

From: sldc kptcl <sldc.kptcl@gmail.com>
To: Shilpa Agarwal <shilpa@cercind.gov.in>
Sent: Tue, 16 Jul 2024 17:36:11 +0530 (IST)
Subject: Comments on draft (Indian Electricity Grid Code) (First
Amendment) Regulations, 2024.

*Hi Madam, *

Myself Mohan, SLDC Karnataka. Please find the attached comments *on
draft **Central Electricity Regulatory
Commission (Indian Electricity Grid Code) (First Amendment)
Regulations,
2024. Kindly do the needful.*

--

Regards
STATE LOAD DESPATCH CENTRE,
BANGALORE-560009.

**SLDC, KPTCL Submissions on draft Central Electricity Regulatory
Commission (Indian Electricity Grid Code) (First Amendment)
Regulations, 2024.**

Preamble:

The Hon'ble commission has been actively issuing regulations, amendments, and orders aimed at establishing a resilient, stable, safe, and reliable power system in the country. In pursuit of this overarching goal for the power sector, the commission introduced the IEGC-2023 regulation to enforce discipline among generators, users, and beneficiaries. Initially, in IEGC-2023, the commission emphasized equal importance for all users in a balanced manner. However, regrettably, subsequent Commission Orders dated 30/09/2023, and 18/12/2023, through Suo-Moto Petition No. 14/SM/2023 and 18/SM/2023, provided significant flexibility to generators while reducing flexibility for system operators and beneficiaries. This included changes such as minimum turn down and downward revision in D day, which are not in the best interest of users. These changes favored generators but imposed a substantial financial burden on beneficiaries and end consumers.

At present lot of issues are being faced by the beneficiaries such as must run of RE generation, as RE generators are not being penalized properly for improper forecasting of generation, huge load fluctuation and inconsistencies of market both in terms of quantum & its prices. Furthermore, in a subsequent suo moto order, the commission has mandated support for the technical minimum of Inter-State Generating Stations (ISGS), which has now become mandatory alongside RE and nuclear power generation. Such preferential treatment for specific users(generators) within the grid is likely to result in uneconomical grid operations and is not in the best interests of the country.

Additionally, this removal of downward provision feels like a deterrent for the States which are complying with the Central Govts initiative of embracing Green energy to the maximum extent.

We do understand that there is a provision to go for the market mechanism when the State is in power surplus situation but the rates in the exchange may not be favourable at that point of time. This leads to financial burden on the State/ESCOMs. The entire burden of managing the variability of RE, accurate estimation of weather sensitive demand, and maintaining the State deviation within the stipulated limits by selling surplus power at low cost and purchasing high cost power during deficit time is being shouldered by the State/ESCOMs. The Hon'ble Commission is requested to recommend for a AI based platform under PSDF for the beneficiaries to manage this dynamic variations, as more RE is being injected to the grid.

In addition to the above, ensuring technical minimum for all the generators scheduled on D-1 day while absorbing all the must run variable RE generation is a

huge burden to the RE rich States. It may be noted that, the generators have the similar provision like States to go for the market when the requisition is below technical minimum. In this way, it will be win-win situation, assisting the States/ESCOMs to go for integration of more Renewable energy & thereby fulfilling the Central govts initiative of achieving 500GW of green energy by 2030.

Moreover, every generator can engage in the power market, can also source get alternate source of power, SCED, SCUC, etc., to manage their technical minimum portfolio. The commission has also simplified in IEGC-2023, the process for generators to sell power by allowing them to do so without requiring consent from beneficiaries after a specified time interval.

As per Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022, the thermal generators are capable to operate: The steam turbine shall be designed for a minimum of 4000 hot starts, 1000 warm starts and 150 cold starts during its life.

The introduction **restriction on downward revision goes against the CEA regulations for hot and warm starts**. This discourages optimum usage by beneficiaries who actually pay for, especially considering that many hot starts by generators like NTPC, NLC, and other ISGS thermal generators occur within less than 4 hours. Please refer to **Annexure-A** for detailed startup information.

In the power sector, there is ongoing debate regarding the adoption of two-shift operations in thermal power plants to better integration of renewable energy sources. Tamil Nadu has successfully implemented this approach with its state-owned thermal units operating comfortably in two shifts. Hence, this downward restriction will not help to achieve hot, warm and two shift operation in the country.

And in IEGC-2023, the generators operating above technical minimum and below in agreed conditions is also compensated. As the case may be the generator shall perform to the requirement of beneficiaries and secured operation of the grid.

In order to bring in discipline across all conventional and non-conventional resources. It is brought to the Hon'ble Commission's attention that WS sellers are still treated as immature products in terms of forecasting, despite the fact that they have already exceeded 50% of total installed capacity in many states like Karnataka and more than 35% of national installed capacity. The responsibility is to be enforced on WS sellers to achieve the objectives of the Commission and bring in discipline for establishing a resilient grid.

Even with advanced technology available in the global market, WS sellers are unwilling to invest in technologies to increase accuracy in prediction due to privileges endorsed by the Commission to WS sellers, at the cost of the end consumers. It is humbly requested that the commission has to allow them to comprehend their position for development in the larger interest of the nation.

The commission has to address the underlying issues of the WS seller, the Commission is aware that WS sellers lack discipline in providing accuracy in their schedule under the provisions made in the DSM regulation by CERC. The provision of Available capacity (AVC) is to be reviewed & removed to obtain desired objective.

Under the IEGC-2023 principal regulation, the GNA corridor must be utilized according to merit order and completed by 08:30hrs on the previous day, promoting economical operations that benefit beneficiaries. However, in recent suo moto orders and the Draft IEGC-2024 1st amendment, the lack of downward revision in real-time is causing violation of many of the rules & regulations and also leads to significant financial losses to the beneficiaries. Real-time conditions differ substantially from day-ahead planning, making it challenging to manage Variable Renewable Energy (VRE) alongside technical minimum for conventional thermal generation, leading to continuous underdrawal. Consequently, beneficiaries are forced into distress sales, sometimes at prices as low as 5 paise per unit.

Karnataka State is having total GNA of 5376 MW and is having ISGS contract of 6568MW during solar hours where as in non-solar hours 4718 MW. But in Real time expected ISGS generation would be around 90%, thereby expected generation during solar hours from ISGS contracts will be 5911MW and expected generation during non-solar hours from ISGS contracts will be 4246MW.

To accommodate the contracted power over and above the GNA, SLDC is scheduling conventional power i.e., NTPC plants under T-GNA, the main disadvantage of scheduling conventional power under T-GNA is that the power scheduled under T-GNA cannot be rescheduled and it becomes Must Run, due to this State grid under draw power in many occasions which is more than the deviation limit. In addition, the proposed downward revision restriction will exacerbate financial losses for beneficiaries.

Illustration: In several cases, the operation of technical minimum conventional generators has resulted in distressed sales and underdrawal by the state. For example, **on May 25, 2024**, it is important to inform the Honorable commission about the variation in technical minimum of ISGS stations (such as Kudgi, RSTPS, Vallur, NNTPP, etc., of state share), ranging from 1200 MW to 1500 MW, in addition to 510 MW from a nuclear power plant and same is illustrated below:

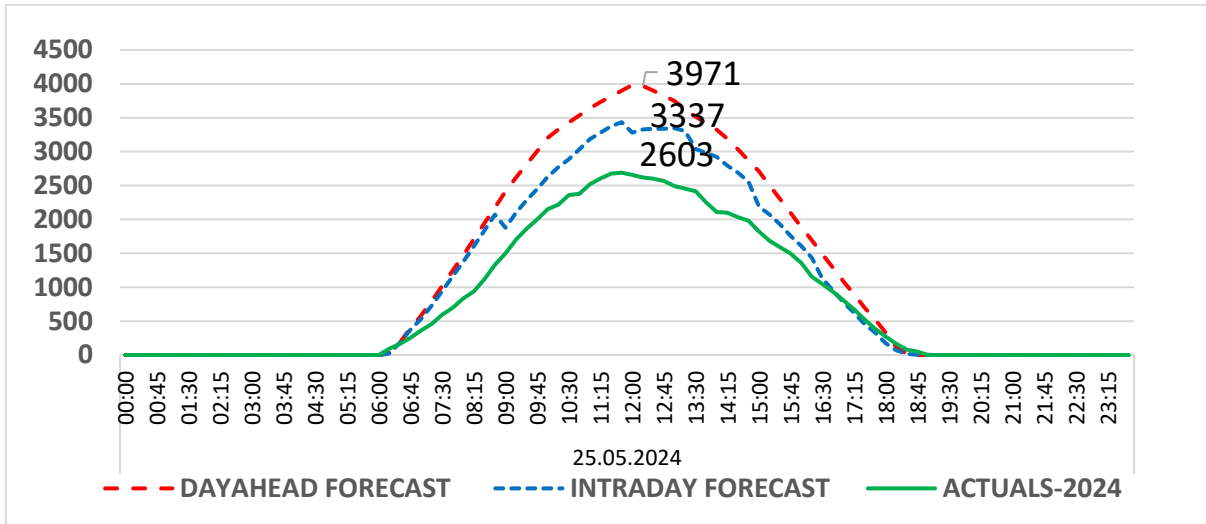
Date	Time	Deviation	Conventional ISGS power plant	Nuclear power plant	Distress sale	RTM price
25-05-2024	05:00:00	-37	2198	510	2000	3510
25-05-2024	05:15:00	-42	2198	510	2000	3201
25-05-2024	05:30:00	-242	2134	510	2000	2999
25-05-2024	05:45:00	-325	2076	510	2000	2870
25-05-2024	06:00:00	-614	2160	510	1600	3500

25-05-2024	06:15:00	-831	2198	510	1600	3932
25-05-2024	06:30:00	-762	2198	510	1700	3407
25-05-2024	06:45:00	-735	2198	510	1700	2921
25-05-2024	07:00:00	-514	2198	510	2200	1913
25-05-2024	07:15:00	-807	2198	510	1974	1800
25-05-2024	07:30:00	-451	2045	510	2400	1500
25-05-2024	07:45:00	-304	1900	510	2400	1481
25-05-2024	08:00:00	-421	1751	510	2200	2749
25-05-2024	08:15:00	-409	1697	510	2200	1896
25-05-2024	08:30:00	-463	1490	510	2447	1000
25-05-2024	08:45:00	-860	1434	510	2161	1000
25-05-2024	09:00:00	-626	1334	510	2300	554
25-05-2024	09:15:00	-599	1334	510	2492	700
25-05-2024	09:30:00	-497	1234	510	2600	2231
25-05-2024	09:45:00	-819	1234	510	2600	2230
25-05-2024	10:00:00	-1	1134	510	3500	2401
25-05-2024	10:15:00	-40	1134	510	3500	2750
25-05-2024	10:30:00	-81	1134	510	3200	2411
25-05-2024	10:45:00	-223	1134	510	3200	2261
25-05-2024	11:00:00	98	1131	510	3700	1761
25-05-2024	11:15:00	-456	1131	510	3700	2202
25-05-2024	11:30:00	-680	1131	510	3500	2431
25-05-2024	11:45:00	-693	1131	510	3500	2601
25-05-2024	12:00:00	-498	1131	510	3800	2250
25-05-2024	12:15:00	-523	1131	510	3700	2602
25-05-2024	12:30:00	-730	1131	510	3400	2800
25-05-2024	12:45:00	-775	1131	510	3400	2801
25-05-2024	13:00:00	-251	1131	510	3800	2201
25-05-2024	13:15:00	-347	1131	510	3800	2830
25-05-2024	13:30:00	-431	1131	510	3800	3034
25-05-2024	13:45:00	-237	1131	510	3800	3400
25-05-2024	14:00:00	-212	1131	510	3600	3595
25-05-2024	14:15:00	-86	1131	510	3600	3700
25-05-2024	14:30:00	-134	1293	510	3500	3943
25-05-2024	14:45:00	-46	1289	510	3500	4099
25-05-2024	15:00:00	-67	1442	510	3400	4412
25-05-2024	15:15:00	33	1542	510	3400	4465
25-05-2024	15:30:00	-64	1609	510	3200	4413
25-05-2024	15:45:00	43	1709	510	3200	4120
25-05-2024	16:00:00	180	1876	510	3200	3050
25-05-2024	16:15:00	441	1962	510	3200	2791
25-05-2024	16:30:00	143	2082	510	2800	4119
25-05-2024	16:45:00	-19	2082	510	2800	4048
25-05-2024	17:00:00	43	2170	510	2700	3690
25-05-2024	17:15:00	95	2257	510	2700	3481

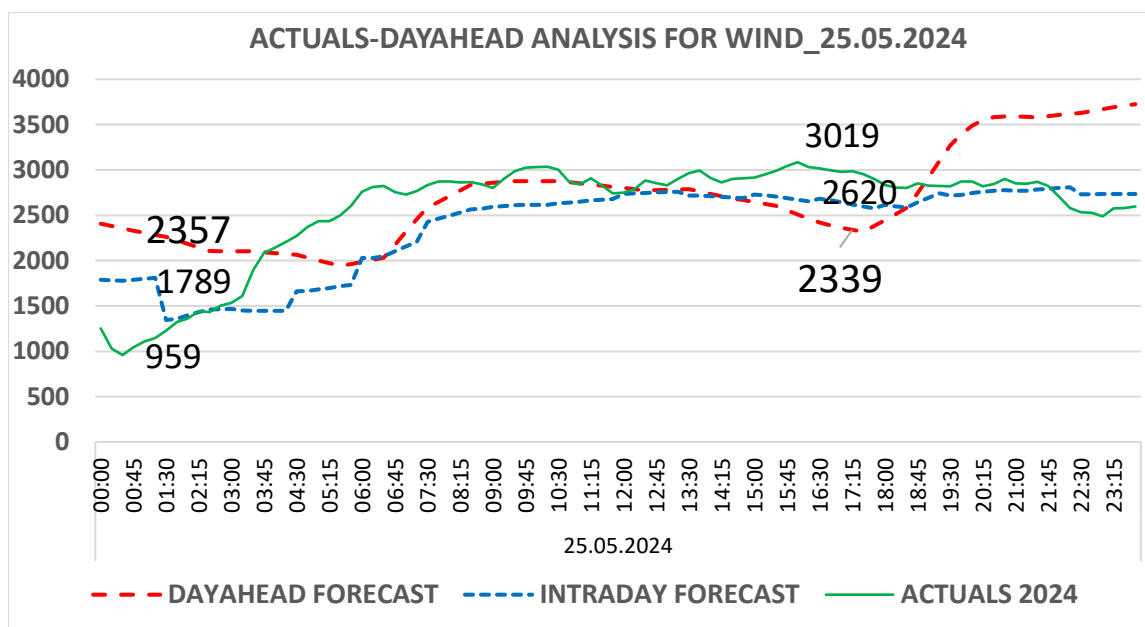
25-05-2024	17:30:00	-21	2254	510	2800	2600
25-05-2024	17:45:00	117	2262	510	2800	2551
25-05-2024	18:00:00	-413	2337	510	1800	1761

* "-ve" means underdrawn

The actual solar generation differed significantly from both the day-ahead and intraday forecasts, with a deviation of 1368 MW and 734 MW respectively.



The comparison of wind actual generation with Day ahead / intraday forecast, the deviation of varying more than 1000 MW with respect to day ahead and intraday forecast.



Inferring from above, the system operators/beneficiaries are put under stress in managing the RE variations and is placed as reference for Commission's information.

Clause wise submission is follows:

1. Submission:

Quote

6. Amendment to Regulation 49 of the Principal Regulations

- (1)
- (2)
- a.
- b.
- c.
- d.
- (3)
- (4) *The following proviso shall be inserted under sub-clause b(ii) of Clause (4) of Regulation 49 of the Principal Regulations:
“Provided that downward revision of schedules by the buyers for ‘D’ day, after 1430 hrs on ‘D-1’ day in the generating station shall not be allowed below their respective share of minimum turndown level in the generating station.”*
- (5)

Unquote

The intended proviso takes out the flexibility from the SLDC (beneficiaries) to run its grid. Any reserves cannot be utilised in a day ahead basis, as whole idea of reserves is to meet contingency. Under this proviso SLDC will be deprived with flexible operation of the thermal station under its control meant for meeting its demand and contingency. Under this mechanism after D -1 day it will be taken over the flexibility by restricting no downward revision for the beneficiaries, SLDC would be left with no mechanism to control its deviation or any contingency occurrences which may affect the grid security.

SLDC has the responsibility of meeting its demand along with running economic grid operation considering the security of the grid. To achieve this, it requires support of all the generators under its control with whom it has signed power purchase agreement. In case SLDC is deprived to use this generation on real time basis (D Day) then it will be impossible for SLDC to run a secure grid which has huge must run RE integration and obligation to meet 24/7 power supply to the consumer as mandated by MoP in Electricity (Rights of Consumers) Rules, 2020.

Even change in 4th time block to 8th time block scheduling for implementation of real time market, SLDC lost the flexibility which they had for scheduling at least 4 time block in advance now which has been moved to 8th time block, this further strained the national grid and lost the flexibility for system operator to despatching the hot reserves. As may be the condition, in the draft IEGC 1st amendment regulation the provision of downward revisions for ISGS stations is not considered in real time (D day), which is a disaster for system operator as explained above.

This particular proviso would deprive SLDC to run economic power system. Hence suggested to include downward revisions of the schedules of ISGS which shall become

effective from 7th or 8th time block in real time (D day) which is mandated in the principal IEGC-2023.

In light of the above brief description on draft IEGC (1st amendment) regulation, the following prayer is humbly submitted to Hon'ble commission for consideration to establish a stable, reliable and resilient grid in the country.

The fundamental provisions of downward revision and technical minimum requirements as per the principal IEGC-2023 regulation may be retained and the following proviso proposed in draft IEGC-2024 1st amendment shall be dropped:

The following proviso shall be inserted under sub-clause b(ii) of Clause (4) of Regulation 49 of the Principal Regulations:

“Provided that downward revision of schedules by the buyers for ‘D’ day, after 1430 hrs on ‘D-1’ day in the generating station shall not be allowed below their respective share of minimum turndown level in the generating station.”

Annexure I: Technical and Commercial Parameters of SRAS Providers

From: Talcher Super Thermal Power Station / NTPC Ltd.

To: SRPC, Bangalore.

Validity of the Information: From: 16.12.2023 To: 15.01.2024

Date: 07.12.2023

Talcher Super Thermal Power Station, Stage-II		
S.No.	Title / Parameters	Values/ Data
1	Number of Generating Units	4x 500 MW
2	Total Installed Capacity (MW)	2000
3	Auxiliary consumption (%)	6.25
4	Maximum possible Ex-bus injection (MW) (including overload if any)	1950
5	Technical Minimum (MW), Ex-bus @ 55% of Normative	1031.25
6	Type of Fuel	Coal (Startup with HFO /LDO)
7	Region	SR
8	Bid Area	
9	Fixed Cost (paise/kwh upto one decimal place)	81.8
10	Energy Charges (paise / kWh upto one decimal place) (Section-62 plants)	156.0
11	Compensation Charges (paise / kWh upto one decimal place) (other than Section-62 plants)	NA
12	Ramp-up Rate (MW/Min) for each unit Ex-bus MW	4.69
13	Ramp-down Rate (MW/Min) for each unit Ex-bus MW	4.69
14	Startup Time from Cold Start (in Min) & Warm Start of each unit	Cold Start: 360 Min, 840 Min if recalled after more than 5 days Warm Start: 240 Min*
15	Any other information	Nil

* Warm start, in relation to steam turbine, means start up after a shutdown period between 10 hours and 72 hours (turbine metal temperatures between approximately 40% and 80% of their full load values).

Cold start, in relation to steam turbine, means start up after a shutdown period exceeding 72 hours (turbine metal temperatures below approximately 40% of their full load values);

प्रमाणित रूप से अनुसर प्रमाणित
Certified as As3 Form

Ashok Kumar
सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार / Govt. of India
दक्षिण क्षेत्रीय विद्युत समिति
Southern Regional Power Committee
के.वि.प्रा., बेंगलूरु / C.E.A., Bengaluru

Ashok Kumar
General Manager (O&M)

2/12/23
ASHOK KUMAR SHARMA
सहायक कार्यपालक अभियंता (O&M)
General Manager (O&M)
एनटीपीसी लिमिटेड / ताल्चर कारखाना
NTPC Limited / Talcher Kanha

✓
From: (Name of RRAS Provider Generating Station) / (Name of Owner Organization):

NEYVELI NEW THERMAL POWER STATION (NNTPS-2 X 500MW), NLC INDIA LIMITED
(Station COD from 00:00hrs on 10.02.2021)

To: NRPC/WRPC/SRPC/ERPC/NERPC: SRPC

Validity of the Information From: 16/12/2023 To: 15/01/2024

Date: 05/12/2023

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2 X 500 MW
b)	Total Installed Capacity (MW)	1000 MW
c)	Maximum possible Ex-bus injection (MW) (including overload if any)	938 MW
d)	Technical Minimum (MW) for Station (258MW if one Unit)	516 MW
e)	Type of Fuel	Lignite
f)	Region	Southern Region
g)	Bid area	S2
h)	Fixed Cost (paise / kWh upto one decimal place)	179.90 Paise/kwhr
i)	Variable Cost (paise / kWh upto one decimal place)	258.80 Paise/Kwhr
j)	Ramp-Up Rate (MW/Min) for each unit	4.69 MW /Min
k)	Ramp-Down Rate (MW/Min) for each unit	4.69 MW /Min
l)	Start-up Time from Cold Start (in Min) & Warm Start of each unit	510 min. for Cold start 240 min. for Warm start
m)	Any other information	-

* Capacity Charges is based on AFC as per CERC Interim Order (Station CoD since 10.02.2021)

Copy to: ED / SRLDC / Bangalore

Signature of Authorized Signatory (with Stamp)

Name: **SURIANARAYANAN B**

Designation: **CGM/NNTPS (2X500 MW)**

एस 3 फॉर्म के अनुसार प्रमाणित
Certified as As3 Form

Abhinav Shree
सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार / Govt. of India
दक्षिण क्षेत्रीय विद्युत समिति
Southern Regional Power Committee
के.वि.प्रा., बंगलूरु / C.E.A., Bengaluru

Format ASI(Revised): Generator Details by RRAS Provider

From: (Name of RRAS Provider Generating Station) / (Name of Owner Organization): TPS-I EXPANSION
NLC INDIA LIMITED

To: NRPC/WRPC/SRPC/ERPC/NERPC: SRPC

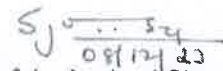
Validity of the Information **From:** 16/12/2023 **To:** 15/01/2024


Date: 08/12/2023

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2 X 210 MW
b)	Total Installed Capacity (MW)	420 MW
c)	Maximum possible Ex-bus injection (MW) (including overload if any)	395 MW
d)	Technical Minimum (MW) (ex bus)	250.30 MW
e)	Type of Fuel	Lignite
f)	Region	Southern Region
g)	Bid area	SRLDC/Bangalore
h)	Fixed Cost (paise / kWh upto one decimal place)	98.50 Paise/kwhr
i)	Variable Cost (paise / kWh upto one decimal place)	285.20 Paise/Kwhr
j)	Ramp-Up Rate (MW/Min) for each unit	1.93 MW /Min
k)	Ramp-Down Rate (MW/Min) for each unit	1.93 MW /Min
l)	Start-up Time from Cold Start (in Min) & Warm Start of each unit	480 min. for Cold start 180 min. for Warm start
m)	Any other information	

एस 3 प्रपत्र के अनुसार प्रमाणित
Certified as As3 Form

Copy to: ED / SRLDC / Bangalore


Signature of Authorized Signatory (with Stamp)
Name: SHAJI JOSE
Designation: CGM (Unit Head) / TPS-I EXPN
Chief General Manager
TPS-I Expansion
NLC India Ltd., Mayapalli


सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार / Govt. of India
दक्षिण क्षेत्रीय विद्युत समिति
Southern Regional Power Committee
के.वि.प्रा., बेंगलूरु / C.E.A., Bengaluru



NLC INDIA LIMITED

(Formerly Neyveli Lignite Corporation Limited)
"Navratna" - A Govt Of India Enterprise
OFFICE OF THE GENERAL MANAGER
Thermal Power Station-II Expansion
Neyveli - 607 807
Cuddalore district, Tamilnadu
TeleFax : 04142-257715 / 257716
Email: gm.tps2expn@nlcindia.in

एनएलसीइंडियालिमिटेड

(पूर्व नेनेयवेली लिग्नाइट कॉर्पोरेशनलिमिटेड)
भारतसरकारका "नवरत्न" उद्यम
महाप्रबंधककाकार्यालय
तापविद्युतगृह - II विस्तार
नेयवेली- 607 807
कड्डलूरजिला, तमिलनाडु
टेली फैक्स: 04142-257715 /
257716
ई-मेल: gm.tps2expn@nlcindia.in



एक ही परिवार - एक ही भविष्य
ONE EARTH - ONE FAMILY - ONE FUTURE



ISO 9001:2015
ISO 14001:2015
ISO 50001:2011
ISO 45001:2018
Certified by IRIS



QM 008
EM 005
EnM 001
OHSMS 007

Date: 06-12-2023

Format AS1: Generator Details by RRAS Provider

From: TPS-II Expansion / (NLC India Ltd)

To: SRPC

Validity of the Information From: 16-12-2023 to 15-01-2024

Date: 06-12-2023

S No.	Title/Parameters	Values/Data
(a)	Number of Generating Units	: 2 x 250 MW
(b)	Total Installed Capacity (MW)	: 500 MW
(c)	Maximum possible Ex-bus injection (MW) (including overload if any)	: 450 MW
(d)	Technical Minimum (MW)	: Technical Minimum is 293 MW after 30.06.2019*
(e)	Type of Fuel	: Lignite
(f)	Region	: Southern
(g)	Bid area	: S-2
(h)	Fixed Cost (capacity charges) (paise / kWh upto one decimal place)	: 210.6
(i)	Variable Cost (Energy charges) (paise / kWh upto one decimal place)	: 302.1
(j)	Ramp-Up Rate (MW/Min) for each unit	: 2.25 MW/Min
(k)	Ramp-Down Rate (MW/Min) for each unit	: 2.25 MW/Min
(l)	Start-up Time from Cold Start (in Min) & Warm Start of each unit	: Cold: 720 Min Hot: 390 Min
(m)	Any other information	:

*As per CERC Corrigendum to Petition No: 144/MP/2017 Dt: 23.05.2019

Andrew Knie
सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार / Govt. of India
दक्षिण क्षेत्रीय विद्युत समिति
Southern Regional Power Committee
के.वि.प्रा., बंगलूरु / C.E.A., Bengaluru

Copy to: SRLDC

Signature of Nodal Officer

NAME : MARIMUTHU T.
DESIGNATION : GM/O&M/TPS-II Expn.
General Manager/Qual
Thermal Power Station-II Expn.
NLC India Ltd., Neyveli.

एनएलसीइंडिया के अनुसार प्रमाणित
Certified as As3 Form

Format ASI: Generator Details by RRAS Provider

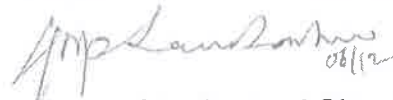
From: TPS-II Stage I/ (NLC INDIA Ltd)

To: SRPC Fax No. 080 - 22259343 / 22352616

Validity of the Information : From 16/12/2023 To: 15/01/2024

Date: 06/12/2023

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	3 x 210 MW
b)	Total Installed Capacity (MW)	630MW
c)	Maximum possible Ex-bus injection (MW) (including overload if any)	567MW
	Maximum possible Ex-Mine injection (MW) (Based on Mines Minimum Power Consumption during daily Preventive & Breakdown Maintenance period)	557MW
d)	Technical Minimum (MW)	368.6 MW
e)	Type of Fuel	Lignite
f)	Region	Southern
g)	Bid area	S-2
h)	Fixed Cost (paise / kWh upto one decimal place)	84.20
i)	Variable Cost (paise / kWh upto one decimal place)	320.40
j)	Ramp-Up Rate (MW/Min) for each unit Ex-bus MW	1.89
k)	Ramp-Down Rate (MW/Min) for each unit Ex-bus MW	1.89
l)	Start-up Time from Cold Start (in Min) & Warm Start of each unit	Cold: 660Min Hot: 270Min
m)	Any other information	Nil



Signature of Authorized Signatory (with Stamp)

Name:

K.M.CHANDRAMOHAN
General Manager / UH

Designation:

Thermal Power Station-II
NLC India Ltd., Neyveli-607 807.

एक 3 प्रारूप के अनुसार प्रमाणित
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CM/PLG



DGM/PLG



GM/Opn&PLG

Ashwin Shree

सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार Govt. of India
दक्षिण क्षेत्रीय विद्युत समिति
Southern Regional Power Committee
के.वि.प्रा., बेंगलूरु / C.E.A., Bengaluru

M/T. P.S.-II
66
6/12/2023

Format AS1: Generator Details by RRAS Provider

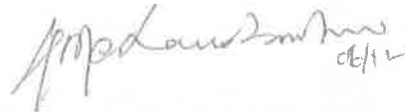
From: TPS-II Stage II/ (NLC INDIA Ltd)

To: SRPC Fax No. 080 - 22259343 / 22352616

Validity of the Information : From 16/12/2023 To: 15/01/2024

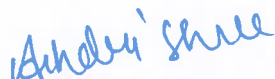
Date: 06/12/2023

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	4 x 210 MW
b)	Total Installed Capacity (MW)	840MW
c)	Maximum possible Ex-bus injection (MW) (including overload if any)	756MW
	Maximum possible Ex-Mine injection (MW) (Based on Mines Minimum Power Consumption during daily Preventive & Breakdown Maintenance period)	746MW
d)	Technical Minimum (MW)	491.4 MW
e)	Type of Fuel	Lignite
f)	Region	Southern
g)	Bid area	S-2
h)	Fixed Cost (paise / kWh upto one decimal place)	86.60
i)	Variable Cost (paise / kWh upto one decimal place)	320.40
j)	Ramp-Up Rate (MW/Min) for each unit Ex-bus MW	1.89
k)	Ramp-Down Rate (MW/Min) for each unit Ex-bus MW	1.89
l)	Start-up Time from Cold Start (in Min) & Warm Start of each unit	Cold: 525Min Hot: 270Min
m)	Any other information	Nil


06/12

Signature of Authorized Signatory (with Stamp)

प्रारूप 3 प्रमाण के अनुसार प्रमाणित
Certified as As3 Form


सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार / Govt. of India
दक्षिण क्षेत्रीय बिजली समिति
Southern Regional Power Committee
के.वि.प्रा., बंगलूरु / C.E.A., Bengaluru


Name:


K.M.CHANDRAMOHAN

Designation:

General Manager / UH
Thermal Power Station-II
NLC India Ltd., Neyveli-607 807.


CM/PLG


DGM/PLG


GM/Opn&PLG

Format AS1: Generator Details by RRAS Provider

From: NLC Tamilnadu Power Limited, Tuticorin

To: SRPC

Validity of the Information

From: 16/12/2023

To: 15/01/2024

Date: 06/12/2023

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2 x 500 MW
b)	Total Installed Capacity (MW)	1000 MW
c)	Maximum possible Ex-bus injection (MW) (including overload if any)	952.5 MW
d)	Technical Minimum (MW) for each unit (Ex-bus)	259.2 MW
e)	Type of Fuel	Coal
f)	Region	Southern Region
g)	Bid area	SRLDC, Bangalore
h)	Fixed Cost (paise/kWh up to one decimal place)	154.9 Paise/kWh
i)	Variable Cost (paise/kWh up to one decimal place)	342.0 Paise/kWh
j)	Ramp-Up Rate (MW/Min) for each unit	5.0 MW/Min
k)	Ramp-Down Rate (MW/Min) for each unit	5.0 MW/Min
l)	Start-up Time from Cold Start (in Min) & Warm Start of each unit	420 Min & 210 Min
m)	Any other information	-

Signature of Authorized Signatory (with Stamp)

एएस 3 फॉर्म के अनुसार प्रमाणित
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K. Anandaramanujam
06/12/23

Name: K. ANANDARAMANUJAM

Designation: Chief Executive Officer/NTPL

Chief Executive Officer
NLC Tamil Nadu Power Ltd
Harbour Estate, Tuticorin - 4

Ashwin Shree

सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार / Govt. of India
दक्षिण क्षेत्रीय विद्युत समिति
Southern Regional Power Committee
के.वि.प्रा., बेंगलूरु / C.E.A., Bengaluru

Thermal Generator Details for Participation in Secondary Reserve Ancillary Service Provider (SRAS)

From: Stage #2 Simhadri super thermal power station/NTPC Ltd

TO: NRPC/WRPC/SRPC/ERPC/NERPC

Validity of information From: 16-Dec-23 To: 15-Jan-24

Date: 7-Dec-23

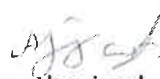
S.no	Tital/Parameters	Value/Data
1	Number of generating units (e.g. 2*500MW)	2*500
2	Total installed capacity(MW)	1000
3	Auxiliary consumption (%)	5.75
4	Maximum possible Ex-bus injection (including overload if any)	942.5
5	Technical minimum(MW)	518.38
6	Type of Fuel	COAL
7	Region	SR
8	Bid area	S1
9	Fixed cost (paise/kWh upto decimal place)	143
10	Variable cost (paise/kWh upto decimal place)	351.8
11	Ramp-up rate (MW/Min) for each unit	4.7125 MW/Min
12	Ramp-down rate (MW/Min)for each unit	4.7125 MW/Min
13	Start up Time from cold start (in min) & Warm start of each unit	Cold: 360min Warm: 240 min
14	Any other information	

** Startup time from Reserve Shut down (In case Unit shut down period is more than 5 days as Boiler will be kept under preservation) 840 min

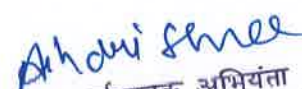
copy to: signature of authorized signatory(with stamp)

Name:

Designation:


GUPTA
 General Manager (EEMG)
 Simhadri - Simhadri
 531 000
ADAY GUPTA
 Dy. General Manager (EEMG)
 NTPC Limited - Simhadri
 ANAKAPALLE - 531 000

एएस 3 प्रपत्र के अनुसार प्रमाणित
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 सहायक कार्यपालक अभियंता
 Asst. Executive Engineer
 भारत सरकार / Govt. of India
 दक्षिण क्षेत्रीय विद्युत समिति
 Southern Regional Power Committee
 के.वि.प्रा., बंगलूरु / C.E.A., Bengaluru

**Thermal Generator Details for Participation in Secondary Reserve Ancillary Service Provider
(SRAS)**

From: Stage #1 Simhadri super thermal power station/NTPC Ltd

TO: NRPC/WRPC/SRPC/ERPC/NERPC

Validity of information From: 16-Dec-23 To: 15-Jan-24

Date: 7-Dec-23

S.no	Tital/Parameters	Value/Data
1	Number of generating units (e.g. 2*500MW)	2*500
2	Total installed capacity(MW)	1000
3	Auxiliary consumption (%)	5.75
4	Maximum possible Ex-bus injection (including overload if any)	942.5
5	Technical minimum(MW)	518.4
6	Type of Fuel	COAL
7	Region	SR
8	Bid area	S1
9	Fixed cost (paise/kWh upto decimal place)	101.1
10	Variable cost (paise/kWh upto decimal place)	352.2
11	Ramp-up rate (MW/Min) for each unit	4.7125 MW/Min
12	Ramp-down rate (MW/Min)for each unit	4.7125 MW/Min
13	Start up Time from cold start (in min) & Warm start of each unit	Cold: 360 min Warm: 240 min
14	Any other information	

** Startup time from Reserve Shut down (In case Unit shut down period is more than 5 days as Boiler will be kept under preservation) 840 min

copy to:

signature of authorized signatory(with stamp)

Name: अजय गुप्ता / AJAY GUPTA

Designation: अधीक्षक (ई ई एन सी) / Dy. General Manager (EENG)

Certified as AS3 Form
एनपीसी के अक्षर प्रमाणित

Ashwini Shree
सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार / Govt. of India
दक्षिण क्षेत्रीय विद्युत समिति
Southern Regional Power Committee
के.वि.प्रा., बेंगलूरु / C.E.A., Bengaluru

Format AS1: Generator Details by SRAS Provider

From: Ramagundam Super Thermal Power Station (RSTPS U7) / NTPC Ltd

To: SRPC

Validity of the Information: From: 16/12/2023 To: 15/01/2024

Date:

07-Dec-23

S No	Title/Parameters	Values/Data
a)	Number of Generating Units	1X500 MW
b)	Total Installed Capacity (MW)	500 MW
c)	Maximum possible Ex-bus injection (MW) (including overload if any)	490
d)	Technical Minimum (MW)*	258
e)	Type of Fuel	Fuel (Primary) - Coal Fuel (Secondary) - Oil
f)	Region	SOUTHERN REGION
g)	Bid area	S1
h)	Fixed Cost (paise / kWh upto one decimal place)	85.7
i)	Variable Cost (paise / kWh upto one decimal place)	368.2
j)	Ramp-Up Rate (MW/Min) for each unit *	4.69
k)	Ramp-Down Rate (MW/Min) for each unit *	4.69
l)	Start-up Time from Cold Start (in Min)/Warm Start of each unit	Cold: 360 Warm:240
m)	Any other information	Start up time from reserve shutdown (incase unit shutdown period is more than 5 days as boiler will be kept under preservation) is 840 min.

* Ex-bus MW

Copy to:

Signature of Authorised Signatory

एस 3 प्रपत्र के अनुसार प्रमाणित
Certified as As3 Form

Ashwini Shree
सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार / Govt. of India
दक्षिण क्षेत्रीय विद्युत समिति
Southern Regional Power Committee
के.वि.प्रा., बेंगलूरु / C.E.A., Bengaluru

(A.C. THAKUR)
GM(M)

ए.सी. ठाकुर A.C. THAKUR
महानिदेशक General Manager (Man-1)
राजस्थानी लिमिटेड RSTPS Limited, Ramagundam
बेंगलूरु, के.वि.प्रा., बेंगलूरु / C.E.A., Bengaluru

Format AS1: Generator Details by SRAS Provider

From: Ramagundam Super Thermal Power Station (RSTPS U1to6) / NTPC Ltd

To: SRPC

Validity of the Information: From: 16/12/2023 To: 15/01/2024

Date:

07-Dec-23

S No	Title/Parameters	Values/Data
a)	Number of Generating Units	3X200 MW + 3X500 MW
b)	Total Installed Capacity (MW)	2100
c)	Maximum possible Ex-bus injection (MW) (including overload if any)	2010
d)	Technical Minimum (MW)*	1074
e)	Type of Fuel	Fuel (Primary) - Coal Fuel (Secondary) - Oil
f)	Region	SOUTHERN REGION
g)	Bid area	S1
h)	Fixed Cost (paise / kWh upto one decimal place)	78.4
i)	Variable Cost (paise / kWh upto one decimal place)	373.2
j)	Ramp-Up Rate (MW/Min) for each unit *	1.82 MW/Min for 200 MW & 4.69 MW/Min for 500 MW units
k)	Ramp-Down Rate (MW/Min) for each unit *	1.82 MW/Min for 200 MW & 4.69 MW/Min for 500 MW units
l)	Start-up Time from Cold Start (in Min)/ Warm Start of each unit	Cold: 360 Warm:240
m)	Any other information	Start up time from reserve shutdown (incase unit shutdown period is more than 5 days as boiler will be kept under preservation) is 840 min.

* Ex-bus MW.

Copy to:

पत्र 3 प्रपत्र के अनुसार प्रमाणित
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A. Indee Shree
सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार / Govt. of India
दक्षिण क्षेत्रीय विद्युत समिति
Southern Regional Power Committee
के.वि.प्रा., बेंगलूरु / C.E.A., Bengaluru

Signature of Authorised Signatory

(A.C. THAKUR)
07/12/2023
(A.C. THAKUR)
GM(M)

ए.सी. ठाकुर A.C. THAKUR
महाप्रबंधक General Manager (Maint)
एनटीपीसी लिमिटेड NTPC Limited, Ramagundam
ज्योतिनगर JYOTHINAGAR - 505 215

**Thermal Generator details for Participation in Secondary Reserve
Ancillary Service Provider (SRAS)**

From: - Stage-I Telangana Super Thermal Power Plant /NTPC Ltd.

To: -NRPC/WRPC/SRPC/ERPC/NERPC

Validity Information From: - 16-12-2023 To 15-01-2024

Date: -08-12-2023

S. No.	Title/Parameters	Values/Data
1)	Number of Generating Units	1×800(of 2x800 MW)
2)	Total Installed Capacity (MW)	800 MW (of 1600 MW)
3)	Auxiliary Power consumption (%)	6.25%
4)	Maximum possible Ex-bus injection (MW) (Including overload if any)	787.5
5)	Technical Minimum (MW)	412.5
6)	Type of Fuel	coal
7)	Region	SR
8)	Bid area	S1
9)	Fixed Cost (paise/kWh up to one decimal place)	199.0
10)	Variable Cost (paise/kWh up to one decimal place)	399.2
11)	Ramp-Up Rate (MW/Min) for each unit	7.5 MW/min
12)	Ramp-Down Rate (MW/Min) for each unit	7.5 MW/min
13) 14)	Start-up Time from Cold Start & Warm Start (in Hours) for each unit	Cold:35 hours, Warm:24 hours Hot:12 hours
15)	Any other information	NIL

एम.श्रीनिवास M. SRINIVAS

अपर महाप्रबंधक Addl.General Manager (EEMG)

एनटीपीसी लिमिटेड NTPC Limited, Telangana

ज्योतिनगर JYOTHINAGAR - 505 215

एस 3 प्रपत्र के अनुसार प्रमाणित
Certified as As3 Form

Ashwini shree
सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार / Govt. of India
दक्षिण क्षेत्रीय विद्युत समिति
Southern Regional Power Committee
के.वि.प्रा., बंगलूरु / C.E.A., Bengaluru

Format ASI: Generator Details by RRAS Provider

From: NTPC Tamil Nadu Energy Company Ltd, Vallur Thermal Power Station, Vallur, Chennai-600103

To: SRPC, Bengaluru

Validity of the Information From 16.12.2023 To 15.01.2024

Date: 07-12-2023

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units (e.g. 1 x 210 MW + 2 x 500 MW)	3X500
b)	Total Installed Capacity (MW)	1500
c)	Maximum possible Ex-bus injection (MW) (including overload if any)	1399.65
d)	Technical Minimum (MW)/unit	256.6
e)	Type of Fuel	Coal
f)	Region	SR
g)	Bid area	S2
h)	Fixed Cost (paise / kWh upto one decimal place)	170.2
i)	Variable Cost (paise / kWh upto one decimal place)	418.0
j)	Ramp-Up Rate (MW/Min) for each unit	4.666
k)	Ramp-Down Rate (MW/Min) for each unit	4.666
l)	Start-up Time (in Min) from Cold Start & Warm Start of each unit	480/240
m)	Any other information	Absolute cold start up time(unit S/D duration more than 5 days, Boiler preservation is required): 1080 minutes Cold startup time: 480 minutes Warm startup time: 240 minutes *As per draft detailed procedure for SCUC ,USD,SCED, dated 07.09.23 by NLDC.

Copy to:
SRLDC

Signature of Authorized Signatory (with Stamp)

Name:

A Suresh Babu

Designation:


DGM (EEMG)
A. SURESH BABU
Dy. General Manager (EEMG)
NTPC Tamilnadu Energy Company Ltd.
Vallur Thermal Power Station
P.O.: Vellivoyal Chavadi, Chennai-600 103.

एस 3 प्रपत्र के अनुसार प्रमाणित
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Ashwini Suresh
सहायक कार्यपालक अभियंता
Asst. Executive Engineer
भारत सरकार / Govt. of India
दक्षिण क्षेत्रीय विद्युत समिति
Southern Regional Power Committee
के.वि.प्रा., बेंगलूरु / C.E.A., Bengaluru

Annexure – I: Technical and Commercial Parameters of SRAS Providers

Thermal (Coal/Lignite/Gas) Generator Details for Participation in Secondary Reserve Ancillary Service Provider (SRAS)		
From: KUDGI Super Thermal Power Station / NTPC Limited		
To: NRPC/WRPC/SRPC/ERPC/NERPC		
Format SRAS : Generator Details by SRAS Provider (Thermal)		
Validity of the Information From: 16/12/2023 To: 15/01/2024		
Date: 08/12/2023		
S.No	Title/Parameters	Values/Data
1	Number of Generating Units (e.g. 1 x 210 MW + 2 x 500 MW)	3*800 MW
2	Total Installed Capacity (MW)	2400 MW
3	Auxiliary consumption (%)	6.25%
4	Maximum possible Ex-bus injection (MW) (including overload if any)	2250 MW
5	Technical Minimum (MW)	1237.5 MW
6	Type of Fuel	Fuel (Primary)-Coal Fuel (Secondary)-Oil
7	Region	SOUTHERN Region
8	Bid area	S1
9	Fixed Cost (paise / kWh upto one decimal place)	166.4
10	Variable Cost (paise / kWh upto one decimal place)	528.2
11	Compensation Charges(paise/kWh upto one decimal)(other than section-62 plants)	NA
12	Ramp-Up Rate (MW/Min) for each unit	7.5
13	Ramp-Down Rate (MW/Min) for each unit	7.5
14	Start-up Time from Cold Start (in Min) & Warm Start of each unit	HOT- 300 WARM-1740 COI.D-2100
15	Any other information	


बिद्यानंद झा / Bidya Nand Jha
 महासंचालक (प्रदा. एवं. सप्ल.) / General Manager (O&M)
 एनटीपीसी लिमिटेड, कुडगी एस.टी.पी.एस.
 NTPC Limited, Kudgi S.T.P.S.
 बिलसपुर कर्नाटक / Vijayapura, Karnataka - 586121.

एएस 3 प्रपत्र के अनुसार प्रमाणित
 Certified as As3 Form

Anderi Shree
 सहायक कार्यपालक अभियंता
 Asst. Executive Engineer
 भारत सरकार, Govt. of India
 दक्षिण क्षेत्रीय विद्युत समिति
 Southern Regional Power Committee
 के.वि.प्रा., बंगलूरु / C.E.A., Bengaluru