# Nuclear Power Corporation of India Limited

July 16, 2024

| Facilities/Instruments | Amount (₹ crore) | Rating[1] | Rating Action |
|---|---|---|---|
| Long-term bank facilities | 12,465.47 (Enhanced from 10,145.87) | CARE AAA; Stable | Reaffirmed |
| Long-term / short-term bank facilities | 1,000.00 | CARE AAA; Stable / CARE A1+ | Assigned |
| Non-convertible debentures | 2,000.00 | CARE AAA; Stable | Reaffirmed |
| Non-convertible debentures | 2,200.00 | CARE AAA; Stable | Reaffirmed |
| Non-convertible debentures | 2,200.00 | CARE AAA; Stable | Reaffirmed |
| Non-convertible debentures | 3,500.00 | CARE AAA; Stable | Reaffirmed |
| Non-convertible debentures | 2,000.00 | CARE AAA; Stable | Reaffirmed |
| Non-convertible debentures | 2,500.00 | CARE AAA; Stable | Reaffirmed |
| Non-convertible debentures | 4,600.00 | CARE AAA; Stable | Reaffirmed |

Details of instruments/facilities in Annexure-1.

## Rationale and key rating drivers

CARE Ratings Limited (CARE Ratings) has reaffirmed the long-term rating of Nuclear Power Corporation of India Limited (NPCIL), while assigning "CARE A1+" to short-term bank facilities. Ratings derive strength from NPCIL's strong shareholding pattern, with Government of India (GoI) being the 100% owner. NPCIL's administrative control lies with the Department of Atomic Energy (DAE). CARE Ratings notes that GoI's strategic importance towards NPCIL is high towards the country's nuclear programme. The rating favourably factors in NPCIL's long-term power sales arrangement with power distribution companies (discoms) at the tariff determined by the DAE, which is largely based on principles of the Central Electricity Regulatory Commission (CERC), ensuring full recovery of cost with fixed returns subject to achievement of the normative parameters.

Ratings draw comfort from the large proportion of reactors employing indigenously developed technology, which also complements reactors operating on imported technology. Ratings take cognisance of GoI's continuous fuel management initiatives to support NPCIL, given its strategic importance and NPCIL's relatively competitive average tariff. Ratings take note of recent commissioning of the Kakrapar Atomic Power Station (KAPS)-4 unit of 700 megawatt (MW) with complete tie-up of capacity at a reasonable tariff. The sustained operational performance, characterised by long uninterrupted operations recorded by many of its reactors, has aided NPCIL to log a high plant load factor (PLF) over the years, adding strength to its business risk profile. Diversity in its underlying plant operations in terms of geographical and off-takers are other credit positives. While leverage metrics are expected to increase in the medium term considering large debt-funded proposed capacity addition, CARE Ratings expects improvement in the debt service coverage ratio (DSCR) considering commercialisation of units in Rajasthan and Tamil Nadu.

While ratings note significant financial progress in under-construction projects in FY24, there is risk associated with implementation and consequential increase in projected leverage metrics. Ratings factor cost overrun in units 7 and 8 (700 MW each) of the Rajasthan Atomic Power Station (RAPS) and Units 3 and 4 (1000 MW each) of the Kudankulam Nuclear Power Plant (KKNPP), which are expected to be commissioned in the next three years. NPCIL is also exposed to counterparty risk emanating from substantial sales to weaker discoms of Tamil Nadu, Jammu & Kashmir, and Telangana, which is alleviated through liquidity schemes rolled out by the Ministry of Power (MoP) in the last two years. Going forward, NPCIL is expected to receive a higher proportion of its sales from relatively stronger discoms of Gujarat.

## Rating sensitivities

**Positive factors – Factors that could lead to positive rating action/upgrade**

Not applicable

**Negative factors – Factors that could lead to negative rating action/downgrade:**

- Materially reducing sovereign ownership and the GoI's support to the company.
- Operations at lower-than-normative PLF on sustained basis, impacting profitability..
- Significant delays in receipt of payments from discoms, adversely impacting the liquidity profile.
- Inability to tie up PPAs at remunerative tariff for the new projects.

[1]Complete definition of the ratings assigned are available at www.careedge.in and other CARE Ratings Ltd.'s publications.

**Analytical approach**: Standalone. The rating continues to take cognisance of strategic importance of NPCIL to India's nuclear programme and parentage of GoI.

**Outlook**: Stable
The stable outlook reflects sustenance of NPCIL's strategic importance to GoI leading to favourable business model, maintenance of steady operational and financial risk profile in the medium term.

## Detailed description of key rating drivers

**Key strengths**

**Strategic importance underpins government support**
NPCIL is wholly owned by GoI with administrative control by the DAE. The company is the only player in India for the design, construction, commissioning, and operations of first-stage nuclear power reactors. Thus, NPCIL continues to be of strategic importance to India's nuclear power programme. The GoI plays a pivotal role of decision-making for capacity addition, transfer of technology, arrangement of fuel or consumables until the economic life of the reactor, tariff determination, and off-take arrangement. Over the years, the GoI has demonstrated financial support to NPCIL in the form of equity and loans for its capex plans. Appointment of directors on the board is with consultation from the DAE and the Central Electricity Authority (CEA). The company's day-to-day operations are managed by a team of qualified and seasoned professionals.

**Long-term sales arrangement with cost-reflective tariff determined by DAE**
Capacity of NPCIL's power plants is entirely tied up through power purchase agreements (PPAs) having a tenure of 15 years. Allocation of power to discoms is done through MoP. On the recommendation of the CEA, the DAE notifies tariff of power stations (by powers vested under the Atomic Energy Act, 1962). The tariff considers fuel price and heavy water lease charges, operating expenses, depreciation, interest, insurance, foreign exchange variation, decommissioning or waste management or renovation costs. The return on equity (RoE) is also considered, ensuring stable cash flows for the company. The tariff is single part only.

**Management of fuel supply by GoI**
As on March 31, 2024, about 71% of the installed capacity of NPCIL are under (IAEA) safeguards and run on imported fuel, while 29% of the capacity is strategic and run only on domestically produced fuel.
GoI is arranging fuel for NPCIL by virtue of its long-term supply contract with overseas vendors for the supply of natural uranium fuel pellets for its pressurised heavy water reactors (PHWRs). Continuous availability of stockpile at nuclear fuel complexes in India will be important from NPCIL's operational standpoint.

**Large operational capacity having indigenised technology**
As on March 31, 2024, around 69% of the installed capacity of NPCIL comprises pressurised heavy-water reactor (PHWR), which has been indigenously developed. About 45% of the capacity, which is under implementation, will be deploying PHWR technology and is scheduled to be commissioned by March 31, 2030. NPCIL has added 2-gigawatt (GW) of light-water reactor (LWR) technology and is expected to add another 4 GW of the technology by FY30. Due to its superior heat rates and operating performance, LWR is a popular technology across the world. Its fuel or spent fuel management process complements PHWR's operations as well.

**Stable operational performance**
The extended period (typically for even more than one year) of operations for reactors at a stretch, while meeting the base load demand leads to high operational performance for NPCIL. Since commissioning a few reactors including KGS-1, 2, and 3, NAPS-2, and RAPS-3/5 have demonstrated strong uninterrupted operations at a stretch. NPCIL's overall PLF continued to remain comfortable at 88% in FY24 (PY: 87%), driven by strong power demand.

**Off-taker or locational diversification**
The company operates and manages 24 nuclear power plants spread across major states of India, including, Rajasthan, Gujarat, Maharashtra, Andhra Pradesh, Tamil Nadu, Karnataka, and Uttar Pradesh. NPCIL continues to supply power to more than 20 discoms in India.

**Limited impact on accident, covered by insurance**
NPCIL continues to have financial security, the Nuclear Operator Liability Insurance Policy of ₹1,500 crore per accident for all nuclear installations per The Civil Liability for Nuclear Damages Act, 2010.

**Reasonable coverage metrics, despite moderate leverage**
Considering its cost-plus operating model with a healthy PLF, the elongated loan tenor and lower cost of borrowing, CARE Ratings expects the average DSCR to be higher than 1.5x, which is comfortable. Although moderating in the medium term, interest coverage is expected to remain above 4.0x. High construction cost and longer gestation period makes projects prone to cost overruns, and hence, the company has a leveraged capital structure. The total debt (TD) to PBILDT stood high at 8.89x in FY24. CARE Ratings expects TD/PBILDT to strengthen with gradual commissioning of RAPS-7 and 8, and KK-3 and 4 in the next three years. Considering higher dividend and debt-funded capex, the company's overall gearing has moderated yet is likely to remain below 1.6x.

**Key weaknesses**
**Counterparty risk emanating from weak financial profile of off-takers**
The weak financial health of many of the discoms continues to remain a cause of concern for NPCIL. This is evidenced by the increase in the total receivables, especially since the C0VID-19 outbreak. A sizeable portion of the overdue is from the discoms of Tamil Nadu, Jammu and Kashmir, and Telangana. NPCIL, given its competitive tariff and diversified off-taker base, has bargaining power in terms of collections. The continuous liquidation of the overdues under the EMI scheme defined in the Electricity (Late Payment Surcharge and Related Matters) Rules, 2023, is crucial and remains to be seen.

**Project execution risk**
As on March 31, 2024, the company is actively constructing eight reactors having an aggregate capacity of 6.8 GW. This is significant against NPCIL's net worth. The company has estimated 3.4 GW of capacity to be commissioned in the next three years. The cumulative physical progress of these projects, RAPS-7 and 8, and KK-3 and 4 was 79.07%, and 62.65%, respectively, as on March 31, 2024. NPCIL has 10 more reactors with a total capacity of 7.0 GW for construction, which are at an early stage. NPCIL entered a joint venture (JV) with NTPC to develop and operate some of these projects. Thus, CARE Ratings envisages an annual capital outlay of ₹20,000-23,000 crore in the medium term. The timely completion of projects within permissible capital costs will be important for NPCIL, so that its tariff continues to remain competitive.

## **Liquidity:** Strong
NPCIL's projected gross cash accruals (GCA) less internal commitment for the capex in FY25 and FY26 is estimated to have adequate headroom over the scheduled debt repayments. The free cash and bank balance stood at ₹3,542 crore as on March 31, 2024. While the company's average collection period remained elevated in the last two years and gradual liquidation of discoms overdue, liquidity profile is expected to improve. Its fund-based working capital limit of ₹2,000 crore remained largely undrawn in 12-months ended March 31, 2024. NPCIL also enjoys a long credit period from its fuel supplier, the DAE.

Due to its strong parentage and healthy business model, the company has good access to banks and the capital market. It has been able to avail foreign currency borrowings with elongated repayment tenor at competitive rates in the past.

## Environment, social, and governance (ESG) profile
The adequate safety initiatives undertaken by NPCIL and low green-house gas emission intensity in business operations places NPCIL's environmental risk in a comfortable position. The company has sound waste management and fuel reprocessing processes. It has fair compliance standards, given the parentage and industry space in which it operates.

## Applicable criteria
Definition of Default
Factoring Linkages Government Support
Financial Ratios – Non financial Sector
Liquidity Analysis of Non-financial sector entities
Rating Outlook and Rating Watch
Infrastructure Sector Ratings
Thermal Power
Short Term Instruments

## About the company and industry

## Industry classification

| Macro-economic indicator | Sector | Industry | Basic industry |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Utilities | Power | Power | Power generation |

Incorporated in 1987, NPCIL was set up for operating atomic power plants and implementing atomic power projects for generation of electricity in pursuance of the schemes and programmes of the GoI under the Atomic Energy Act, 1962. The company operates under administrative control of the DAE, with the overall policy framework laid down by the Atomic Energy Commission (AEC). The Atomic Energy Regulatory Board (AERB), an independent body reporting to AEC, is the regulatory agency overseeing commissioning and de-commissioning nuclear power plants and overall safety of operations at NPCIL.

| Brief Financials (₹ crore) | FY23 (Aud) | FY24 (Abr) |
|---|---|---|
| Total operating income | 14,618.50 | 18,484.17 |
| PBILDT | 5,452.11 | 10,210.28 |
| PAT | 5,146.01 | 6,522.66 |
| Overall gearing (times) | 1.32 | 1.47 |
| Interest coverage (times) | 7.97 | 9.36 |

Aud: Audited; Abr: Abridged.These are latest available financial results.

**Status of non-cooperation with previous CRA:** Not applicable

**Any other information:** Not applicable

**Rating history for last three years:** Annexure-2

**Covenants of rated instruments/facilities:** Annexure-3

**Complexity level of instruments rated**: Annexure-4

**Lender details**: Annexure-5

## Annexure-1: Details of instruments/facilities

| Name of the Instrument | ISIN | Date of Issuance | Coupon Rate (%) | Maturity Date | Size of the Issue (₹ crore) | Rating Assigned along with Rating Outlook |
|---|---|---|---|---|---|---|
| Debentures-Non-convertible debentures | INE206D08162 | 23-Jan-2014 | 9.18 | 23-Jan-2025 | 400.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08170 | 23-Jan-2014 | 9.18 | 23-Jan-2026 | 400.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08188 | 23-Jan-2014 | 9.18 | 23-Jan-2027 | 400.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08196 | 23-Jan-2014 | 9.18 | 23-Jan-2028 | 400.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08204 | 23-Jan-2014 | 9.18 | 23-Jan-2029 | 400.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08212 | 28-Nov-2014 | 8.40 | 28-Nov-2025 | 440.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08220 | 28-Nov-2014 | 8.40 | 28-Nov-2026 | 440.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08238 | 28-Nov-2014 | 8.40 | 28-Nov-2027 | 440.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08246 | 28-Nov-2014 | 8.40 | 28-Nov-2028 | 440.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08253 | 28-Nov-2014 | 8.40 | 28-Nov-2029 | 440.00 | CARE AAA; Stable |

| Name of the Instrument | ISIN | Date of Issuance | Coupon Rate (%) | Maturity Date | Size of the Issue (₹ crore) | Rating Assigned along with Rating Outlook |
|---|---|---|---|---|---|---|
| Debentures-Non-convertible debentures | INE206D08261 | 25-Mar-2015 | 8.14 | 25-Mar-2026 | 440.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08279 | 25-Mar-2015 | 8.14 | 25-Mar-2027 | 440.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08287 | 25-Mar-2015 | 8.14 | 25-Mar-2028 | 440.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08295 | 25-Mar-2015 | 8.14 | 25-Mar-2029 | 440.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08303 | 25-Mar-2015 | 8.14 | 25-Mar-2030 | 440.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08311 | 04-Aug-2016 | 8.23 | 04-Aug-2026 | 700.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08329 | 04-Aug-2016 | 8.23 | 04-Aug-2027 | 700.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08337 | 04-Aug-2016 | 8.23 | 04-Aug-2028 | 700.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08345 | 04-Aug-2016 | 8.23 | 04-Aug-2029 | 700.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08352 | 04-Aug-2016 | 8.23 | 04-Aug-2030 | 700.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08360 | 28-Mar-2016 | 8.13 | 28-Mar-2027 | 400.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08378 | 28-Mar-2016 | 8.13 | 28-Mar-2028 | 400.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08386 | 28-Mar-2016 | 8.13 | 28-Mar-2029 | 400.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08394 | 28-Mar-2016 | 8.13 | 28-Mar-2030 | 400.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08402 | 28-Mar-2016 | 8.13 | 28-Mar-2031 | 400.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08410 | 15-Dec-2016 | 7.25 | 15-Dec-2027 | 500.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08428 | 15-Dec-2016 | 7.25 | 15-Dec-2028 | 500.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08436 | 15-Dec-2016 | 7.25 | 15-Dec-2029 | 500.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08444 | 15-Dec-2016 | 7.25 | 15-Dec-2030 | 500.00 | CARE AAA; Stable |
| Debentures-Non-convertible debentures | INE206D08451 | 15-Dec-2016 | 7.25 | 15-Dec-2031 | 500.00 | CARE AAA; Stable |

| Name of the Instrument | ISIN | Date of Issuance | Coupon Rate (%) | Maturity Date | Size of the Issue (₹ crore) | Rating Assigned along with Rating Outlook |
|---|---|---|---|---|---|---|
| Debentures-Non-convertible debentures | NA | NA | NA | NA | 4600.00 | CARE AAA; Stable |
| Fund-based - LT-Term loan | | - | - | 27-Feb-2033 | 12465.47 | CARE AAA; Stable |
| Non-fund-based - LT/ ST-BG/LC | | - | - | - | 1000.00 | CARE AAA; Stable / CARE A1+ |

NA- Not Applicable since it is not placed

**Annexure-2: Rating history for last three years**

| Sr. No. | Name of the Instrument/Bank Facilities | Current Ratings | | | Rating History | | | |
|---|---|---|---|---|---|---|---|---|
| | | Type | Amount Outstanding (₹ crore) | Rating | Date(s) and Rating(s) assigned in 2024-2025 | Date(s) and Rating(s) assigned in 2023-2024 | Date(s) and Rating(s) assigned in 2022-2023 | Date(s) and Rating(s) assigned in 2021-2022 |
| 1 | Fund-based - LT-Term Loan | LT | 12465.47 | CARE AAA; Stable | - | 1)CARE AAA; Stable (20-Nov-23) | 1)CARE AAA; Stable (21-Nov-22) | 1)CARE AAA; Stable (25-Nov-21) |
| 2 | Debentures-Non Convertible Debentures | LT | - | - | - | 1)Withdrawn (20-Nov-23) | 1)CARE AAA; Stable (21-Nov-22) | 1)CARE AAA; Stable (25-Nov-21) |
| 3 | Debentures-Non Convertible Debentures | LT | 2000.00 | CARE AAA; Stable | - | 1)CARE AAA; Stable (20-Nov-23) | 1)CARE AAA; Stable (21-Nov-22) | 1)CARE AAA; Stable (25-Nov-21) |
| 4 | Debentures-Non Convertible Debentures | LT | 2200.00 | CARE AAA; Stable | - | 1)CARE AAA; Stable (20-Nov-23) | 1)CARE AAA; Stable (21-Nov-22) | 1)CARE AAA; Stable (25-Nov-21) |
| 5 | Debentures-Non Convertible Debentures | LT | 2200.00 | CARE AAA; Stable | - | 1)CARE AAA; Stable (20-Nov-23) | 1)CARE AAA; Stable (21-Nov-22) | 1)CARE AAA; Stable (25-Nov-21) |
| 6 | Debentures-Non Convertible Debentures | LT | 3500.00 | CARE AAA; Stable | - | 1)CARE AAA; Stable (20-Nov-23) | 1)CARE AAA; Stable (21-Nov-22) | 1)CARE AAA; Stable (25-Nov-21) |
| 7 | Debentures-Non Convertible Debentures | LT | 2000.00 | CARE AAA; Stable | - | 1)CARE AAA; Stable (20-Nov-23) | 1)CARE AAA; Stable | 1)CARE AAA; Stable |

| Sr. No. | Name of the Instrument/Bank Facilities | Current Ratings | | | Rating History | | | |
|---|---|---|---|---|---|---|---|---|
| | | Type | Amount Outstanding (₹ crore) | Rating | Date(s) and Rating(s) assigned in 2024-2025 | Date(s) and Rating(s) assigned in 2023-2024 | Date(s) and Rating(s) assigned in 2022-2023 | Date(s) and Rating(s) assigned in 2021-2022 |
| | | | | | | | (21-Nov-22) | (25-Nov-21) |
| 8 | Debentures-Non Convertible Debentures | LT | 2500.00 | CARE AAA; Stable | - | 1)CARE AAA; Stable (20-Nov-23) | 1)CARE AAA; Stable (21-Nov-22) | 1)CARE AAA; Stable (25-Nov-21) |
| 9 | Debentures-Non Convertible Debentures | LT | 4600.00 | CARE AAA; Stable | - | 1)CARE AAA; Stable (20-Nov-23) | - | - |
| 10 | Non-fund-based - LT/ ST-BG/LC | LT/ST | 1000.00 | CARE AAA; Stable / CARE A1+ | | | | |

LT: Long term; LT/ST: Long term/Short term

## Annexure-3: Detailed explanation of covenants of rated instruments/facilities

NA

## Annexure-4: Complexity level of instruments rated

| Sr. No. | Name of the Instrument | Complexity Level |
|---|---|---|
| 1 | Debentures-Non-convertible debentures | Simple |
| 2 | Fund-based - LT-Term loan | Simple |
| 3 | Non-fund-based - LT/ ST-BG/LC | Simple |

## Annexure-5: Lender details

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| To view lender-wise details of bank facilities please click here. |

**Note on complexity levels of rated instruments:** CARE Ratings has classified instruments rated by it based on complexity. Investors/market intermediaries/regulators or others are welcome to write to care@careedge.in for clarifications.

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**About us:**
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