March 13, 2025

Nuclear Power Corporation of India Limited: Rating reaffirmed

Summary of rating action

Instrument*	Previous Rated Amount (Rs. crore)	Current Rated Amount (Rs. crore)	Rating Action
Non-convertible debenture (NCD) programme	27,010.10	27,010.10	[ICRA]AAA (Stable); reaffirmed
Total	**27,010.10**	**27,010.10**	

**Instrument details are provided in Annexure-1*

Rationale

The rating continues to factor in the 100% ownership of Nuclear Power Corporation of India Limited (NPCIL/the company) by the Government of India (GoI) and its strategic importance to the GoI in the nuclear energy sector. The rating also considers the limited demand and tariff risks because of the long-term power purchase agreements (PPAs) with state distribution utilities for its entire operational capacity as per the tariff norms notified by the Department of Atomic Energy (DAE), the GoI. Moreover, the tariffs offered by the operational capacity are cost-competitive in relation to the average pooled procurement cost (APPC) of the offtaking distribution utilities. The company has tied-up PPAs for the recently commissioned Unit 3 and 4 of Kakrapur Atomic Power Station (KAPS) at a competitive tariff.

Further, ICRA takes note of the established track record of the operating capacity, with majority of the plants operating at higher-than-normative plant load factor (PLF), leading to stable cash flows. The PLF was, however, Lower-than-normative in few plants in the current year because of maintenance and rectification works. At present, two units of the Tarapur Atomic Power Station (TAPS – 1 and 2) are under prolonged shutdown and are expected to restart operations in the next one year. Also, unit 1 of the Madras Atomic Power Station (MAPS) is under a prolonged shutdown since April 2018. While the combined capacity of these shutdown units is only 540 MW (7% of NPCIL's total capacity), their timely commencement remains important for an improvement in the company's overall generation. Unit 3 of Rajasthan Atomic Power Station (RAPS) which was under shutdown from October 2022 for En-masse Coolant Channel Replacement (EMCCR) work, has started generating power from July 2024. The company commissioned unit 4 (700 MW) of KAPS in March 2024, while RAPS units 7 and 8 (700 MW each) are expected to be commissioned in March 2025 and September 2025 respectively. With a combined capacity of 1,400 MW of the RAPS units 7 and 8, the generation is expected to improve, going forward.

The rating also draws comfort from the strong financial profile of NPCIL, supported by adequate profitability and comfortable debt coverage metrics. The funding of the ongoing projects is expected to be met through a mix of internal accruals, fresh equity and debt funding at highly competitive rates.

These strengths are, however, partially offset by NPCIL's high counterparty credit risk due to the weak financial health of many of the offtaking state distribution utilities (discoms). However, this risk is mitigated to some extent by the diverse offtaker profile. Moreover, following the notification of the Electricity (Late Payment Surcharge and Related Matters) Rules, 2022, (LPS) notified by the Ministry of Power (MoP), Government of India, in June 2022, the discoms are clearing the bills in a regular manner. Also, the outstanding dues as of June 2022 along with the late payment surcharge aggregating to Rs. 5,925 crore is being realised in instalments of 12-48 months from the discoms, which has reduced the overall receivable cycle in the last 24 months. This is evident from the reduction in receivable position to Rs. 4,864 crore as on September 30, 2024 compared to Rs. 6,028 crore as on March 31, 2024.

Further, the rating factors in the execution risks associated with the large under-construction capacity, which entails an annual capital expenditure of about Rs. 18,000-20,000 crore, especially given the risk of delays in execution and cost-overruns. Apart from RAPS 7 & 8, the company expects to commission units 3 and 4 (1000 MW each) of the Kudankulam Nuclear Power Plant

(KKNPP) over the next two years, unit 5 and 6 (1000 MW each) of the Kudankulam Nuclear Power Plant (KKNPP) over the next 3-4 years and two units (700 MW each) of Gorakhpur Haryana Anu Vidyut Pariyojana (GHAVP) by 2030-31. Further, there are 12 other nuclear units under various stages of development including four units under joint venture (JV) with NTPC Limited. This is expected to keep the leverage level high for the company in the near to medium term.

Also, the relatively high capital cost (Rs. 15 crore per MW for the 700-MW unit and Rs. 35 crore per MW for the 1000 MW unit) of these projects, is expected to necessitate high normative tariff rates. Nonetheless, the company's blended tariff is expected to remain competitive in relation to the discoms' APPC in the near to medium term. In this context, the company's ability to secure PPAs for the under-construction projects as per the normative cost, reflective of the tariff norms, remains a key rating monitorable. The ability to secure the PPAs at remunerative rates would remain a key rating sensitivity for the company.

ICRA also takes note of the liability of Rs. 1,500 crore in case of any nuclear accident under the Civil Liability for Nuclear Damage Act, 2010, which is covered by an insurance policy of an equivalent amount. Any liability beyond Rs.1,500 crore would be borne by the GoI.

The Stable outlook assigned to NPCIL reflects the healthy cash flow visibility, supported by an established track record of operations and the long-term PPAs for the operational capacity.

Key rating drivers and their description

Credit strengths

Strategic importance to Government of India, with demonstrated equity support - NPCIL has strategic importance to the GoI amid the push to reduce the dependence on fossil fuel-based generation. At present, NPCIL operates 24 nuclear power plants, which have a cumulative capacity of 8,180 MW. The entity is fully owned by the GoI, which provides continuous support in the form of regular equity infusion as well as supply of fuel and coolants.

Limited demand risks and competitive tariff rates of existing projects – NPCIL's demand risk is mitigated by the long-term PPAs with the state distribution utilities for its operating capacity, as per the allocation approved by the Ministry of Power. The tariffs under the PPAs are single-part and cost-plus based that cover fixed and variable costs and are linked to the normative PLF of 68.5%-72% as notified by the DAE. The last control period for the tariff norms expired in March 2022. The tariff notification from the DAE for the ongoing control period is yet to be issued. The tariff rates of the operating projects are competitive compared to the average pooled procurement cost (APPC) of the offtaking distribution utilities.

Established track record of operations - The nuclear power stations of NPCIL have an established track record of operations with majority of the plants operating at higher-than-normative PLF, leading to healthy cash flows. The company reported average plant load factor (PLF) of 87% and an average plant availability factor of 89% in 10M FY2025. The average PLF has remained above 75.0% over the past five years.

Strong financial profile – NPCIL's financial profile remains strong, supported by adequate profitability and comfortable debt coverage metrics. While the leverage level remains high owing to the large debt-funded capex underway, reflected in a total debt to OPBDITA of 8.9 times in FY2024, the debt coverage metrics remain comfortable with debt service coverage ratio (DSCR) of 3.1 times in FY2024. The DSCR is expected to remain above 2.0x times over FY2025-FY2027. The funding of the ongoing projects is expected to be met through a mix of internal accruals, fresh equity and debt funding at a highly competitive rate. Further, the company's superior financial flexibility provides comfort from a credit perspective.

Credit challenges

High counterparty credit risks – NPCIL's counterparty credit risk remains high because of the weak financial health of majority of the state distribution utilities with whom the PPAs have been signed. However, this risk is mitigated to some extent by the diverse offtaker profile. Moreover, following the notification of the LPS scheme by the MoP, the collection efficiency for NPCIL has improved and past dues as of June 2022 are being cleared by the discoms through instalments of 12-48 months. This has moderated the receivables over the last 12 months and is expected to aid in keeping the receivable position at a manageable level for the company over the medium term.

Risks associated with large under-construction portfolio - The execution risks remain high for NPCIL with a large under-construction portfolio aggregating to 4800 MW across RAPS 7 & 8 (1400 MW), KKNPP 3 & 4 (2000 MW) and GHAVP 1 & 2 (1,400 MW). This apart, there are 12 more units under various stages of development aggregating to 9000 MW, including four units under JV with NTPC. This will entail annual capital expenditure of about Rs. 18,000-20,000 crore over the next three years, with possible risk of delays and cost overrun. The capital cost of the under-construction projects remains relatively high, leading to high normative tariff, which may adversely impact the tariff competitiveness of these projects. Nonetheless, the company's blended tariff is expected to remain competitive in the near term in relation to the APPC of the discoms. The timely signing of the PPAs for the upcoming projects remains a key monitorable for the company.

Liquidity position: Strong

The liquidity profile of NPCIL is strong, supported by positive cash flow from operations and free cash and bank balances of ~Rs. 7,680 crore as on December 31, 2024. The cash flows are expected to remain sufficient to meet the debt obligations and contribution for the under-construction projects. Apart from the internal accruals, the capex is funded through equity infusion from the GoI and debt funding. The liquidity is further supported by improved payment discipline from the discoms since June 2022.

Rating sensitivities

Positive factors – Not applicable

Negative factors – NPCIL's rating could face pressure if the operational nuclear power units show sustained under-performance with the PLF remaining below the normative level, adversely impacting the profitability and cash accruals. Any significant delays in payments from the offtakers adversely impacting its liquidity profile could be another negative factor. Also, the inability of the company to secure PPAs for the new projects at adequate tariffs would weigh on the rating. Further, any weakening of linkages with the Government of India would affect the rating.

Analytical approach

Analytical Approach	Comments
Applicable rating methodologies	Corporate Credit Rating Methodology
Parent/Group support	The rating derives strength from NPCIL's ownership by the Government of India and its strategic importance for nuclear power generation in the country.
Consolidation/Standalone	The rating is based on the consolidated financial profile of the company.

About the company

NPCIL is a public-sector enterprise under the administrative control of the Department of Atomic Energy (DAE), the Government of India. NPCIL is responsible for the design, construction, commissioning and operations of nuclear power plants in the country. At present, NPCIL is operating 24 nuclear power reactor units, with an installed capacity of 8,180 MW. NPCIL owns all the commercial nuclear reactors (23), except Rajasthan Atomic Power Station's unit 1 (RAPS-1; 100 MW), which is owned by the DAE, the Government of India. The company has an under-construction capacity of 4,800 MW. In addition, the

Government has given administrative approval and financial sanction to 12 more reactor units, which are in various stages of development.

Key financial indicators

NPCIL	FY2023 (Audited)	FY2024 (Audited)	9M FY2025 (Unaudited)
Operating income (Rs. crore)	14,618.5	18,484.2	15,052.8
PAT (Rs. crore)	5,146.0	6,522.7	4,754.4
OPBDITA/OI (%)	47.8%	55.5%	52.5%
PAT/OI (%)	35.2%	35.3%	31.6%
Total outside liabilities/Tangible net worth (times)	1.6	1.7	NA
Total debt/OPBDITA (times)	11.0	8.9	NA
Interest coverage (times)	10.2	9.4	6.1

PAT: Profit after tax; OPBDIT: Operating profit before depreciation, interest, taxes and amortisation; NA: Data not available

Source: Company data, ICRA Research; All ratios as per ICRA calculations

Ratios/figures other than those contained in the published financials of the company, are as per ICRA calculation.

Status of non-cooperation with previous CRA: Not applicable

Any other information: None

Rating history for past three years

	Instrument	Current rating (FY2025)			Chronology of rating history for the past 3 years			
		Type	Amount rated (Rs. crore)	Date & rating in FY2025	Date & rating in FY2024	Date & rating in FY2023		Date & rating in FY2022
				March 13, 2025	March 14, 2024	March 15, 2023	Dec 19, 2022	Mar 08, 2022
1	**Non-convertible debentures**	Long term	20700.0	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)
2	**Non-convertible debentures**	Long term	1785.1	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)
3	**Non-convertible debentures**	Long term	3675.0	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)
4	**Non-convertible debentures**	Long term	850.0	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	-
5	**Proposed non-convertible debentures**	Long term	-	-	-	[ICRA]AAA (Stable)	-	-
6	**Non-convertible debentures**	Long term	-	-	[ICRA]AAA (Stable); withdrawn	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)	[ICRA]AAA (Stable)

Complexity level of the rated instruments

Instrument	Complexity Indicator
Non-convertible debentures	Simple

The Complexity Indicator refers to the ease with which the returns associated with the rated instrument could be estimated.

It does not indicate the risk related to the timely payments on the instrument, which is rather indicated by the instrument's credit rating. It also does not indicate the complexity associated with analysing an entity's financial, business, industry risks or complexity related to the structural, transactional or legal aspects. Details on the complexity levels of the instruments are available on ICRA's website: Click Here

Annexure I: Instrument details

ISIN No	Instrument Name	Date of Issuance / Sanction	Coupon Rate	Maturity Date	Amount Rated (Rs Crore)	Current Rating and Outlook
INE206D08501	**Non-Convertible Debentures – Series XXXVIII**	March 21, 2023	7.70%	March 20, 2038	2500.00	[ICRA]AAA (Stable)
INE206D08493	**Non-Convertible Debentures – Series XXXVII**	December 23, 2022	7.55%	December 23, 2032	1500.00	[ICRA]AAA (Stable)
					850.00	
INE206D08485	**Non-Convertible Debentures – Series XXXVI**	March 22, 2022	6.89%	March 24, 2037	3675.00	[ICRA]AAA (Stable)
INE206D08477	**Non-Convertible Debentures – Series XXXV**	March 21, 2021	6.80%	March 21, 2031	1785.10	[ICRA]AAA (Stable)
INE206D08469	**Non-Convertible Debentures – Series XXXIV**	January 23, 2020	7.34%	January 23, 2030	2300.00	[ICRA]AAA (Stable)
INE206D08410	**Non-Convertible Debentures – Series XXXIII**	December 15, 2016	7.25%	December 15, 2031	500.00	[ICRA]AAA (Stable)
INE206D08428					500.00	[ICRA]AAA (Stable)
INE206D08436					500.00	[ICRA]AAA (Stable)
INE206D08444					500.00	[ICRA]AAA (Stable)
INE206D08451					500.00	[ICRA]AAA (Stable)
INE206D08360	**Non-Convertible Debentures – Series XXXII**	March 28, 2016	8.13%	March 28, 2031	400.00	[ICRA]AAA (Stable)
INE206D08378					400.00	[ICRA]AAA (Stable)
INE206D08386					400.00	[ICRA]AAA (Stable)
INE206D08394					400.00	[ICRA]AAA (Stable)
INE206D08402					400.00	[ICRA]AAA (Stable)
INE206D08311	**Non-Convertible Debentures – Series XXXI**	August 04, 2015	8.23%	August 04, 2030	700.00	[ICRA]AAA (Stable)
INE206D08329					700.00	[ICRA]AAA (Stable)
INE206D08337					700.00	[ICRA]AAA (Stable)
INE206D08345					700.00	[ICRA]AAA (Stable)
INE206D08352					700.00	[ICRA]AAA (Stable)
INE206D08261	**Non-Convertible Debentures – Series XXX**	March 25, 2015	8.14%	March 25, 2030	440.00	[ICRA]AAA (Stable)
INE206D08279					440.00	[ICRA]AAA (Stable)
INE206D08287					440.00	[ICRA]AAA (Stable)
INE206D08295					440.00	[ICRA]AAA (Stable)
INE206D08303					440.00	[ICRA]AAA (Stable)
INE206D08212	**Non-Convertible Debentures – Series XXIX**	November 28, 2014	8.40%	November 28, 2029	440.00	[ICRA]AAA (Stable)
INE206D08220					440.00	[ICRA]AAA (Stable)
INE206D08238					440.00	[ICRA]AAA (Stable)
INE206D08246					440.00	[ICRA]AAA (Stable)
INE206D08253					440.00	[ICRA]AAA (Stable)
INE206D08162	**Non-Convertible Debentures – Series XXVIII**	January 23, 2014	9.18%	January 23, 2029	400.00	[ICRA]AAA (Stable)
INE206D08188					400.00	[ICRA]AAA (Stable)
INE206D08170					400.00	[ICRA]AAA (Stable)
INE206D08196					400.00	[ICRA]AAA (Stable)
INE206D08204					400.00	[ICRA]AAA (Stable)

Source: *Company*

Annexure II: List of entities considered for consolidated analysis

Company Name	Ownership	Consolidation Approach
Nuclear Power Corporation of India Limited	100.00% (Holding Company)	Full Consolidation
Anushakti Vidhyut Nigam Limited	51.00%	Full Consolidation
NPCIL Indian Oil Nuclear Energy Corporation Ltd.	74.00%	Full Consolidation
L&T Special Steels and Heavy Forgings Private Limited	26.00%	Equity Method

ICRA

ANALYST CONTACTS

Girishkumar Kadam
+91 22 6114 3441
girishkumar@icraindia.com

Vikram V
+91 40 6939 6410
vikram.v@icraindia.com

Rachit Mehta
+91 22 6169 3328
rachit.mehta2@icraindia.com

Saurabh Gupta
+91 22 6169 3379
saurabh.gupta@icraindia.com

RELATIONSHIP CONTACT

L. Shivakumar
+91 22 6114 3406
shivakumar@icraindia.com

MEDIA AND PUBLIC RELATIONS CONTACT

Ms. Naznin Prodhani
Tel: +91 124 4545 860
communications@icraindia.com

HELPLINE FOR BUSINESS QUERIES

+91-9354738909 (open Monday to Friday, from 9:30 am to 6 pm)

info@icraindia.com

ABOUT ICRA LIMITED

ICRA Limited was set up in 1991 by leading financial/investment institutions, commercial banks and financial services companies as an independent and professional investment Information and Credit Rating Agency.

Today, ICRA and its subsidiaries together form the ICRA Group of Companies (Group ICRA). ICRA is a Public Limited Company, with its shares listed on the Bombay Stock Exchange and the National Stock Exchange. The international Credit Rating Agency Moody's Investors Service is ICRA's largest shareholder.

For more information, visit www.icra.in

ICRA Limited

Registered Office

B-710, Statesman House, 148 Barakhamba Road, New Delhi-110001
Tel: +91 11 23357940-45

Branches