

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.GT/2026

IN THE MATTER OF : Petition under Section-62 & Section 79(1)(a) of the Electricity Act, 2003 read with Chapter-III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Regulation-9 & 29A of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 **for approval of additional capitalization and supplementary tariff w.e.f. anticipated CODess on account of installation of Integrated Battery Energy Storage Systems of 125 MW /250 MWh capacity under the VGF scheme of GOI at Khargone Super Thermal Power Station (2x660 MW) for the period from 29.09.2027 (anticipated CODess) to 31.03.2029.**

Petitioner: : NTPC Ltd.
NTPC Bhawan
Core-7, Scope Complex
7, Institutional Area, Lodhi Road
New Delhi-110 003.

Respondents

1. Madhya Pradesh Power Management Company Ltd.(MPPMCL)
Shakti Bhawan, Vidyut Nagar,
Jabalpur 482 008
2. Maharashtra State Electricity Distribution Co Ltd. (MSEDCL)
Prakashgad, Bandra (East),
Mumbai 400 051
3. Gujarat Urja Vikas Nigam Ltd.(GUVNL)
Vidyut Bhavan, Race Course
Vadodara – 390 007

4. Chhattisgarh State Power Distribution Co. Ltd
(CSPDCL)
P.O. Sundar Nagar,
Danganiya, Raipur – 492013
- 5 Electricity Department
Government of Goa
Vidyut Bhawan, Panaji, Goa
- 6 Dadra And Nagar Haveli and Daman and Diu Power
Distribution Corporation Limited (DNHDDPDCL);
1st & 2nd Floor, Vidyut Bhavan, Silvassa-396230,
DNH, India

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Executive Summary of the Petition (Summary of Issues)

Conspectus:

The present petition is being filed under Section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Chapter-3, Regulation-9 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 read with subsequent Second Amendment **for approval of additional capitalisation of integrated BESS (250 MWh) at Khargone Super Thermal Power Station (2x660 MW) and its supplementary tariff for the period from anticipated CODess, i.e. 29.09.2027, to 31.03.2029.**

Brief background of the Petitioner :

- 1) The Petitioner herein NTPC Limited (hereinafter referred to as '**Petitioner**' or '**NTPC**'), is a company incorporated under provisions of the Company Act, 1956 and a Government Company as defined under Section 2(45) of the Companies Act, 2013. Further, NTPC is a 'Generating Company' as defined under Section 2(28) of the Electricity Act, 2003 and is owned and controlled by the Government of India. In terms of Section 79(1)(a) of the Act, this Hon'ble Commission is vested with exclusive jurisdiction to regulate the tariff of NTPC.

Brief background of the Respondent(s):

- 2) The respondents to the instant petition are the distribution licensee/ bulk power procuring utilities and are the beneficiaries of the instant generating station i.e. Khargone Super Thermal Power Station (2x660 MW). The power generated from Khargone STPS is being supplied to various discoms as per MoP allocation and respective PPAs including Madhya Pradesh Power Management Company Ltd. (MPPMCL), Maharashtra State Electricity Distribution Co Ltd. (MSEDCL), Gujarat Urja Vikas Nigam Ltd. (GUVNL), Chhattisgarh State Power Distribution Co. Ltd

(CSPDCL), Electricity Department - Government of Goa, Dadra And Nagar Haveli and Daman and Diu Power Distribution Corporation Limited (DNHDDPDCL).

Background of Generating Station/Unit:

- 3) The Petitioner is having power stations/ projects at different regions and places in the country. Khargone Super Thermal Power Station (2x660MW) (hereinafter referred to as '**Khargone STPS**') is one such coal-based thermal generating station located in the State of Madhya Pradesh. It comprises of two operational units, each of 660 MW capacity. The Station has achieved its COD on 04.04.2020.

Brief details relevant to the Petition:

- 4) Considering the strategic requirement of Energy Storage in India, on 09.06.2025, Ministry of Power, Government of India ("MoP") has issued Viability Gap Funding Scheme ("VGF Scheme") for the development of Battery Energy Storage Systems (BESS) supported through Power System Development Fund ("PSDF"). This VGF scheme provides VGF to 15 States and NTPC for development of 30 GWh BESS capacity supported through PSDF.
- 5) This VGF scheme, inter alia, allocated 5000 MWh (5 GWh) of BESS capacity to NTPC for deployment at NTPC thermal power generating stations with Viability Gap Funding @ Rs. 18 Lakhs per MWh.
- 6) BESS capacity has been allocated to NTPC for optimum utilization of thermal generation and transmission infrastructure as well as to facilitate meeting non-solar hour electricity demand in a reliable and economic manner. The VGF Scheme further provides that the BESS capacity allocated to NTPC is to be implemented under Section 62 of the Electricity Act, 2003 as per CERC regulations/orders.
- 7) The CERC (Terms and Condition of Tariff) (Second Amendment) Regulations 2026 has introduced Regulation 29A in respect of additional capitalization on account of an integrated energy storage system with the generating station.
- 8) The Petitioner has awarded the EPC package through competitive bidding route for installation of BESS (125 MW/250 MWh) at Khargone STPS. The scheduled commissioning of BESS has been considered 18 months from the date of award of

the package. The detailed submission regarding BESS and indicative supplementary tariff w.e.f anticipated CODess is being provided in the instant tariff petition.

- 9) Accordingly, the present Petition is being filed by the Petitioner for approval of installation of BESS (125 MW/ 250 MWh) at Khargone STPS and supplementary tariff on anticipated CODess, as per the provisions of Regulation 9 of Tariff Regulations 2024 read with Second Amendment.

Summary of Claims:

In the light of above submission, the petitioner, therefore, prays that the Hon'ble Commission may be pleased to:

- a. Grant approval for additional capitalization for BESS as Integrated Energy Storage System at Khargone STPS.
- b. Approve the indicative supplementary tariff from the anticipated CODess for Integrated BESS at Khargone STPS.
- c. Grant liberty to amend the instant petition for approval of supplementary tariff based on actual cost incurred on CODess after implementation of Integrated Energy Storage System as per Regulations 9 (4)(a) and 29 (A)(4) of CERC Tariff Regulations 2024 and amendments thereof.
- d. Allow the petitioner for submission of additional information and facts as may be required.
- e. Pass any other order as it may deem fit in the circumstances mentioned above.

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.GT/2026

IN THE MATTER OF : Petition under Section-62 & Section 79(1)(a) of the Electricity Act, 2003 read with Chapter-III of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 and Regulation-9 & 29A of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 **for approval of additional capitalization and supplementary tariff w.e.f. anticipated CODess on account of installation of Integrated Battery Energy Storage Systems of 125 MW /250 MWh capacity under the VGF scheme of GOI at Khargone Super Thermal Power Station (2x660 MW) for the period from 29.09.2027 (anticipated CODess) to 31.03.2029.**

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Distribution Corporation Limited (DNHDDPDCL);
1st & 2nd Floor, Vidyut Bhavan, Silvassa-396230,
DNH, India

Detailed Petition

The Petitioner humbly states that:

- 1) The Petitioner herein NTPC Ltd., (hereinafter referred to as '**Petitioner**' or '**NTPC**'), is a Government of India undertaking and a Company incorporated under the Companies Act, 1956. Further, it is a 'Generating Company' as defined under Section 2(28) of the Electricity Act, 2003.
- 2) The Petitioner is having power stations/projects at different regions and locations in the country. The present petition pertains to Khargone Super Thermal Power Station (hereinafter referred as "Khargone STPS"), one such station located in the state of Madhya Pradesh with an installed capacity of 1320 MW (2x660 MW). The station supplies electricity to beneficiaries in terms of allocation made by the Ministry of Power, Government of India.
- 3) Under Section 79(1)(a) of Electricity Act, 2003, Hon'ble Commission is vested with the jurisdiction to regulate the tariff of the Generating Companies owned or controlled by the Central Government. Further, in exercise of powers under Section 178 of the Electricity Act, 2003, the Hon'ble Commission has notified the Central Electricity

Regulatory Commission (Terms and Condition of Tariff) Regulations, 2024 (hereinafter called Tariff Regulations 2024) and its Second Amendment Regulations.

- 4) Government of India (GOI) is taking all necessary steps to facilitate the energy transition from fossil fuel-based sources to non-fossil fuel sources. The incorporation of a significant amount of variable and intermittent Renewable Energy (RE) into the energy mix is imposing a challenge for maintaining grid stability and operation of thermal generating stations. The significant RE integration needs the support of thermal generation in India for demand-supply management and grid stability during solar and non-solar hours. This leads to cyclic scheduling/operation of thermal generating station(s). In several instances, thermal generating stations are getting below technical minimum level schedule during solar hours, whereas full schedule is received during non-solar hours. Such scheduling below Technical Minimum level is posing problem for keeping thermal generating unit(s) on bar to meet the demand during non-solar hours.
- 5) If the coal-based generation resources are to be used as a transition fuel in India, there is a need to keep the coal-based generating units on bar to absorb the variability and intermittency of renewable generation in India. Therefore, the integration of an energy storage system with the coal-based generating stations is required to enhance the grid stability and reliability of the power system by quickly responding to fluctuations in demand and supply through an integrated energy storage system.
- 6) Integration of large-scale variable energy resources necessitates additional measures for grid stability and reliability of the power system to minimize operational risk of the grid and enable the infusion of other flexible generation resources into the grid to balance the variability of the renewable generation. Increasing share of RE also necessitates flexible operation of thermal generation plants. The variability of renewable generation requires thermal generators to back down during periods of high RE availability, especially during solar hours. However, during non-solar hours, when solar generation is not available, thermal plants are essential to meet the demand of power.
- 7) Considering the strategic requirement of Energy Storage in India, on 09.06.2025, Ministry of Power, Government of India ("MoP") has issued Viability Gap Funding Scheme (hereinafter referred as "**VGF Scheme**") for the development of Battery

Energy Storage Systems (BESS) supported through Power System Development Fund ("PSDF"). This VGF scheme provides VGF to 15 States and NTPC @ Rs 18 Lakhs per MWh for development of 30 GWh of BESS capacity supported through PSDF.

- 8) This VGF scheme, inter alia, allocated 5000 MWh Battery Energy Storage System (BESS) capacity to NTPC for deployment of BESS at NTPC thermal power stations for optimum utilization of existing thermal generation and transmission infrastructure as well as to facilitate meeting non-solar hour electricity demand in a reliable and economic manner. Accordingly, out of 5000 MWh, BESS of 250 MWh is being implemented by NTPC at Khargone STPS.
- 9) The VGF Scheme further provides that the BESS capacity allocated to NTPC is to be implemented under Section 62 of the Electricity Act, 2003 as per CERC regulations/orders. A copy of the said VGF scheme dated 09.06.2025 is attached herewith as **Annexure-A**.
- 10) It is further submitted that on 20.03.2026, Hon'ble Commission has notified the CERC (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2026 and the same has come into force from 10.04.2026. This Second Amendment has introduced Regulation 29A in respect of additional capitalization on account of an integrated energy storage system with the generating station which provides as below:

Quote

"29A. Additional Capitalization on account of an integrated energy storage system with the generating station:

*(1) A generating company required to incur additional capital expenditure in the existing generating station for an integrated energy storage system shall share its proposal with the beneficiaries for their consideration, and seek response within 30 days. The generating company shall, thereafter, file a petition for in-principle approval of the integrated energy storage system in the planning stage along with the response of the beneficiaries, except those covered under the viability gap funding scheme. **For the integrated energy storage system covered under the viability gap funding scheme, the generating company shall file the petition for approval at the subsequent stage, within six months from the notification of these regulations.***

(2) The proposal under clause (1) above shall contain details of the proposed technology, scope of the work, phasing of expenditure, schedule of completion, estimated completion cost including interest during construction, foreign exchange component, if any, detailed computation of indicative impact on tariff to the beneficiaries, cost-benefit analysis and any other information considered to be relevant by the generating company.

(3) Where the generating company makes an application for approval of additional capital expenditure for installation of integrated energy storage system, the Commission may grant in-principle approval after due consideration of the reasonableness of the cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, and such other factors as may be considered relevant by the Commission..

(4) After completion of the implementation of the integrated energy storage system, the generating company shall file a petition for the determination of a supplementary tariff for the integrated energy storage system. Any expenditure incurred or projected to be incurred and admitted by the Commission after a prudence check based on the reasonableness of the cost shall form the basis of the determination of the tariff.

(5) Un-discharged liability, if any, on account of the integrated energy storage system shall be allowed as additional capital expenditure during the year it is discharged, subject to prudence check.”

Unquote

- 11) In terms of the above, the Petitioner is filing the instant petition for approval of additional capitalization in relation to installation of Integrated BESS (125 MW/250 MWh) at Khargone STPS under Govt. of India's VGF Scheme dated 09.06.2025 and supplementary tariff thereof with effect from anticipated CODess of in accordance with the provisions of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 and its subsequent Second Amendment Regulations.
- 12) The Petitioner has accordingly calculated the indicative supplementary tariff on anticipated CODess for BESS being implemented at Khargone STPS, and tariff forms with respect to the same are attached herewith as **Appendix-A**.
- 13) It is further submitted that the Board of Directors of NTPC, in its 565th meeting held on 28.03.2026, has accorded investment approval for installation of the Battery

Energy Storage System (BESS) comprising of total capacity of 4.70 GWh (Lot-1 for 2.33 GWh and Lot-2 for 2.37 GWh) at a total project cost of Rs 5,821.90 Crore including IDC and Financing Charges at Q4 FY 2025-26 price level, with an envisaged COD after 18 months from the date of award of the projects. A copy of the said Investment Approval is annexed herewith as **ANNEXURE-B**.

- 14) It is submitted that Khargone STPS forms part of the aforesaid Lot-2 BESS Project and has been allocated a Battery Energy Storage System (BESS) capacity of 250 MWh. The Investment Approval dated 28.03.2026 corresponding to 4.70 GWh includes project cost of **Rs 336.06 Crore pertaining to BESS at Khargone STPS**.
- 15) It is further submitted that EPC package for implementation of BESS at Khargone STPS has been awarded through competitive bidding route. Notification of Award (NOA) of contract for the same has been issued on 30.03.2026. Further, as per Investment Approval (IA), the schedule completion period for BESS has been envisaged as 18 months from the date of award of the project.
- 16) The BESS capacity/configurations and plant locations have been identified primarily considering the availability of Un-requisitioned Surplus (URS) power, and availability of required land.
- 17) The salient details of integrated BESS (250 MWh) to be set up at Khargone STPS are provided in the below table:

Integrated BESS (125 MW/250 MWh) at Khargone STPS		
1	Total Capacity of BESS	125 MW /250 MWh
2	Cycles per day	2 cycles of 2 hours each day
3	Technology	Lithium Iron Phosphate (LFP) battery technology
4	Capital Cost (As per Investment Approval including IDC and FC)	Rs 336.06 Cr
5	Viability gap funding (VGF)	Rs 18 lakh/MWh at milestones as mentioned in the VGF Scheme
6	Implementation period	18 months from the date of award. Date of award: 30.03.2026
7	Scope of the work	The scope includes BESS Implementation at Khargone STPS and interconnection with the existing thermal power plant facilities. The BESS shall

		comprise of Battery System, Battery Management System (BMS), Energy Management System (EMS) and SCADA, Power Conversion System (PCS), Inverter Duty Transformer (IDT), 33 kV pooling switchgear, Protection system, Communication System, HT & LT System, Auxiliary power system, Fire Fighting, remote control and monitoring, and all other associated materials and accessories necessary for trouble free operation and maintenance of the BESS system.
8	Operating/Financial Parameters considered as provided in CERC (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2026	
(i)	Useful life	15 years
(ii)	Round Trip efficiency (RTE _{ess})	85 %
(iii)	Auxiliary Energy Consumption (AEC _{ess})	5 % of the BESS Input energy
(iv)	Annual Degradation factor	2%
(v)	Normative Annual Availability factor (NAPAF _{ess})	90 %
(vi)	Return on Equity (post tax)	14.00 %
(vii)	Interest on Working Capital	11.95 %
(viii)	O&M Cost (as % of original project cost)	2.00 %
(ix)	Annual escalation in O&M Cost up to 2 years	5.25 %
(x)	Working Capital	
	Receivables (no of days)	45.00
	Maintenance Spares (as % of O&M Cost)	10.00%
	O&M Expenses (no of month)	1.00
(xi)	Debt: Equity	70:30
9	VGF	Rs 18.00 Lakh per MWh
10	Indicative Tariff of BESS, on the basis of the capital cost and the operating parameters as mentioned above, is as follows:	
(i)	Indicative 1st year Annual Fixed Cost of BESS	Rs 61.68 Cr/year*

	Indicative 1st year Supplementary Capacity Charges of BESS	Rs 3.76 /kWh
	<i>* The Annual Fixed Cost for BESS shall be borne by the beneficiaries as per their respective percentage share or allocation in the capacity of the generating station where the BESS is installed.</i>	
(ii)	Supplementary Energy charge: As per Regulation 8(5a) of Tariff Regulations 2024 read with its Second Amendment, Supplementary energy charge of the integrated energy storage system shall be computed based on the energy charge rate of the electricity sourced from the associated generating station or the tariff of the electricity procured for charging the integrated energy storage system based on sources other than the associated generating station, as the case may be, adjusted for the round-trip efficiency and auxiliary energy consumption of the integrated energy storage system.	

18) It is submitted that installation of BESS at thermal stations will lead to the following benefits:

- i. Assured Peak-Hour Supply at Lower Cost Compared to peak Market Rates:
 - a. Ensures assured availability of power during peak hours, improving system reliability for beneficiaries.
 - b. During non-solar hours, renewable energy (RE) generation drops significantly, resulting in power shortages and sustained high prices in the Power Exchange (PX), often reaching the ceiling rate of **Rs 10/kWh**. In many instances, the required quantum of power is also not available in the market.
 - c. In this context, installing BESS offers a reliable and strategic solution. BESS can store Un-Requisitioned Surplus (URS) from thermal power stations during off-peak hours/solar hours and discharge this stored energy during morning and evening peak hours, thereby ensuring dependable supply at competitive rates.
- ii. Reduced Cycling of Thermal Units: Minimizing frequent ramping and cycling operations of thermal generating units enhances plant performance, efficiency, and life, ultimately benefiting beneficiaries.

- iii. Optimum utilization of existing transmission infrastructure: Optimum utilisation of existing transmission infrastructure has been envisaged for the evacuation of power for BESS.
 - iv. Transparent and Competitive Cost: Capital cost has been discovered through transparent competitive bidding and tariff determination shall be through the regulatory framework.
- 19) Upon completion of implementation of the integrated BESS system at Khargone STPS, the Petitioner shall file a separate petition/amend the instant petition for determination of supplementary tariff (i.e. after CODess of BESS), as directed by Hon'ble Commission, in terms of Regulations 9(4)(a) and Regulations 29(A)(4) based on actual expenditure incurred as well as projected expenditure to be incurred, as applicable, and normative operating parameters/ norms as specified by the Hon'ble Commission in Tariff Regulations 2024 as amended from time to time.
- 20) It is submitted that the Petitioner has uploaded a copy of the present Petition at CERC website (Saudamini portal), the access of which is available to all the Respondents mentioned herein above and therefore the petition stands served to all the respondents. Further, the petitioner has also posted the present Petition on the company's website, i.e., www.ntpc.co.in.

Prayers

It is respectfully prayed that the Hon'ble Commission may be pleased to:

- a. Grant approval for additional capitalization for BESS as Integrated Energy Storage System at Khargone STPS.
- b. Approve the indicative supplementary tariff from the anticipated CODess for Integrated BESS at Khargone STPS.
- c. Grant liberty to amend the instant petition for approval of supplementary tariff based on actual cost incurred on CODess after implementation of Integrated Energy Storage System as per Regulations 9 (4)(a) and 29 (A)(4) of CERC Tariff Regulations 2024 and amendments thereof.
- d. Allow the petitioner for submission of additional information and facts as may be

required.

- e. Pass any other order as it may deem fit in the circumstances mentioned above.

Date:01.09.2026

Place: Noida

Petitioner – NTPC Ltd.

APPENDIX-A

**TARIFF FILING FORMS
(INTEGRATED BATTERY ENERGY STORAGE-BESS)**

FOR APPROVAL OF SUPPLEMENTARY TARIFF

FOR

BESS at Khargone STPS (125 MW / 250 MWh)

(From Anticipated CODess (29.09.2027) to 31.03.2029)

Checklist of Main Tariff Forms and other information for tariff filing for Thermal Stations

Form No.	Title of Tariff Filing Forms (Thermal)	Tick
FORM- 1	Summary of Tariff	✓
FORM -1 (I)	Statement showing claimed capital cost	✓
FORM -1 (II)	Statement showing Return on Equity	✓
FORM-2	Plant Characteristics	✓
FORM-3	Normative parameters considered for tariff computations	✓
FORM-3A	Statement showing O&M Expenses	✓
FORM-3B	Statement of Special Allowance	NA
FORM- 4	Details of Foreign loans	**
FORM- 4A	Details of Foreign Equity	NA
FORM-5	Abstract of Admitted Capital Cost for the existing Projects	NA
FORM-5A	Abstract of Claimed Capital Cost for the existing Projects	NA
FORM- 6	Financial Package upto COD	NA
FORM- 7	Details of Project Specific Loans	**
FORM- 8	Details of Allocation of corporate loans to various projects	**
FORM-9A^	Summary of Statement of Additional Capitalisation claimed during the period	**
FORM-9	Statement of Additional Capitalisation after COD	✓
FORM- 10	Financing of Additional Capitalisation	✓
FORM- 11	Calculation of Depreciation on original project cost	✓
FORM- 12	Statement of Depreciation	✓
FORM- 13	Calculation of Weighted Average Rate of Interest on Actual Loans	**
FORM- 14	Draw Down Schedule for Calculation of IDC & Financing Charges	NA
FORM- 15	Details of Fuel for Computation of Energy Charges	**
FORM- 15A	Details of Secondary Fuel for Computation of Energy Charges	**
FORM- 16	Details of Limestone for Computation of Energy Charge Rate	NA
FORM-17	Details of Capital Spares	***
FORM- 18	Non-Tariff Income	***
FORM-19	Details of Water Charges	***
FORM-20	Details of Statutory Charges	***

List of Supporting Forms / documents for tariff filing for BESS

Form No.	Title of Tariff Filing Forms (Thermal)	Tick
FORM-A	Abstract of Capital Cost Estimates	✓
FORM-B	Break-up of Capital Cost for Coal/Lignite based projects	✓
FORM-C	Break-up of Capital Cost for Gas/Liquid fuel based Projects	NA
FORM-D	Break-up of Construction/Supply/Service packages	NA
FORM-E	Details of variables , parameters , optional package etc. for New Project	NA
FORM-F	Details of cost over run	**
FORM-G	Details of time over run	**
FORM -H	Statement of Additional Capitalisation during end of the useful life	NA
FORM -I	Details of Assets De-capitalised during the period	***
FORM -J	Reconciliation of Capitalisation claimed vis-à-vis books of accounts	***
FORM -K	Statement showing details of items/assets/works claimed under Exclusions	***
FORM-L	Statement of Capital cost	**
FORM-M	Statement of Capital Woks in Progress	**
FORM-N	Calculation of Interest on Normative Loan	✓
FORM- O(i)^	Computation of Energy Charges	✓
FORM-O	Calculation of Interest on Working Capital	✓
FORM-P	Incidental Expenditure up to SCOD and up to Actual COD	**
FORM-Q	Expenditure under different packages up to SCOD and up to Actual COD	**
FORM-R	Actual cash expenditure	**
FORM-S	Statement of Liability flow	**
FORM-T	Summary of issues involved in the petition	✓

** Shall be provided at the time of COD

*** Shall be provided at the time of true up

^ Additional Forms

Summary of Tariff

Name of the Petitioner:	NTPC Limited
Name of the Generating Station:	Khargone BESS (125 MW / 250 MWh)
Place (Region/District/State):	Western Region / Khargone / Madhya Pradesh

Amount in Rs. Lakh

S. No.	Particulars	Unit	Existing	2027-28 (29.09.2027 to 31.03.2028)	2028-29
1	2	3	4	7	8
1.1	Depreciation	Rs Lakh	NA	1,999.08	1,885.14
1.2	Interest on Loan	Rs Lakh		1,782.12	1,558.73
1.3	Return on Equity	Rs Lakh		1,635.03	1,541.84
1.4	Interest on Working Capital	Rs Lakh		104.78	99.86
1.5	O&M Expenses	Rs Lakh		646.54	680.48
	Total (AFC) - BESS	Rs Lakh		6167.55	5766.05
1.6	Supplementary Normative Capacity Charges (BESS)	Rs/Unit	NA	3.76	3.58
2	Supplementary Energy Charges & Source of Charging*			PI refer Note below	
2.1	Same Generating Station (Khargone)	Rs/Unit			
2.2	Another Generating Station 1 (Name)	Rs/Unit			
2.3	Another Generating Station 2 (Name)	Rs/Unit			
2.4	Renewable Generation 1 (Name)	Rs/Unit			
2.5	Renewable Generation 2 (Name)	Rs/Unit			
2.6	Open Market (Name of Platform/Traders)	Rs/Unit			
	Total				

Note-

*Regulation 8(5a) of Tariff Regulations 2024 read with its Second Amendment provides that:
"Supplementary energy charge of the integrated energy storage system shall be computed based on the energy charge rate of the electricity sourced from the associated generating station or the tariff of the electricity procured for charging the integrated energy storage system based on sources other than the associated generating station, as the case may be, adjusted for the round-trip efficiency and auxiliary energy consumption of the integrated energy storage system."

Further, Regulations 74(2)(a) provide that the procedure for charging, scheduling, and dispatch of electricity and energy account for the integrated ESS shall be prepared by the NLDC in consultation with the stakeholders.

As the Supplementary energy charges would only be known based on actual source of charging of the ESS, the same shall be furnished at the time of seeking the tariff determination on COD of BESS.

(Petitioner)

PART-I			
FORM- 1(I)			
Name of the Petitioner:		NTPC Limited	
Name of the Generating Station:		Khargone BESS (125 MW / 250 MWh)	
Amount in Rs. Lakhs			
<u>Statement showing claimed capital cost of the Integrated Energy Storage System (BESS)</u>			
S. No.	Particulars	2027-28 (29.09.2027 to 31.03.2028)	2028-29
1	2	3	4
1	Capital Cost	33,606.00	
1a	Add: Un-Amortized Finance Charges		
1b	Add: Notional IDC		
1c	Add: Loan ERV Charged to P&L		
1d	Less: 20% of total VGF received prior to CODess as per VGF scheme of GOI	900.00	
1e	Opening Capital Cost	32,706.00	30,456.00
2	Less: 50%/30% of total VGF received during the year/period as per VGF scheme of GOI	2,250.00	1,350.00
3	Add: Addition during the year/period	-	-
4	Less: De-capitalisation during the year/period	-	-
5	Less: Reversal during the year/period	-	-
6	Add: Discharges during the year/period	-	-
7	Closing Capital Cost	30,456.00	29,106.00
8	Average Capital Cost	31,581.00	29,781.00
Note: 1. As per VGF scheme of GOI, 20% of the funding is disbursed during construction upto COD and 50 % is released after COD and rest 30% after 1st year from COD 2. Details of Un-amortised finance charges, Notional IDC and Loan ERV Charged to P&L etc. shall be provided at the time of actual CODess.			
(Petitioner)			

PART-I
FORM- 1(IIA)

Name of the Petitioner:	NTPC Limited
Name of the Generating Station:	Khargone BESS (125 MW / 250 MWh)

Statement showing Return on Equity for Integrated Energy Storage System

Amount in Rs. Lakh

S. No.	Particulars	2026-27	2027-28 (29.09.2027 to 31.03.2028)	2028-29
1	2	3	6	7
	Return on Equity			
1	Gross Opening Equity (Normal)	-	9,811.80	9,136.80
2	Less: Adjustment in Opening Equity			
3	Adjustment during the year			
4	Net Opening Equity (Normal)		9,811.80	9,136.80
5	Less: Decrease due to 50%/30% of total VGF received during the year/period as per VGF scheme of GOI		675.00	405.00
6	Add: Increase in equity due to addition during the year / period		0.00	0.00
7	Less: Decrease due to De-capitalisation during the year / period		0.00	0.00
8	Less: Decrease due to reversal during the year / period		0.00	0.00
9	Add: Increase due to discharges during the year / period		0.00	0.00
10	Net closing Equity (Normal)		9,136.80	8,731.80
11	Average Equity (Normal)		9,474.30	8,934.30
12	Rate of ROE (%) (Grossed up with applicable tax rate)		17.258	17.258
13	Total ROE		1,635.03	1,541.84

(Petitioner)

PART-I FORM-2		
<u>Integrated BESS Characteristics</u>		
Name of the Petitioner	NTPC Ltd.	
Name of the Generating Station	Khargone BESS (125 MW / 250 MWh)	
Unit(s)/Block(s)/Parameters	Unit-1	Unit-2
Installed Capacity (MW) - Khargone STPS	660	660
Actual COD of Khargone STPS	1-Feb-20	4-Apr-20
Anticipated COD of BESS	29.09.2027	
Types of ESS (integrated)	BESS	
Technology of ESS (Li-ion, odium-Sulfur, or Lead-acid)	Li-Ion (LFP-Lithium Iron Phosphate)	
Number of Battery Racks/Modules of ESS	Typically 12 Battery Racks in one container (May vary as per OEM configuration)	
Number of Battery Cell in ESS	Typically 4992 Cells in one container (May vary as per OEM Configuration)	
Voltage capacity of Battery Cell (DC volt)	Nominal Voltage 3.2 V/Cell (May vary as per OEM Configuration)	
Operation mode (bi-directional or uni-directional at interface point with the grid)	Bi-directional	
Rated Capacity (MW) of ESS (Start of year-1)	125	
Maximum continuous rating of ESS (MW) (Start of year-1)	125	
Energy Capacity (MWh) of ESS (Start of year-1)	250	
Voltage output of ESS		
	AC	400 KV (Point of interconnection)
	DC	Min: 1123.2 V Nominal: 1331.2 V Max: 1497.6 V (May vary as per OEM Configuration)
Power Factor of ESSS	0.95 lead to 0.95 lag	
Round-Trip Efficiency of ESS	85%	
Response Time of ESS	Typically <1 sec (Shall be as per OEM configuration. Response time shall meet the grid code requirements)	
State of Charge (SoC)	0-100% (May vary as per OEM Configuration)	
Cycle Life of ESS	~8000 Cycles	
C-Rate of ESS		
i) Charging	0.5 C	
ii) Discharging	0.5 C	
Black Start Capability of ESS	Yes	
Efficiency or Utilization factor (%) of ESS		
Special Features/Site Specific Features ⁸		
Any other special features		
Petitioner		

Normative parameters considered for computation of supplementary tariff of Integrated ESS

Name of the Petitioner:	NTPC Limited					
Name of the Generating Station:	Khargone BESS (125 MW / 250 MWh)					
Particulars	Unit	2024-25	2025-26	Existing 2026-27	2027-28 (29.09.2027 to 31.03.2028)	2028-29
1	2	4	5	6	7	8
Base Rate of Return on Equity	%			NA	14.00	14.00
Effective Tax Rate	%				18.8760	18.8760
O&M Expenses	% of Capital Cost				2.00	2.00
Maintenance Spares for WC	% of O&M				10.00	10.00
Receivables for WC	in Days				45	45
O&M Expenses for WC	in month				1	1
Round-Trip Efficiency	%				85	85
Number of Cycles per day	%				2	2
Total annual cycles					331	657
Availability of ESS (NAPAF)	%				90	90
Auxiliary Energy Consumption of ESS	%				5	5
Depth of Discharge (DoD)						
Useful life of ESS	Years				15	15
Petitioner						

Part-I
FORM-3A
ADDITIONAL FORM

Calculation of O&M Expenses

Name of the Company :	NTPC Limited
Name of the Power Station :	Khargone BESS (125 MW / 250 MWh)

Amount in Rs. Lakhs

S.No	Particulars	2024-25	2025-26	2026-27	2027-28 (29.09.2027 to 31.03.2028)	2028-29
1	2	3	4	5	6	7
1	O&M expenses under Reg.36(4)					
1a	Normative				646.54	680.48
2	O&M expenses under Reg.36(6)					
2a	Water Charges*					
2b	Security expenses *					
2c	Capital Spares*					
	Total O&M Expenses				646.54	680.48

* Shall be provided at the time of CODess/truing up

Petitioner

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner	NTPC Limited
Name of the Generating Station	Khargone BESS (125 MW / 250 MWh)
CODess (Anticipated)	29.09.2027
For Financial Year	2027-29 (Summary)

Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)			Justification	Admitted Cost by the Commission, if any
		2027-28	2028-29	Regulations under which claimed		
1	2	3	4	5	6	7
A.	Works eligible for RoE at Normal Rate					
1	Shall be provided at the time of CODess/ truing up, if any					
2						
3						
4						
	Total (A)					
B.	Works eligible for Return on Equity linked to SBI MCLR					
1	Shall be provided at the time of CODess/ truing up, if any					
2						
3						
4						
	Total (B)					
Total Add. Cap. Claimed (A+B)						

(Petitioner)

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited						
Name of the Generating Station		Khargone BESS (125 MW / 250 MWh)						
CODess (Anticipated)		29.09.2027						
For Financial Year		2027-28 (29.09.2027 to 31.03.2028)						
								Amount in Rs Lakh
Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
A.	Works eligible for RoE at Normal Rate							
1	Shall be provided at the time of CODess/ truing up, if any							
2								
3								
4								
Total (A)								
B.	Works eligible for Return on Equity linked to SBI MCLR							
1	Shall be provided at the time of CODess/ truing up, if any							
2								
3								
4								
Total (B)								
Total Add. Cap. Claimed (A+B)								
(Petitioner)								

Year wise Statement of Additional Capitalisation after COD

Name of the Petitioner		NTPC Limited						
Name of the Generating Station		Khargone BESS (125 MW / 250 MWh)						
CODess (Anticipated)		29.09.2027						
For Financial Year		2028-29						
								Amount in Rs Lakh
Sl. No.	Head of Work /Equipment	ACE Claimed (Actual / Projected)				Regulations under which claimed	Justification	Admitted Cost by the Commission, if any
		Accrual basis as per IGAAP	Un-discharged Liability included in col. 3	Cash basis	IDC included in col. 3			
1	2	3	4	5= (3-4)	6	7	8	9
A.	Works eligible for RoE at Normal Rate							
1	Shall be provided at the time of CODess/ truing up, if any							
2								
3								
4								
	Total (A)							
B.	Works eligible for Return on Equity linked to SBI MCLR							
1	Shall be provided at the time of CODess/ truing up, if any							
2								
3								
4								
	Total (B)							
	Total Add. Cap. Claimed (A+B)							
(Petitioner)								

Name of the Petitioner	NTPC Limited
Name of the Generating Station	Khargone BESS (125 MW / 250 MWh)
Date of Commercial Operation (Anticipated)	29.09.2027

Amount in Rs Lakh										
Financial Year (Starting from COD)1	Actual					Admitted				
	2024-25	2025-26	2026-27	2027-28	2028-29	2024-25	2025-26	2026-27	2027-28	2028-29
1		3	4	5	6	7	8	9	10	11

Amount capitalised in Work/ Equipment

Financing Details	Add cap is proposed to be financed in Debt:Equity ratio of 70:30
Loan-1	
Loan-2	
Loan-3 and so on	
Total Loan2	
Equity	
Internal Resources	
Others (Pl. specify)	
Total	

(Petitioner)

Calculation of Depreciation

Name of the Company :		NTPC Limited					
Name of the Power Station :		Khargone BESS (125 MW / 250 MWh)					
(Amount in Rs Lakh)							
Sl.No.	Name of the Assets	Gross Block as on 29.09.2027 (anticipated CODess)	Depreciation Rates as per CERC's Depreciation Rate Schedule	Depreciation Amount (2027-28)	Gross Block as on 31.03.2028	Depreciation Rates as per CERC's Depreciation Rate Schedule	Depreciation Amount (2028-29)
1	2	3	4	5	6	7	8
1	Integrated Energy Storage System-BESS	32706.00	6.33%	2070.29	30456.00	6.33%	1927.86
	TOTAL	32706.00		2070.29	30456.00		1927.86
	Weighted Average Rate of Depreciation (%)			6.33			6.33
(Petitioner)							

PART-I
FORM- 12

Statement of Depreciation

Name of the Company :	NTPC Limited
Name of the Power Station :	Khargone BESS (125 MW / 250 MWh)

(Amount in Rs Lakh)

S. No.	Particulars	Existing 2026-27	2027-28 (29.09.2027 to 31.03.2028)	2028-29
1	2	3	4	5
1	Opening Capital Cost	NA	32,706.00	30,456.00
2	Closing Capital Cost		30,456.00	29,106.00
3	Average Capital Cost		31,581.00	29,781.00
4	Freehold land			
5	Rate of depreciation		6.330%	6.330%
6	Depreciable value		28,422.90	26,802.90
7.	Balance useful life at the beginning of the period		15.00	14.50
8	Remaining depreciable value		28,422.90	25,792.44
9	Depreciation (for the period)		1,010.46	1,885.14
10	Depreciation (annualised)		1,999.08	1,885.14
11	Cumulative depreciation at the end of the period		1,010.46	2,895.60
12	Less: Cumulative depreciation adjustment on account of de-capitalisation		-	-
13	Net Cumulative depreciation at the end of the period after adjustments		1,010.46	2,895.60

(Petitioner)

Abstract of Capital Cost Estimates and Schedule of Commissioning for the New Projects
(Integrated Energy Storage System)

Name of the Petitioner	NTPC Limited	
Name of the Generating Station	Khargone BESS (125 MW / 250 MWh)	
<u>New Projects</u>		
<u>Capital Cost Estimates</u>		
Board of Director/ Agency approving the Capital cost estimates:	Board of Directors	
Date of approval of the Capital cost estimates:	28.03.2026	
	Present Day Cost	Completed Cost
Price level of approved estimates	4th Qtr of FY2025-26	As on Scheduled COD of the Station
Foreign Exchange rate considered for the Capital cost estimates		
Capital Cost excluding IDC, IEDC & FC (Rs. Lakh)		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Lakh)	32327.00	--
Capital cost excluding IDC, IEDC, FC, FERV & Hedging Cost (Rs. Lakh)	32327.00	--
IDC, IEDC,FC, FERV & Hedging Cost		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Lakh)	1279.00	--
Total IDC, IEDC, FC, FERV & Hedging Cost (Rs. Lakh)	1279.00	--
Rate of taxes & duties considered		
Capital cost Including IDC, IEDC, FC, FERV & Hedging Cost		
Foreign Component, if any (In Million US \$ or the relevant Currency)		
Domestic Component (Rs. Lakh)	33606.00	--
Capital cost Including IDC, IEDC& FC (Rs. Lakh)	33606.00	--
<u>Schedule of Commissioning</u>		
Scheduled CODess of integrated BESS	29.09.2027	
Petitioner		

							PART-I
							FORM- B
Break-up of Capital Cost for Integrated Battery Energy Storage system (BESS)							
Name of the Petitioner			NTPC Limited				
Name of the Generating Station			Khargone BESS (125 MW / 250 MWh)				
(Amount in Rs. Lakh)							
Sl. No.	Break Down	Present Day Cost as per Investment Approval (IA)	Anticipated Capital Expenditure of Battery Energy Storage (BESS) at Khargone STPS as on 29.09.2027 (anticipated CODess)	Liabilities corresponding to Capitalisation shown in Column (4)	Variation With Respect to IA (3-4-5)	Specific Reasons for Variation	Estimated Capital expenditure upto Cut-off date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2.5A	Specific Equipment of BESS						
2.5A.1	Battery Pack Cost	32,327.00	32,327.00				32,327.00
2.5A.2	Power Conversion System (PCS)						
2.5A.3	AC-DC/DC-DC Coupling cost						
2.5A.4	Battery Management System (BMS)						
2.5A.5	Specific fire protection system						
	Total Capital Cost (excluding IDC & FC)	32,327.00	32,327.00	-	-		32,327.00
8	IDC, FC, IEDC, FERV & Hedging Cost						
8.1	Interest During Construction(IDC)	1,279.00	1,279.00				1,279.00
8.2	Financing Charges (FC)						
8.3	Incidental Expenditure During Construction (IEDC)	Included in Sl. No. 2.5A above	Included in Sl. No. 2.5A above				
8.4	FERV	-	-				
8.5	Hedging Cost	-	-				
	Total of IDC, FC, IEDC, FERV & Hedging Cost	1,279.00	1,279.00		-		1,279.00
9	Capital cost of BESS (including IDC, FC, IEDC, FERV & Hedging Cost)	33,606.00	33,606.00	-	-		33,606.00
(Petitioner)							

PART 1 FORM- D		
Break-up of Construction/Supply/Service packages		
Name of the Petitioner		NTPC Limited
Name of the Generating Station		Khargone BESS (125 MW / 250 MWh)
(Amount in Rs. Lakh)		
S. No.	Name/No. of Construction / Supply / Service Package	EPC Package
1	Scope of works	BESS implementation at Khargone STPS
2	Whether awarded through ICB/DCB/ Departmentally/ Deposit Work	DCB
3	No. of bids received	15
4	Date of Award	30.03.02026
5	Date of Start of work*	30.03.02026
6	Expected date of completion of work	29.09.2027
7	Value of Award (excluding taxes) (in Rs. Lakh)	29884.07
8	Firm or With Escalation in prices	Firm
9	Actual capital expenditure till the completion or up to COD whichever is earlier (Rs. Lakh)	Shall be provided on actual CODess of BESS
10	Taxes & Duties and IEDC (Rs. Lakh)	
11	IDC, FC, FERV & Hedging cost (Rs. Lakh)	
12	Sub -total (9+10+11) (Rs. Lakh)	
(Petitioner)		

Details of variables, parameters, optional package etc. for New Project including integrated energy storage system

Name of the Petitioner		NTPC Ltd
Name of the Generating Station		NTPC Limited
BESS Capacity (MWh)		Khargone BESS (125 MW / 250 MWh)
S.No	Variables	(Design Operating Range) Values
1	Battery/Module Supply	Shall be as per OEM drawings
2	Power Conversion System (PCS)	Shall be as per OEM drawings
3	Energy Management & Control for ESS	Shall be as per OEM drawings

PART-I FORM- N				
Calculation of Interest on Normative Loan				
Name of the Company :		NTPC Limited		
Name of the Power Station :		Khargone BESS (125 MW / 250 MWh)		
(Amount in Rs Lakh)				
S. No.	Particulars	Existing 2025-26	2027-28 (29.09.2027 to 31.03.2028)	2028-29
1	2	3	4	5
1	Gross Normative loan – Opening	NA	22,894.20	21,319.20
2	Cumulative repayment of Normative loan up to previous year		0.00	1,010.46
3	Net Normative loan – Opening		22,894.20	20,308.74
4	Add: Increase due to addition during the year / period		-	-
5	Less: Decrease due to de-capitalisation during the year / period		-	-
6	Less: Decrease due to reversal during the year / period		-	-
7	Less: Decrease due to VGF received during the year / period		1,575.00	945.00
8	Add: Increase due to discharges during the year / period		-	-
9	Net addition in loan during the period (4-5-6-7+8)		-1575.00	-945.00
10	Less: Repayment of Loan		1,010.46	1,885.14
11	Net Normative loan - Closing		20,308.74	17,478.60
12	Average Normative loan		21,601.47	18,893.67
13	Weighted average rate of interest		8.25%	8.25%
14	Interest on Loan		1782.12	1558.73
Note: Weighted average rate of interest provisionally considered as 8.25% ,actual rate of interest shall be provided at time of CODess/ true up (Petitioner)				

Form-O(i)				
ADDITIONAL FORM				
Name of the Company			NTPC Limited	
Name of the Power Station			Khargone BESS (125 MW / 250 MWh)	
(Amount in Rs Lakh)				
SN	Particulars	Unit	2027-28 (29.09.2027 to 31.3.2028)	2028-29
	No. of days in the year		366	365
	No. of days in the period		185	365
1	Installed Capacity BESS	MWh	250.00	250.00
2	NAPAFess	%	90%	90%
3	Additional Auxiliary Power Consumption (BESS) AECess	%	5%	5%
4	Round Trip Efficiency	%	85%	85%
5	Cycles	No	2	2
6	Annual Degradation	%	2%	2%
7	Degraded capacity at beginning of the period	MWh	250.00	247.47
8	Degraded capacity at end of the period	MWh	247.47	242.47
9	Average Capacity after degradation	MWh	248.74	244.97
10	Normative Energy - OUT-BESS in the period	MU	82.83	160.95
11	Annual Normative Energy - IN-BESS in the period	MU	102.57	199.32
12	Average ECR of input charging energy *	Rs/kWh	PI refer Note below	
13	Cost of Energy - Input (Charging)	Rs Lakh		
14	Supplementary Energy Charge Rate (BESS)	Rs/kWh		
15	ECR Contribution of BESS	Rs/kWh		
16	Variable Cost for 1 Day	Rs Lakh		
17	Variable Cost for 45 Day	Rs Lakh		
Note	* Regulation 64B(2) of CERC Tariff Regulations 2024 read with its Second Amnedment provides that: <i>"The energy used for charging the integrated energy storage system shall be arranged from the surplus generation from the associated generating station where the integrated energy storage system is installed or the other generating station or from the open market."</i> Further, Regulations 74(2)(a) provide that the procedure for charging, scheduling, and dispatch of electricity and energy account for the integrated ESS shall be prepared by the NLDC in consultation with stakeholders. In view of the above, Average ECR of input charging energy would only be known based on actual source of charging of the ESS, and the same shall be considered for the computation of the supplementary energy charge and Interest on working capital at the time of seeking tariff determination on COD of BESS.			

Calculation of Interest on Working Capital

Name of the Company :	NTPC Limited
Name of the Power Station :	Khargone BESS (125 MW / 250 MWh)

(Amount in Rs Lakh)

S. No.	Particulars		Existing 2026-27	2027-28 (29.09.2027 to 31.3.2028)	2028-29
1	2		3	4	5
1	No of days		NA	185	365
2	O & M Expenses	1 month		53.88	56.71
3	Maintenance Spares	@10% of O&M		64.65	68.05
4	Receivables	45 days		758.31	710.88
5	Total Working Capital	Rs Lakh		876.84	835.64
6	Rate of Interest	%		11.95	11.95
7	Interest on Working Capital	Rs Lakh		104.78	99.86

Petitioner

Summary of issue involved in the petition

Name of the Company :		NTPC Limited				
Name of the Power Station :		Khargone BESS (125 MW / 250 MWh)				
1	Petitioner:	NTPC Limited				
2	Subject	Approval of additional capitalisation of BESS and supplementary tariff (on anticipated CODess) of 250 MWh BESS at NTPC Khargone STPS for the period from 29.09.2027 to 31.03.2029				
3	Prayer: a. Grant approval for additional capitalization for BESS as Integrated Energy Storage System at Khargone STPS. b. Approve the indicative supplementary tariff from the anticipated CODess for Integrated BESS at Khargone STPS. c. Grant liberty to amend the instant petition for approval of supplementary tariff based on actual cost incurred on CODess after implementation of Integrated Energy Storage System as per Regulations 9 (4)(a) and 29 (A)(4) of CERC Tariff Regulations 2024 and amendments thereof. d. Allow the petitioner for submission of additional information and facts as may be required. e. Pass any other order as it may deem fit in the circumstances mentioned above.					
4	Respondents: Six (6) no. respondents					
	Name of Respondents					
	1. Madhya Pradesh Power Management Company Limited		2. Maharashtra State Electricity Distribution Company Limited			
	3. Gujarat Urja Vikas Nigam Limited		4. Chattisgarh State Power Distribution Co. Ltd.			
	5. Electricity Department, Government of Goa		6. Dadra and Nagar haveli and Daman and Diu Power Distribution Corporation Limited (DNHDDPDCL)			
5	Project Scope					
		2024-25	2025-26	2026-27	2027-28	2028-29
	AFC (in Rs Lakh)				6167.55	5766.05
	Avg. Capital cost (in Rs Lakh)				31,581.00	29,781.00
	NAPAF (Gen)	90%				

Ministry of Power
NRE Section
Shram Shakti Bhawan, New Delhi

**Guidelines for Viability Gap Funding (VGF) Scheme for
development of Battery Energy Storage Systems
(BESS) supported through Power System Development
Fund (PSDF).**

1. Introduction

1.1 Objective: Development of 30GWh BESS capacity for deployment to ensure grid integration of RE and reliable electricity supply.

1.2 Energy storage systems are essential for integration of variable renewable energy (vRE) sources in the electricity grid. With an installation target of 393 GW (293 GW Solar and 100 GW Wind) by 2030, vRE will constitute approx. 50% of the installed generation capacity by 2030.

1.3 Increasing share of RE also necessitate flexible operation of thermal generation plants. The variability of renewable generation requires thermal generators to back down during periods of high RE availability, especially during solar hours. However, during evening peak hours, when solar generation is not available, thermal plants are essential to meet the evening peak. Therefore, BESS may also be installed with thermal power stations to leverage existing generation and transmission infrastructure efficiently.

1.4 As per CEA, 37GWh BESS capacity is required by 2027 and the requirement will increase to 236 GWh by 2031-32. BESS capacity of 13.2 GWh has been approved under the ongoing VGF scheme for development of BESS.

2 Scheme Overview

2.1 Viability Gap Funding (VGF): VGF of Rs 18 lakh per MWh, shall be provided and is aimed at supporting a BESS capacity of 30 GWh.

2.2 Scheme Budget: This scheme has a budgetary allocation of Rs 5,400 Crore. The VGF shall be a non-recurring expenditure and

shall be fully funded from Power System Development Fund (PSDF). The disbursement of funds shall be as per procedure applicable for PSDF. The VGF for each project shall be disbursed to the Eligible Entity/ REIA, once CEA certifies the achievement of the disbursement schedule milestone and submission of the required BG.

2.3 Commissioning Period: The projects are required to be commissioned within a period of 18 months from the date of signing of Battery Energy Storage Purchase Agreement (BESPA) / Power Purchase Agreement (PPA).

2.4 Eligible Entities: State utilities or agencies authorized by States Governments or Central Government shall be eligible. (refer Annexure).

2.5 Disbursement schedule: The VGF amount to the eligible projects shall be disbursed in three tranches as detailed below.

Milestone	% VGF disbursed
On financial closure, subject to submission of bank guarantee.	20
On Commercial Operation Date (COD)	50
Completion of 1st year from COD	30
Total	100

2.5 Storage Duration: The BESS capacity should preferably be with 2-hour discharge duration and average 1.5 cycles in a day i.e within 24 Hour period. However, the Eligible Entity may vary the duration, no of cycles as required.

3. Implementation Model

3.1. Bidding Process: BESS projects shall be awarded using the Tariff Based Competitive Bidding (TBCB) process under section 63 of the Electricity Act, 2003.

3.2 Contract Period: The contract period shall be specified in the RfS document, in accordance with the BESS TBCB Guidelines. The contract shall be awarded on Build Own Operate (BOO)/ Build Own Operate Transfer (BOOT) basis preferably for a contract period of 12 to 15 years.

[Handwritten signature]

3.3 Bidding Parameter: Developers shall compete based on the annualized fixed cost they offer, expressed in rupees per Megawatt (MW) per Month or on Rs/kWh after factoring in the VGF specified in the RfS.

3.4. Eligible Entities are required to invite bids, either by themselves or through Renewable Energy Implementing Agencies designated by Central Government, following the bidding guidelines issued under section 63 of the Electricity Act, 2003. The BESPA / PPA shall be signed within 9 months from the date of issue of these guidelines, to be eligible for VGF.

3.5 States / NTPC desirous of availing the VGF are required to submit their proposal to the Central Electricity Authority (CEA) within 60 days from the date of issue of these Guidelines, specifying the implementing agency, location(s) and size of BESS capacity planned for implementation for screening and approval for VGF funding through PSDF.

3.6 The project may be connected at InSTS or ISTS. The land and InSTS grid connectivity shall be provided by the respective Eligible Entities.

3.7 The payment security mechanism shall be as per Electricity (Late Payment Surcharge & Related matters), Rules 2022 as amended from time to time. CEA will monitor the implementation of the scheme as well as the progress of the awarded projects under the Scheme through a Management Information System (MIS) portal and submit monthly reports to the Ministry of Power. The monitoring parameters shall include details of physical and financial progress vis-a-vis the agreed milestones. The performance levels may also be verified by CEA on at least quarterly basis.

3.8. Bank Guarantee: The Eligible Entities/REIAs shall be required to obtain a Bank Guarantee (BG) of value equal to the VGF to be disbursed, prior to its release to the developer, as specified in the RfS. This BG shall be liable for encashment to recover the VGF amount in the event of non-fulfilment of the scheme conditions specified in the Bidding Documents. The BG for the VGF sanctioned up to COD may be released within one year of COD.

4. Eligible Entity/REIA Responsibilities

- 4.1. The Eligible Entity/REIA shall be responsible for:
- (i) inviting bids, and selecting the developer(s) for the allocated

- quantum and entering into contracts with the selected developer(s);
- (ii) ensuring and certifying that the bidding process complies with the Scheme guidelines and that all specified conditions are met;
 - (iii) acting as purchaser of energy storage services or output of BESS and entering into a BESPA / PPA with the developer for the contract period and BESSA / PSA with Eligible Entities, as applicable;
 - (iv) submit to CEA, all the requisite information for monitoring of the project including the audited Statement of Expenditure (SoE) and Utilization Certificate (UC) in the prescribed format of GFR 19 (A) as amended from time to time;
 - (v) comply with the provisions of General Financial Rules, 2017, as amended from time to time;

4.2. The VGF amount (Grant-in-Aid) is also subject to the Chapter 9 of the General Financial Rules, 2017, as amended from time to time, read with the Government of India's decisions incorporated there-under, and any other guidelines which may be issued in this regard.

4.3. Assets acquired wholly or substantially out of Central Government Grants shall not be disposed of during the contract period without obtaining the prior approval of the sanctioning authority of Grants-in-Aid {Rule 230(9)}. Shareholding of the bidding entity in the SPV/ project company executing the BESS project shall not fall below fifty-one per cent at any time prior to Commercial Operation Date (COD).

4.4. The accounts of Eligible Entity / REIA shall be audited by C&AG or by any person authorized by him on his behalf in accordance with the provisions laid down in Section 14 of the C&AG (DPC, 1971) and as amended from time to time.

4.5. The accounts of Eligible Entity / REIA shall be open for inspection by the sanctioning authority and audit, both by the Comptroller & Auditor General of India under the provision of C&AG (DPC) Act, 1971 and internal audit party by the Principal Accounts Office of the Ministry or Department whenever it is called upon to do so.

5. Notwithstanding the aforementioned provisions at para 3 and 4, NTPC may implement its allocated capacity under section 62 of the Electricity Act 2003, as per CERC Regulations/ Orders.



6. Amendment to the Operational Guidelines

6.1. These guidelines may be amended with the approval of Secretary, Ministry of Power, to address implementation challenges.

6.2. The implementation model in these guidelines may be modified by the Ministry of Power, if required.

Annexure Allocation of BESS Capacity under the Scheme

S.N.	State / Entity	BESS Capacity Allocation (MWh)
1	Rajasthan	4000
2	Gujarat	4000
3	Maharashtra	4000
4	Tamil Nadu	1500
5	Karnataka	2000
6	Andhra Pradesh	2000
7	Madhya Pradesh	1500
8	Telangana	1500
9	Uttar Pradesh	1500
10	Haryana	500
11	Kerala	500
12	Punjab	500
13	Chhattisgarh	500
14	Odisha	500
15	Uttarakhand	500
16	NTPC	5,000
	TOTAL	30,000

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PART MINUTES OF 565th MEETING OF THE BOARD OF DIRECTORS OF NTPC LIMITED HELD ON SATURDAY, 28th MARCH 2026.

Item no. 565.2.5 Battery Energy Storage System (BESS) Lot-1 & Lot-2 Projects (4.70 GWh): Investment Approval

XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX

The Board, after discussion, passed the following resolutions:

Resolved that as recommended by the Projects and Operations Sub-Committee, the investment proposal for Battery Energy Storage System (BESS) Projects, comprising Lot-1: 2.33 GWh and Lot-2: 2.37 GWh, aggregating to total capacity of 4.70 GWh, appraised by Resurgent India Limited, at total project cost of Rs.5,821.90 Crore including Interest During Construction (IDC) and Financing Charges (FC) of Rs.220.45 Crore as of Q4FY2025-26 price level, with an envisaged Commercial Operation Date (COD) of 18 months from the date of award of the projects, as detailed in the Memorandum submitted before the Board of Directors, be and is hereby approved.

Further resolved that Chairman and Managing Director, be and is hereby authorized to approve any subsequent modification, updates & reappropriation within the approved works cost forming part of approved total project cost as well as such changes as may be required in compliance with stipulations of statutory and regulatory authorities.



Handwritten signature
30/03/2026

Form-I

Particulars	
1. Name of the Petitioner/Applicant	NTPC Limited
2. Address of the Petitioner/Applicant	SCOPE Complex, Core -7, Institutional Area, Lodhi Road, New Delhi – 110 003
3. Subject Matter	Tariff Filing fees Payable to CERC in respect of NTPC Generation Stations under commercial operation as on 01.04.2026 for the period 2026-27 as per CERC (Payment of Fees) (Third Amendment) Regulations, 2022
4. Petition No., if any	As per Enclosed Sheet (Annexure A)
5. Details of generation assets a) Generating station/units b) Capacity in MW c) Date of commercial operation d) Period for which fee paid e) Amount of fee paid f) Surcharge, if any	As per Enclosed Sheet (Annexure A)
6. Details of transmission assets a) Transmission line and sub- stations b) Date of commercial operation c) Period for which fee paid d) Amount of fee paid e) Surcharge, if any	N.A.
7. Fee paid for Adoption of tariff for a) Generation asset b) Transmission asset	N.A.
8. Application fee for licence a) Trading licence b) Transmission licence c) Period for which paid d) Amount of fee paid	N.A.
9. Fees paid for Miscellaneous Application	N.A.
10. Fees paid for Interlocutory	45 N.A.

नरेश शर्मा / HARSHIT SHARMA
 नरेश प्रमोद (सी.पी.डी.एफ.)
 Sr. Manager (Commercial)
 (महानगर) / NTPC Limited
 CEC Area, Sector-2, NOIDA-201301 (UP)

Harsha

Application	
11. Fee paid for Regulatory Compliance petition	N.A.
12. Fee paid for Review Application	N.A.
13. License fee for inter-State Trading a) Category b) Period c) Amount of fee paid d) Surcharge, if any	N.A.
14. License fee for inter-State Transmission a) Expected/Actual transmission charge b) Period c) Amount of fee calculated as a percentage of transmission charge. d) Surcharge, if any	N.A.
15. Annual Registration Charge for Power Exchange a) Period b) Amount of turnover c) Fee paid d) Surcharge, if any	N.A.
16. Details of fee remitted a) Transaction id/ Reference No./ Payment id b) Date of remittance c) Amount remitted	Transaction id- 20ba8a7eb66ff46e1594 27.04.2027 Rs. 25,85,26,700.00/-
Note: While Sl. Nos. 1 to 3 and 16 are compulsory, the rest may be filled up as applicable	
Signature of the authorized signatory with date	

Dt. 27.04.2026

Harshit Sharma
Sr. Manager (Commercial)
NTPC Limited
EOC A-8A, Sector-24, Noida-201301 (U.P.)

CERC Filing Fees For FY 2026-27 For NTPC Stations

Annexure - A

S.No	Region	Station Name	Capacity as on 01.04.2026 (in MW)	Filling fees for 2026-27 (in Rs.) Rounded off to nearest hundred as per CERC Regulation
1	NR	Feroze Gandhi Unchahar Thermal Power Station-I	420	18,48,000
2	NR	Feroze Gandhi Unchahar Thermal Power Station-II	420	18,48,000
3	NR	Feroze Gandhi Unchahar Thermal Power Station-III	210	9,24,000
4	NR	Feroze Gandhi Unchahar Thermal Power Station-IV	500	22,00,000
5	NR	National capital Power Project Dadri Stage-I	840	36,96,000
6	NR	National capital Power Project Dadri Stage-II	980	43,12,000
7	NR	Tanda Super Thermal Power Station Stage-II	1320	58,08,000
8	NR	Singrauli Super thermal Power Station	2000	88,00,000
9	NR	Rihand Super Thermal Power Station-I	1000	44,00,000
10	NR	Rihand Super Thermal Power Station-II	1000	44,00,000
11	NR	Rihand Super Thermal Power Station-III	1000	44,00,000
12	NR	Dadri Gas Power Station	829.78	36,51,000
13	NR	Anta Gas Power Station	419.33	18,45,100
14	NR	Auraiya Gas Power Station	663.36	29,18,800
15	ER	Farakka Super Thermal Power Station, Stage-I&II	1600	70,40,000
16	ER	Farakka Super Thermal Power Station, Stage-III	500	22,00,000
17	ER	Kahalgaoon Super Thermal Power Station Stage-I	840	36,96,000
18	ER	Kahalgaoon Super Thermal Power Station Stage-II	1500	66,00,000
19	ER	Bongaigaon TPS	750	33,00,000
20	ER	Barh Super Thermal Power Station-I	1980	87,12,000
21	ER	Barh Super Thermal Power Station-II	1320	58,08,000
22	ER	Barauni TPS Stage-II	500	22,00,000
23	ER	Talcher Super Thermal Power Station Stage-I	1000	44,00,000
24	ER	Darlipali Super Thermal Power Station-I	1600	70,40,000
25	ER	North Karanpura Super Thermal Power Station	1980	87,12,000
26	ER	Nabinagar Super Thermal Power Station	1980	87,12,000
27	ER	Muzaffarpur Thermal Power Station Stage-II	390	17,16,000
28	WR	Korba Super Thermal Power Station, Stage-I&II	2100	92,40,000
29	WR	Korba Super Thermal Power Station, Stage-III	500	22,00,000
30	WR	Jhanor Gandhar Gas Power Project	657.39	28,92,500
31	WR	Kawas Gas Power Project	656.2	28,87,300

[Signature]
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CERC Filing Fees For FY 2026-27 For NTPC Stations

Annexure - A

S.No	Region	Station Name	Capacity as on 01.04.2026 (in MW)	Filling fees for 2026-27 (in Rs.) Rounded off to nearest hundred as per CERC Regulation
32	WR	Sipat Super Thermal Power Project Stage-I	1980	87,12,000
33	WR	Sipat Super Thermal Power Project Stage-II	1000	44,00,000
34	WR	Vindhyachal Super Thermal Power Station-I	1260	55,44,000
35	WR	Vindhyachal Super Thermal Power Station-II	1000	44,00,000
36	WR	Vindhyachal Super Thermal Power Station-III	1000	44,00,000
37	WR	Vindhyachal Super Thermal Power Station-IV	1000	44,00,000
38	WR	Vindhyachal Super Thermal Power Station-V	500	22,00,000
39	WR	Mouda Super Thermal Power Station I	1000	44,00,000
40	WR	Mouda Super Thermal Power Station II	1320	58,08,000
41	WR	Solapur Super Thermal Power Station	1320	58,08,000
42	WR	Gadarwara Super Thermal Power Station	1600	70,40,000
43	WR	Lara Super Thermal Power Station	1600	70,40,000
44	WR	Khargone Super Thermal Power Project	1320	58,08,000
45	SR	Talcher Super Thermal Power Station Stage-II	2000	88,00,000
46	SR	Ramagundam STPS Stage-I&II	2100	92,40,000
47	SR	Ramagundam STPS Stage- III	500	22,00,000
48	SR	Simadhri Thermal Power Station, Stage-I	1000	44,00,000
49	SR	Simadhri Thermal Power Station Stage-II	1000	44,00,000
50	SR	Kudgi Super Thermal Power station	2400	1,05,60,000
51	SR	Telangana Super Thermal Power Station	1600	70,40,000
52	HYDRO	Koldam Hydro	800	35,20,000
		TOTAL	58756.060	25,85,26,700

As per

DECLARATION

The Petitioner above named hereby solemnly declares that nothing material has been concealed or suppressed and further declares that the enclosures and typed set of material papers relied upon and filed herewith are true copies of original(s)/fair representation of the originals/true translation thereof.

Verified at Noida on this 1st day of September 2026.



Petitioner

NTPC Limited

प्रशान्त चतुर्वेदी/PRASHANT CHATURVEDI
अपर महाप्रबन्धक (वाणिज्यिक)
Addl. General Manager (Commercial)
एन टी पी सी लिमिटेड/NTPC LIMITED

VERIFICATION

Verified at Noida on this 1st day of September 2026, that the contents of my above noted affidavit are true and correct to my knowledge and no part of it is false and nothing material has been concealed therefrom.



Petitioner

NTPC Limited

Place: Noida

Date: 01.09.2026

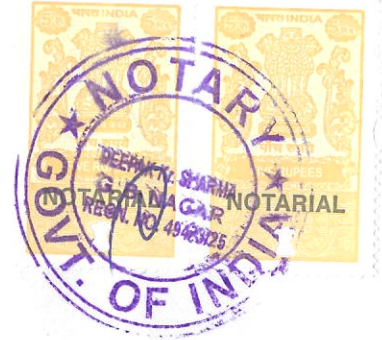
प्रशान्त चतुर्वेदी/PRASHANT CHATURVEDI
अपर महाप्रबन्धक (वाणिज्यिक)
Addl. General Manager (Commercial)
एन टी पी सी लिमिटेड/NTPC LIMITED

BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

PETITION NO/GT/2026

IN THE MATTER OF : Petition for approval of additional capitalization and supplementary tariff w.e.f. anticipated CODess on account of installation of Integrated Battery Energy Storage Systems of 125 MW /250 MWh capacity under the VGF scheme of GOI at Khargone Super Thermal Power Station (2x660 MW) for the period from 29.09.2027 (anticipated CODess) to 31.03.2029.

Petitioner: : NTPC Ltd.
NTPC Bhawan
Core-7, Scope Complex
7, Institutional Area, Lodhi Road
New Delhi-110 003



Respondents: 1. Madhya Pradesh Power Management Company Limited
Shakti Bhawan,
Vidyut Nagar, Rampur
Jabalpur – 482008

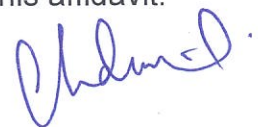
and Others

AFFIDAVIT

I, Prashant Chaturvedi, S/o Dr. S.C Chaturvedi, aged about 50 years, working as Additional General Manager (Commercial) at NTPC Limited, having my office at 7th Floor, EOC, Sector-24, Noida -201301 do hereby solemnly affirm and state as under:

1. That the deponent is the Additional General Manager (Commercial) of the Petitioner NTPC Ltd., and is well conversant with the facts and the circumstances of the case and therefore competent to swear this affidavit.





प्रशान्त चतुर्वेदी/PRASHANT CHATURVEDI
अपर महाप्रबन्धक (वाणिज्यिक)
Addl. General Manager (Commercial)
एन टी पी सी लिमिटेड/NTPC LIMITED

2. That the accompanying Petition under Section 62 and 79 (1) (a) of the Electricity Act, 2003, has been filed by my authorized representative under my instruction and the contents of the same are true and correct to the best of my knowledge and belief.
3. That the contents as mentioned in the Petition are true and correct based on the my personal knowledge, belief and records maintained in the office.
4. That the annexures annexed to the Petition are correct and true copies of the respective originals.
5. That the Deponent has not filed any other Petition or Appeal before any other forum or court of law with respect to the subject matter of the dispute.


(Deponent)

प्रशान्त चतुर्वेदी/PRASHANT CHATURVEDI
अपर महाप्रबन्धक (वाणिज्यिक)
Addl. General Manager (Commercial)
एन टी पी सी लिमिटेड/NTPC LIMITED

Verification:

Verified at Noida on this 21st day of August 2026, that the contents of my above noted affidavit are true and correct to my knowledge and no part of it is false and nothing material has been concealed therefrom.


(Deponent)

प्रशान्त चतुर्वेदी/PRASHANT CHATURVEDI
अपर महाप्रबन्धक (वाणिज्यिक)
Addl. General Manager (Commercial)
एन टी पी सी लिमिटेड/NTPC LIMITED



ATTESTED


DEEPAK Kr. SHARMA
NOTARY NOIDA
G.B. NAGAR (U.P.) INDIA

21 AUG 2026