section 62 generators through SCED**

### **1. Definition and Interpretation:**

2.1 All the words and expressions used in this Detailed Procedure shall have the same meaning as assigned to them in the Grid Code.

2.2 “**D**” day means day of operation.

“**D-1**” day means one day before the day of operation.

“**D+1**” day means one day after the day of operation.

2.3 Minimum Turndown Level (MTL) shall be as defined in the Grid Code.

### **2. Applicability**

2.1. This procedure shall be applicable to all thermal regional entity generating stations, whose tariff is determined under Section 62 of the Act, hereinafter referred to as “Eligible Generating Stations.”

2.2. All Eligible Generating Stations seeking a schedule up to minimum turndown level (MTL) through Security Constrained Economic Despatch (SCED) are required to participate in both SCED-Up and SCED-Down.

2.3. The stations already selected under Security Constrained Unit Commitment (SCUC) shall not be considered in the list prepared for MTL support through SCED.

2.4. The station going under Two-Shift operation shall not be considered for MTL support through SCED in the time blocks in which the generating station is required to be off-bar.

2.5. Gas-based generating stations selected under SCUC shall not be considered for MTL support through SCED. Gas-based generating stations that are brought on the bar for meeting peak demand or reserve requirements of the grid under any mechanism, viz., SCUC, TRAS (Emergency), etc., shall not be considered for MTL support through SCED.

2.6. Notwithstanding provisions of this procedure, all generating stations and beneficiaries shall adopt suitable measures to maintain grid security and reliability.

### 3. Role of RLDCs

- 3.1. RLDCs shall declare "Peak" and "Off-Peak" Hours in a month in terms of provisions under extant CERC Terms and Conditions of Tariff Regulations.
- 3.2. RLDCs shall coordinate with NLDC for scheduling and energy accounting of the Eligible Generating Stations under this procedure.

### 4. Role of Eligible Generating Stations

- 4.1. The Eligible Generating Stations shall coordinate with the respective RLDCs for all matters related to scheduling and despatch. All eligible generating stations seeking schedule up to MTL through SCED shall convey their request to NLDC, with intimation to respective RLDCs.
- 4.2. At 14:30 Hrs of D-1 day, the eligible generating stations shall review their injection schedules for D-Day, as published by the respective RLDCs over Web Based Energy Scheduling portal (WBES).
- 4.3. If any eligible generating station gets a schedule below MTL during any time block (s) in Off-Peak hours of D-day, whereas it gets a schedule above minimum turndown level for at least eight (8) time blocks in Peak hours of D-day, the concerned generating station shall report the same to NLDC by 15:30 hours of D-1 day, with intimation to the respective RLDCs.
- 4.4. By 20:00 hours of D-1 day, the said generating station shall furnish a standard declaration (format attached as **Format-A1**) to the respective RLDCs and NLDC towards all efforts made by them to achieve minimum turn down level through the sale of power in the Power market (under bilateral or collective transactions).
- 4.5. Standard declaration on D+1 by 06:00 Hrs: The generating stations are also required to achieve a schedule of Minimum turndown level (MTL) on the day of operation through their efforts for the sale of power in the Power market (under bilateral or collective transactions in RTM). Generating stations getting MTL support through SCED need to provide a standard declaration electronically for their efforts made to achieve a schedule of minimum turndown level through the sale of power in the Power market (under bilateral or collective transactions) to NLDC after the day of operation is over, i.e. by 06:00 hours (i.e. 6 AM) of D+1 day. This shall be furnished as per a standard declaration format attached as **Format-A2**.

## 5. Role of NLDC

- 5.1. After 1430 Hrs of D-1 day, NLDC, in coordination with RLDCs, shall prepare the list of generating stations that are likely to go below their minimum turndown level.
- 5.2. The list of generating stations that are getting scheduled below minimum turndown level during Off-Peak hours of the day (one or more time block (s)), however, getting scheduled above minimum turndown level during Peak hours (minimum eight time blocks) and are not committed under SCUC mechanism shall be published on NLDC website by 15: 00 Hrs.
- 5.3. In case of anticipated congestion on the inter-regional corridor, NLDC may exclude a few generating stations from the list published under clause 5.2 of this Procedure for SCED support in the interest of grid security and reliability.
  - 5.3.1. Historical trends, renewable energy/net demand forecasts, and inter-regional schedules without and with SCUC/SCED will be analysed to anticipate congestion.
  - 5.3.2. Under such anticipated congestion scenarios, all identified units may not be provided MTL support under SCED. To identify the specific units, the sensitivity of the plant generation on the congested corridor will be factored along with the Energy Charge Rate (ECR).
- 5.4. In case of congestion (either inter-regional flows or schedule greater than Available Transfer Capability (ATC) in real-time, SCED-Down will be prioritized in the exporting region to the extent down reserves are available. Similarly, SCED-Up will be prioritized in the importing region to the extent up reserves are available.
- 5.5. Based on the request received from the eligible generating stations and their standard declaration (Format A1) submitted, NLDC shall publish the list of generating stations that would be considered for MTL support through SCED for the next day (D day) by 20:30 Hrs of 'D-1' day. The list shall be published on the NLDC website.
- 5.6. In case the eligible generating station fails to provide either Format A1 or Format A2 as per stipulated timelines consistently for three (3) days, the concerned eligible generating stations shall be barred by NLDC from getting considered for MTL support through SCED for the next five (5) days.

## **6. Security Constrained Economic Dispatch (SCED) for MTL support:**

- 6.1. The generating stations identified in the list published by NLDC for MTL support through SCED shall be considered for support through SCED to achieve the schedule up to their minimum turndown level.
- 6.2. If the injection schedule of generating stations which is not mentioned in the list published by NLDC on D-1 day at 20:30 hrs, goes below the minimum turndown level on “D” day due to any reason, such as synchronisation of units under planned outage/ forced outage or synchronisation of new units, such generating stations shall not be eligible for MTL support through SCED for such day.
- 6.3. The eligible generating stations identified in the list published by NLDC on D-1 day at 20:30 Hrs may get scheduled through SCED up to their respective minimum turndown level. Equivalent SCED down, as available, shall be despatched in other generating stations in the SCED stack, duly following the merit order to the extent of down reserves available. The stack shall be prepared from the highest energy charge rate to the lowest energy charge rate, duly considering the technical limits of a generator such as ramp up, ramp down, declared capability, minimum turndown level, etc.
- 6.4. In case adequate SCED down reserves are not available in real-time equivalent to the required quantum of MTL support, the eligible generating stations shall be provided MTL support to the extent of available SCED down reserve as per the merit order, i.e., the least variable charge/ SCED compensation charge generator shall be considered first followed others in merit order.
- 6.5. SCED shall run after the Real Time Market (RTM) dispatch as per the timelines defined under the Grid Code.
- 6.6. To achieve optimal solution there shall be no upfront segregation of SCED-Up & Down into regular SCED, and incremental SCED support provided for meeting the minimum turndown level in the schedules. However, such segregation shall be done on a post facto basis for the purpose of accounting and settlement.

## **7. Accounting and Settlement of regional entity generating stations getting MTL support through SCED.**

- 7.1. The incremental/decremental SCED schedules shall be maintained separately in the scheduling system.
- 7.2. The schedule of beneficiaries shall not be changed on account of SCED. Buyers or beneficiaries shall continue to pay the charges for the scheduled energy directly to the generating station(s) participating in the SCED.
- 7.3. Eligible Generating stations getting SCED-Up schedules for getting MTL support through SCED shall be paid from the 'National Pool Account (SCED)' at the rate of their respective energy charge or SCED Compensation Charge rate declared upfront. There shall be no upfront segregation of SCED-Up quantum under Regulation 49(2)(a)(iv) and Regulation 49(2)(a)(v-a) of the Grid Code.
- 7.4. NLDC shall segregate SCED Up, excluding SCED Up for support up to MTL, and match it with an equivalent quantum of SCED down following the merit order of highest to lowest energy charge or SCED Compensation Charge.
- 7.5. After the segregation of SCED Up and its equivalent quantum of SCED Down, the net cost of SCED Up for providing support up to MTL shall be calculated along with the corresponding residual SCED Down.
- 7.6. After calculation as mentioned above, the following shall be done:
  - 7.6.1. In case, in a time block, the net inflow to SCED pool from the total SCED energy charge or SCED Compensation Charge for SCED down despatch is higher than the net outflow from the pool towards SCED energy charge or SCED Compensation Charge for MTL support given through SCED Up despatch, the differential amount shall be considered as savings in SCED.
  - 7.6.2. In case, in a time block, net inflow to SCED pool from the total SCED energy charge or SCED Compensation Charge for SCED down despatch is lower than the net outflow from the SCED pool towards SCED energy charge or SCED Compensation Charge for MTL support through SCED Up, the differential amount shall be payable by the entities which have caused the schedule of the generating station or unit thereof to go below minimum turndown level.

- 7.6.2.1. The differential shall be payable by the beneficiaries of those regional entity generating stations getting MTL support through SCED in proportion to their shortfall in the requisition.
- 7.6.2.2. The shortfall in requisition for MTL support for a beneficiary shall be considered as = (share of entitlement corresponding to MTL - requisition as per ramp rate considered for deriving the schedule of the plant).
- 7.6.2.3. The implemented schedules shall be considered as the basis for deriving the shortfall in the requisition.
- 7.6.2.4. NLDC shall issue a monthly statement, "National SCED Statement for MTL support," comprising of the differential amount payable along with the beneficiary's name within 10 days of issuance of the "National SCED Monthly Statement." The format for "National SCED Statement for MTL support" is enclosed as **Format-SCED\_MTL**.
- 7.6.2.5. The concerned beneficiaries shall pay the applicable charges to the 'National Pool Account (SCED)' within ten (10) days of the issuance of the "National SCED Statement for MTL support" by NLDC.
- 7.6.2.6. If payments by the beneficiaries are delayed beyond ten (10) days from the date of issuance of the "National SCED Statement for MTL support," the defaulting beneficiaries shall pay simple interest @ 0.04% for each day of delay on the payable amount.
- 7.6.2.7. NLDC shall issue the statement of interest due to delay in payment on a quarterly basis. The concerned beneficiary would pay to the 'National Pool Account (SCED)' the indicated charges within seven (7) working days from the issue of "National Statement of Interest due to delay in payments". NLDC shall disburse the interest amount from the 'National Pool Account (SCED)' to the payable party, if any.
- 7.6.2.8. If the concerned beneficiary fails to pay the interest amount within the stipulated period, NLDC shall adjust that amount from the amount receivable by the particular beneficiary from the upcoming "National Net SCED Benefits Distribution Statement."

7.7. The provisions for "Statement of Compensation due to Part Load Operation due to SCUC" and "Monthly benefit sharing statement" shall remain unchanged and shall be calculated on the total SCED amount as stipulated in "Detailed Procedure for Security Constrained Unit Commitment



(SCUC), Unit Shut Down (USD) and Security Constrained Economic Despatch (SCED) at Regional Level” and its amendments. No bifurcation for heat rate compensation on account of Part Load Operation of SCED despatched due to MTL support (Up/Down) shall be done separately.

7.8. There shall be no post-facto revision of the monthly statement "National SCED Statement for MTL support” once issued.

## **8. Settlement of Bank Interest and Interest on Late payment received in National Pool Account (SCED)**

8.1. SCED payment credited in bank account may earn some bank interest. NLDC shall keep a record of the interest earned for each financial year in the National SCED Pool Account.

8.2. Interest payable on account of late payment of charges by SCED Generator shall be first adjusted before settlement of interest from the National Pool account (SCED).

8.3. The interest accumulated on account of Bank Interest and Late payment shall be first utilized for any costs or expenses or other charges incurred on recovery of the amount mentioned in the National SCED monthly statement or any applicable banking/finance charges for maintaining the National Pool Account (SCED).

8.4. The interest accumulated in National Pool Account (SCED) after settlement shall be disbursed between the SCED generator and SCED Beneficiaries after the end of each financial year in the following manner:

8.4.1. The interest accumulated in the pool after payment of all liabilities shall be shared in the ratio of 50:50 between the generators participating in SCED and their concerned beneficiaries / Discoms, on a financial year basis.

8.4.2. The share of 50% of the net interest accrued in the pool corresponding to the beneficiaries would be shared in proportion to their final schedule from the generating stations covered under SCED on a Financial year basis as per the Regional Energy Account (REA)/ State Energy Account (SEA).

8.4.3. The share of 50% of the net interest accrued in the pool corresponding to the SCED generator would be shared in proportion to their total SCED schedule on mileage (SCED Up plus SCED down) on a Financial year basis as per the National SCED Monthly Statement prepared by NLDC.

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**Format-A1: UNDERTAKING**

**To,**

**Grid Controller of India Limited (GRID – INDIA)/National Load Despatch Centre (NLDC)/\_\_\_\_\_Regional Load Despatch Centre (\_RLDC)**

**Sir/Madam,**

This has reference to our request Dated \_\_\_\_\_ for Date.....

**In this connection, we do hereby undertake the following:**

1. It is hereby confirmed that we have made all the efforts to achieve a schedule of Minimum turndown level through the sale of power in the Power market (under bilateral or collective transactions) by 20:00 Hrs of Date \_\_\_\_\_ for date \_\_\_\_\_ with reference to the Regulation 49 (2) (a) (v – a) of the Central Electricity Regulatory Commission (CERC) Indian Electricity Grid Code Regulations (IEGC), 2023.

2. We indemnify Grid Controller of India Limited (GRID – INDIA)/National Load Despatch Centre (NLDC)/Regional Load Despatch Centre (RLDC) against any liability/ claims whatsoever arising out of non-compliance of Indian Electricity Grid Code Regulations, 2023 .

**Signature of the Authorized Signatory with seal**

**Date:**

**Place:**

**Format-A2: UNDERTAKING**

**To,**

**Grid Controller of India Limited (GRID – INDIA)/National Load Despatch Centre (NLDC)/  
\_\_\_\_\_Regional Load Despatch Centre (\_\_\_RLDC)**

**Sir/Madam,**

This has reference to our request Dated \_\_\_\_\_ for Date.....

**In this connection, we do hereby undertake the following:**

1. It is hereby confirmed that we have made all the efforts to achieve a schedule of Minimum turndown level through the sale of power in the Power market (under bilateral or collective transactions) on Date \_\_\_\_\_ & \_\_\_\_\_ for date \_\_\_\_\_ with reference to the Regulation 49 (2) (a) (v – a) of the Central Electricity Regulatory Commission (CERC) Indian Electricity Grid Code Regulations (IEGC), 2023.

2. We indemnify Grid Controller of India Limited (GRID – INDIA)/National Load Despatch Centre (NLDC)/Regional Load Despatch Centre (RLDC) against any liability/ claims whatsoever arising out of non-compliance of Indian Electricity Grid Code Regulations, 2023.

**Signature of the Authorized Signatory with seal**

**Date:**

**Place:**

## Format-SCED\_MTL: “NLDC: National SCED Statement for MTL support”

(To be issued by NLDC)

For Month <from date > <to date>

Date of issue: dd.mmm.yyyy

Table1: Monthly Total SCED UP bifurcation

S. No.	Generator	Region	SCED UP Regular (MWHr) (A)	SCED UP MTL Support (MWHr) (B)	Total SCED UP (MWHr) (C = A + B)
1	Gen 1				
2	Gen 2				
	Total				

Note: Total SCED UP = “National SCED Monthly Statement” SCED UP

Table 2: Monthly Total SCED DOWN bifurcation

S. No.	Generator	Region	SCED DOWN Normal (MWHr) (D)	SCED DOWN MTL Support (MWHr) (E)	Total SCED DOWN (MWHr) (F = D + E)
1	Gen 3				
2	Gen 4				
	Total				

Note: Total SCED DOWN = “National SCED Monthly Statement” SCED DOWN

Table 3: SCED Generator shortfall in requisition below MTL

S. No.	Region	Generator Name	Generator shortfall in requisition (MU)

Table 4: Cost apportioned to the beneficiaries

Total Shortfall towards payment of SCED energy charge or SCED Compensation Charge for MTL support through SCED (in Rs.) [S] =

S. No.	Beneficiary Name	Total shortfall in requisition (MU)	Apportionment of [S] (in Rs.)
1	Beneficiary 1		
2	Beneficiary 2		
3	Beneficiary 3		
	Beneficiary n		
	Sum of requisition		