Email / Website

भारत सरकार केंद्रीय विद्युत प्राधिकरण **दक्षिण क्षेत्रीय विद्युत समिति** 29, रेसकोर्स क्रास रोड बेंगलूर- 560 009		Government of India Central Electricity Authority **Southern Regional Power Committee** 29, Race Course Cross Road Bengaluru-560 009	
Email: mssrpc-ka@nic.in	Web site: www.srpc.gov.in		Phone:080-22282516
सं/No.	SRPC/SE(O)/FGMO/2026-27/ 3819	दिनांक / Date	**19th August 2026**

सेवा मे / To

संलग्न सूची के अनुसार/ As per the enclosed list

Sub: Agenda of the special meeting to deliberate on FGMO performance during FY 2025-26 in Southern Region -reg.

महोदय /महोदया / Sir/ Madam,

संलग्नक में, कृपया दक्षिणी क्षेत्र में वित्तीय वर्ष 2025-26 के दौरान फ्री गवर्नर मोड ऑफ ऑपरेशन (एफजीएमओ) के प्रदर्शन पर विचार-विमर्श करने हेतु दिनांक 01 **सितिमबर 2026 (मंगलवार) 10:30** को वीडियो कॉन्फ्रेंस के माध्यम से आयोजित होने वाली विशेष बैठक की कार्यसूची संलग्न है। यह दक्षेविस के वेबसाइट (www.srpc.gov.in) पर उपलब्ध है।

Enclosed, please find the agenda of the special meeting to deliberate on Free Governor Mode of Operation (FGMO) performance during FY 2025-26 in Southern Region to be held on **01st September 2026 (Tuesday) at 10:30 hrs through VC.** The same is available on SRPC website (www.srpc.gov.in).

भवदीय /Yours faithfully,

malini

(एन एस मालिनी / N S Malini)

अधीक्षक अभियंता/Superintending Engineer (O,P&C)

षिती सूची / Mailing List (Operation Coordination Sub-Committee SRPC)

1. Chief Engineer (GO), APTRANSCO, Vijayawada
2. Chief Engineer (Generation), APGENCO, Vijayawada
3. Chief General Manager (OCS, Civil, EA & CGRF works), APEPDCL, Visakhapatnam
4. Chief Engineer (E), SLDC, KPTCL, Bengaluru
5. Chief Engineer (ED), KPCL, Bengaluru
6. Joint Director (Projects), PCKL, Bengaluru (jdppckl2018@gmail.com)
7. Chief Engineer (TSO), KSEBL, Kalamaserry
8. Chief Engineer (Opn.), TANTRANSCO, Chennai
9. Chief Engineer (Mech), TNPGCL, Chennai
10. Chief Engineer (NCES), TNGECL, Chennai (cences@tnebnet.org)
11. CFC, TNPDCL, Chennai
12. Chief Engineer (GO), TGTRANSCO, Hyderabad
13. Chief Engineer (Generation), TGGENCO, Hyderabad
14. Director (Operation, P&MM, IPC&RAC and Energy Audit), TGSPDCL, Hyderabad
15. Superintending Engineer - I, Electricity Department, Puducherry
16. General Manager (O&M), SRTS–I, PGCIL, Secunderabad.
17. General Manager (O&M), SRTS- II, PGCIL, Bengaluru.
18. General Manager (OS), SRHQ, NTPC, Secunderabad
19. AGM (EEMG), RSTPS, NTPC, Ramagundam
20. AGM(EEMG), Talcher STPS Stg - II, NTPC, Talcher
21. AGM (EEMG), Simhadri STPS, NTPC, Simhadri
22. AGM (EEMG), Kudgi STPS, NTPC, Kudgi.
23. General Manager, Telangana STPS, NTPC
24. General Manager(O&M), NTECL, Vallur
25. Chief General Manager, Neyveli TPS-II, Neyveli
26. General Manager, NNTPS, Neyveli
27. General Manager, TPS-I Expansion, Neyveli
28. General Manager, TPS-II Expansion, Neyveli
29. Chief General Manager (Ele), NLC Tamil Nadu Power Limited (NTPL), Tuticorin
30. Operation Superintendent, MAPS, Kalpakkam
31. STE (E&I), Kaiga G.S. Stage - I, Kaiga
32. STE (E&I), Kaiga G.S. Stage - II, Kaiga
33. Operation Superintendent, KKNPP, Kudankulam
34. AGM, JSWEL Vijayanagar Plant, Torangallu, Bellary
35. Associate Vice President (P&M), APL, Udupi, (Manoj.taunk@adani.com)
36. Head (O), SEIL Phase-I, Hyderabad
37. Head (O), SEIL Phase-II, Hyderabad
38. Plant Head, IL& FS Tamil Nadu Power Company Limited, Cuddalore
39. Sr.Vice President (O&M), HNPCL, Hyderabad
40. Sr. Deputy General Manager, CTUIL, Gurugram (anilsehra@powergrid.in)
41. Executive Director (Commercial), NPCIL, Mumbai (nrchoudhary@npcil.co.in)
42. Dy. General Manager, KNTL, IndiGrid Ltd, Noida (abhishek.kukreja@indigrid.com)
43. M/s Adani Enterprises Limited
44. Joint Sr. Vice President, Greenko Group, Hyderabad (venkateswarlu.a@greenkogroup.com)
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47. Executive Vice President, PTC India Limited, New Delhi (hlchoudhary@ptcindia.com)
48. Director, GM Division, CEA, New Delhi
49. Director, NPC Division, CEA, New Delhi
50. Executive Director, NLDC, Grid-India, New Delhi
51. Executive Director, SRLDC, Grid-India, Bengaluru

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SOUTHERN REGIONAL POWER COMMITTEE (SRPC)

Agenda for the Special Meeting to deliberate on Free Governor Mode of Operation (FGMO) Performance during FY 2025-26 in Southern Region to be held on 01st September 2026

1. Introduction

A Special Meeting of the Southern Regional Power Committee (SRPC) to deliberate on **Free Governor Mode of Operation (FGMO) performance during FY 2025-26** is scheduled to be held on **01st September 2026 (Tuesday)** through **Video Conference (VC),** in continuation of the special meeting held on 31.07.2026.

2. FGMO implementation status

As per IEGC, 2023 Regulation 30 (10) (d) – "*The generating stations and units thereof shall have electronically controlled governing systems or frequency controllers in accordance with the CEA Technical Standards for Connectivity and are mandated to provide PRAS.* ***The generating stations and units thereof with governors shall be under Free Governor Mode of Operation.***"

As intimated by the generators during the special meeting on 31.07.2026, most of the generating units have already shifted to **Free Governor Mode of Operation (FGMO)**. However, the following units are still operating under **Restricted Governor Mode of Operation (RGMO)**:

Generating Station	Capacity (MW)	FGMO/ RGMO status	Update
Nagarjunasagar RCPH	3 x 30	RGMO	**Spl Mtg 31.07.26:** Order placed to BHEL and will be implemented in one to two months. Expected by October 2026.
HNPCL	2 x 520	RGMO	Exploring vendors is under progress for the implementation of FGMO as we don't have OEM support **223rd OCC:** Vendor is explored and found. Scrutiny is under progress and FGMO will be implemented shortly **54th SRPC:** APSLDC needs to insist on HNPCL to adhere to the IEGC. **Spl Mtg 31.07.26:** APSLDC instructed HNPCL to implement FGMO. It is planned to be implemented during the next overhaul. Next overhaul is proposed in October 2026.
Raichur TPS	7 x 210 + 1 x 250	Partial	Unit 1: After unit restoration Unit 2, 3 & 8: Under FGMO **Spl Mtg 31.07.26** Unit 4: AOH is in progress. Would be implemented by October 2026. Unit 5: With technical support of BHEL, FGMO logic is being implemented in the existing control system. Expected by January 2027 Unit 6: expected by December 2026 Unit 7: Turbine vibration issue to be resolved
Yeramarus TPS	2 x 800	Partial	Unit 1: FGMO **Spl Mtg 31.07.26** Unit 2: During Over-hauling FGMO was implemented in April 2026

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Kadra	3 x 50		Some issues are being faced in software and tuning of EHGC at both power houses. Presently, in consultation with BHEL. Budgetary provision is made and work order needs to be placed. Expected to be implemented by Oct-Nov 2025
Kodasalli	3 x 40		
Sharavati	Unit 2: 103.5 MW	Unit 1, 3-10 are in FGMO Unit 2: RGMO	Unit 2 have issues with unit processor controller of governor system. The procurement process is under progress. Implementation timeline is dependent on supply of UPC from M/s GE.
Supa	2 x 50		During the R&M works of Supa power house in FY 2024-25. It is proposed to take up replacement of existing EHGC system with new Digital governor and auto sequencer system with RGMO/FGMO feature. Expected to be completed by March 2026.
NCTPP Stage II	2 x 600	RGMO	Problems with control system. BHEL had not yet responded. In the meantime, NCTPP II stated that the in-house team is planning try and implement FGMO in consultation with other plants by December-2025.
Neyveli STCMS (TAQA)	1 x 250		TNSLDC had instructed to implement FGMO along with AOH
SEPC	1 x 525	RGMO	53rd TCC: TNSLDC informed that SEPC has yet to shift to FGMO mode
Valuthur Gas Turbine Power Station (VGTPS)	Phase I: 59.9+35.1 Phase II: 58.5+33.7		TNSLDC stated that implementation of FGMO is not feasible in the current setup. SRLDC also sought technical clarifications regarding how the control system was designed without incorporating governor control.
Bhadadri TPS	270 x 4	RGMO	**Spl Mtg 31.07.26** Unit 1: 14.06.2025 Unit 2: 14.06.2025 Unit 3: 09.06.2025 Unit 4: 11.06.2025
Singareni Collieries TPS	2 x 600		**51st TCC/54th SRPC**: In the testing phase. Implementation will occur once testing is completed **Spl Mtg 31.07.26** Implemented in both Unit 1 and Unit 2
Nagarjunasagar	Unit 1: 110 MW	Unit 2-8: already under FGMO	**Spl Mtg 31.07.26** Unit 1: PO is placed to BHEL. Implementation in progress
Simhadri STPS Stage I	2 x 500	Unit 1-2: RGMO	**Spl Mtg 31.07.26** Unit 1: FGMO implemnted Unit 2: Implementation is planned during overhauling in November/December 2026
Neyveli TS II	7 x 210	Unit 4-7: RGMO	**Spl Mtg 31.07.26:** FGMO implemented in both Stage I & II
CEPL (TN)	2 x 600	RGMO	**54th TCC**: FGMO in service from Unit 1: 24.02.2026 Unit 2: 18.02.2026
IL & FS (TN)	2 x 600	RGMO	**Spl Mtg 31.07.26:** FGMO implemented in both units in November 2024

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- ***Generators are requested to provide the updated FGMO implementation status through email to seoprnsrpc-ka@nic.in , srpc.operation@gmail.com and srldcreliability@grid-india.in***

- ***Generators still under RGMO mode are requested to expedite change over to FGMO mode.***

3. Analysis of Frequency Response Performance (FRP) during FY 2025-26 in Southern Region

As per IEGC, 2023 Regulation 30 (10) (q) – "*NLDCs, RLDCs and SLDCs* ***shall grade the median Frequency Response Performance annually, considering at least 10 reportable events***. *In case the median Frequency Response Performance is less than 0.75 as calculated as per Annexure-2, NLDC, RLDCs, SLDCs, as the case may be, after analyzing the FRP shall direct the concerned entities to take corrective action. All such cases shall be reported to the concerned RPC for its review.*"

IEGC, 2023 Annexure – 2, Point 8 – Criteria for Reportable Event
"*The frequency response characteristic (FRC) calculation shall be carried out by each control area for* ***any load or generation loss incident involving net change of more than 1000 MW of load or generation or a frequency change involving 0.1 Hz or more***. *The event shall be notified by the NLDC.*"

The following reportable events were notified by NLDC during FY 2025-26 (Annexure-4a):

Sl.No.	Date and Time	Details	Generation (+ve) / Load (-ve) Loss (MW) Generation (+ve) / Load (-ve) Loss (MW)	Solar/Non-solar hours
1	11-05-2025 16:51 HRS	WR_APL_MUNDRA	2832	Solar hours
2	12-06-2025 13:34 HRS	RE_Complex NR	1633	Solar hours
3	16-06-2025 11:51 HRS	ALIPURDUAR_ER and BHUTAN	1322	Solar hours
4	22-07-2025 19:46 HRS	KOTESHWAR and TERHI NR	1437	Non-Solar hours
5	29-07-2025 14:55 HRS	RE_Complex NR	1100	Solar hours
6	01-09-2025 14:57 HRS	DELHI_NR	-1240	Solar hours
7	24-09-2025 11:04 HRS	TAMILNADU_SR	2500	Solar hours
8	24-09-2025 11:32 HRS	TAMILNADU_SR	1400	Solar hours
9	15-10-2025 12:11 HRS	BHADLA Pooling Station NR	1855	Solar hours
10	16-12-2025 06:34 HRS	Obra_C TPS, NR	1252	Solar hours
11	14-01-2026 13:38 HRS	RE Generation Complex and RAPP-D, NR	2281	Solar hours
12	14-01-2026 14:05 HRS	RE Generation Complex, NR	3787	Solar hours
13	14-01-2026 14:09 HRS	RE Generation Complex, NR	925	Non-Solar hours

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Sl.No.	Date and Time	Details	Generation (+ve) / Load (-ve) Loss (MW) Generation (+ve) / Load (-ve) Loss (MW)	Solar/Non-solar hours
14	30-01-2026 11:08 HRS	SIMHADRI, SR	-1214	Solar hours
15	13-02-2026 12:14 HRS	RE Generation Complex, NR	740	Solar hours
16	22-02-2026 22:56 HRS	Sterlite Thermal Power Plant, ER	1470	Non-Solar hours
17	22-02-2026 23:00 HRS	Sterlite Thermal Power Plant, ER	-1353	Non-Solar hours
18	03-03-2026 11:42 HRS	RE Generation Complex, NR	1197	Solar hours

3.1 FRP of STU Connected Generators during FY 2025-26

SLDCs/GENCOs are requested to present the FGMO performance of STU connected generators with the following analysis:

1. **Frequency Response Obligation (FRO) assigned to each generating station in STU control area**
2. **FGMO performance of each generating unit, i.e., Actual v/s Expected Performance wrt Generation immediately before the disturbance.**

   The Expected Performance may be calculated as below:

   Step I: Calculate **Expected Change in Generation** that the governor should produce for the observed frequency deviation.

$$\Delta P = \frac{PA \times (FB - FA) \times 100}{(Droop\ \%) \times 50}$$

   ΔP may be limited to ±5% of MCR for coal/lignite/gas and limited to ±10% of MCR for Hydro.

   Where:

   PA – Generation immediately before the disturbance

   PB - Generation immediately after the disturbance

   FA – System frequency immediately before the disturbance

   FB – System frequency immediately after the disturbance

   Droop % = Governor droop setting (3–6% for thermal and 0-10% for hydro)

   Step 2: Calculate the Actual Change in Generation

   Actual Change= **PB−PA**, where PB is Generation immediately after the disturbance

   Step 3: Calculate Performance

$$Performance\ (wrt\ PA) = \frac{(PB - PA)}{\Delta P}$$

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3. **FGMO performance of each generating unit, i.e., Actual v/s Expected Performance wrt MCR.**

   The Expected Performance may be calculated as below:

   Step I: Calculate **Expected Change in Generation** that the governor should produce for the observed frequency deviation.

$$\Delta P = \frac{MCR \times (FB - FA) \times 100}{(Droop\ \%) \times 50}$$

   ΔP may be limited to ±5% of MCR for coal/lignite/gas and limited to ±10% of MCR for Hydro.

   Where:

   MCR – Maximum Continuous Rating of the unit

   PA – Generation immediately before the disturbance

   PB - Generation immediately after the disturbance

   FA – System frequency immediately before the disturbance

   FB – System frequency immediately after the disturbance

   Droop % = Governor droop setting (3–6% for thermal and 0-10% for hydro)

   Step 2: Calculate the Actual Change in Generation

   Actual Change= **PB−PA**, where PB is Generation immediately after the disturbance

   Step 3: Calculate Performance

$$Performance\ (wrt\ PA) = \frac{(PB - PA)}{\Delta P}$$

4. **FRP performance of generating stations wrt FRO allotted**
5. **FGMO performance of generating stations wrt Generation of the station immediately before the disturbance**
6. **FGMO performance of generating stations wrt MCR of the station**

➢ ***The Performance of STU connected generators to be reviewed in the meeting. SLDCs/GENCOs are requested to present.***

3.2 FRP of State Control Areas during FY 2025-26

The median Frequency Response performance (% wrt ideal response) of **Southern Regional states** considering the 18 reportable events during FY 2025-26 is as tabulated below :

Sl.No	Events (Date and Time)	ANDHRA PRADESH	KARNATAKA	KERALA	TAMILNADU	TELANGANA	SR FRP
1	11-05-2025 16:51HRS	5.98	3.53	2.30	-0.05	2.37	4.80
2	12-06-2025 13:34HRS	1.65	0.38	0.96	-0.06	0.48	1.42
3	16-06-2025 11:51HRS	1.65	0.35	1.54	-0.16	0.08	1.05

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4	22-07-2025 19:46HRS	1.29	1.00	2.32	1.60	0.42	1.51
5	29-07-2025 14:55HRS	1.02	0.27	1.32	0.45	0.16	0.64
6	01-09-2025 14:57HRS	0.74	1.08	1.45	1.35	1.21	1.48
7	24-09-2025 11:04HRS	0.74	-0.93	20.85	0.24	1.01	1.35
8	24-09-2025 11:32HRS	0.49	0.40	-3.12	1.13	0.31	0.33
9	15-10-2025 12:11HRS	0.87	0.49	1.79	0.47	1.32	1.47
10	16-12-2025 06:34HRS	-1.15	-0.28	1.64	-0.29	-0.47	0.60
11	14-01-2026 13:38HRS	1.51	0.34	0.47	0.83	0.17	1.23
12	14-01-2026 14:05HRS	0.93	1.01	0.51	0.20	0.32	1.17
13	14-01-2026 14:09HRS	1.40	0.71	-0.15	0.65	1.75	1.54
14	30-01-2026 11:08HRS	0.03	2.85	0.69	0.25	0.97	0.87
15	13-02-2026 12:14HRS	-0.15	3.82	0.36	-4.57	-0.59	4.24
16	22-02-2026 22:56HRS	2.38	4.65	0.75	1.65	0.30	3.83
17	22-02-2026 23:00HRS	0.35	1.59	1.62	0.62	0.39	1.06
18	03-03-2026 11:42HRS	-11.13	0.92	-0.09	0.45	1.33	0.66
	MEDIAN FRP	**0.90**	**0.82**	**1.14**	**0.45**	**0.40**	**1.29**
	Grading	**Good**	**Average**	**Excellent**	**Poor**	**Poor**	**Excellent**

3.3 FRP of ISTS Connected Generators during FY 2025-26

SRLDC is requested to present the FGMO performance of ISTS connected generators with the following analysis:

1. FGMO performance of each generating unit, i.e., Actual v/s Expected Performance wrt Generation immediately before the disturbance.
2. FGMO performance of each generating unit, i.e., Actual v/s Expected Performance wrt MCR.
3. FRP performance of generating stations wrt FRO allotted
4. FGMO performance of generating stations wrt Generation of the station immediately before the disturbance
5. FGMO performance of generating stations wrt MCR of the station

➢ ***The performance of ISTS connected generators to be reviewed. GENCOs may respond***

4. Frequency Response Obligation (FRO) of Control Area in Southern Region for FY 2026-27

NLDC vide communication dated 13.04.2026 to all the stakeholders communicated the following (placed as Annexure-3a)

a) NLDC, in consultation with RLDCs, has assessed the Frequency Response Obligation (FRO) of each control area under RLDC jurisdiction for the fiscal year 2026-27, in compliance with

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Regulation 30 (10) (f) and as outlined in Annexure-2 of the CERC (Indian Electricity Grid Code) Regulations, 2023.

b) The FRO has been assessed based on the minimum All India target frequency response characteristics (FRC), taking into account the generation and load within each control area during the Calendar Year (CY) 2025, as detailed in Table 4 under Regulation 30 (10) (g) of the CERC (IEGC), 2023.

c) The **FRO** for each control area under SR jurisdiction for **FY 2026-27** is and follows:

Sl. No.	States	Avg. Generation (MW)	Avg. Demand (MW)	FRO (MW/Hz)	
				Solar Hours	Non-Solar Hours
1	Andhra Pradesh (AP)	5396	9107	931	598
2	Karnataka (KAR)	5243	10992	1042	670
3	Kerala (KER)	1132	3554	301	193
4	Puducherry*	0	402	0	0
5	Tamil Nadu (TN)	3921	15003	1214	781
6	Telangana (TG)	4599	10117	944	607

Sl. No.	Entity Name (Registered User in SRLDC)	Capacity (MW)	Avg. Generation (MW)	FRO (MW/Hz)	
				Solar Hours	Non-Solar Hours
1	Coastal Energen Pvt. Ltd	1200	700	45	29
2	Greenko AP01 IREP Pvt. Limited	1200	846	54	35
3	IL & FS Tamil Nadu Power Company Limited	1200	687	44	28
4	LANCO Kondappalli Power Pvt. Ltd Stage II	366	183	12	8
5	Meenakshi Energy Limited	700	220	14	9
6	NEW NEYVELI THERMAL POWER PLANT	1000	596	38	25
7	NLC Tamil Nadu Power Limited	1000	557	36	23
8	NLC TPS I Expansion	420	249	16	10
9	NLC TPS II Expansion	500	185	12	8
10	NLC TPS II Stage I	630	208	13	9
11	NLC TPS II Stage II	840	300	19	12
12	NTPC Kudgi Super Thermal Power Plant	2400	1175	75	48
13	NTPC Simhadri Stage I	1000	609	39	25
14	NTPC Simhadri Stage II	1000	631	40	26
15	NTPC Talcher Stage II	2000	1464	94	60
16	NTPC Tamil Nadu Energy Company Ltd, Chennai	1500	874	56	36
17	NTPC Telangana	1600	1023	66	42
18	Ramagundam Stage I & II	2100	1134	73	47

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19	Ramagundam Stage III	500	344	22	14
20	SEIL Energy India Limited	1320	874	56	36
21	SEIL Energy India Limited Project -2	660	524	34	22

- ***All concerned may note the same for compliance.***
- ***State SLDCs are requested to present distribution of Frequency Response Obligation (FRO) within STU connected generators for FY 2026-27***

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