NHPC LIMITED

Analyst Contacts

Sabyasachi Majumdar
sabyasachi@icraindia.com
+91-124-4545304

Avneet Kaur
avneetk@icraindia.com
+91-124-4545319

Vardhman Chand Rai
vardhman.rai@icraindia.com
+91-124-4545389

Relationship Contact

Vivek Mathur
vivek@icraindia.com
+91-124-4545310

Website
www.icra.in

Rating

ICRA has reaffirmed the long-term rating assigned to the Rs. 1500.00 crore non convertible redeemable Q-Series bonds programme of NHPC Limited (NHPC)† at [ICRA]AAA (pronounced ICRA triple A). ICRA has also assigned a long term rating of [ICRA]AAA (pronounced ICRA triple A) to the Rs. 1500.00 crore non convertible Taxable R-Series bonds programme of NHPC Limited.

Key Financial Indicators

	2009-10	2010-11
Operating Income	4,332	4,225
OPBDIT	3,337	2,877
Profit after Tax	2,093	2,167
Net Worth	23,273	24,581
OPBDIT /OI	77.03%	68.10%
PAT / OI	48.32%	51.28%
PBIT/(Total Debt + Tangible Net Worth)	13.20%	14.16%
OPBDIT/Interest & Finance Charges	7.30	7.85
Net Cash Accruals/Total Debt	16%	15%
Total Debt /Tangible Net Worth	0.61	0.59
Net Working Capital / OI	-4%	-15%

Note: Amounts in Rs. Crore; OI: Operating Income; OPBDIT: Operating Profit before Depreciation, Interest and Tax; PAT: Profit after Tax; PBIT: Profit before Interest and Tax; DTL: Deferred Tax Liability; NWC: Net Working Capital
Source: Company Annual Reports

† For complete rating scale and definitions, please refer to ICRA's website www.icra.in or other ICRA Rating Publications

Key Rating Considerations

Credit Strengths

- Sovereign ownership, strategic importance in implementation of GoI's planned capacity addition in the hydel power sector and status as the largest hydro power company in the country.
- Limited demand risk, both in view of the energy shortage in Northern states and and the low variable cost of generation, which gives it top priority for dispatch under 'Merit Order'.
- Positive demand outlook on the hydro power sector given the existing large imbalance in the current thermal-hydro mix (75-25) from the optimal ratio (60-40). With current thermal projects under implementation far exceeding hydro projects under implementation this ratio is likely to worsen further
- Very competitive cost of power, with average selling price of Rs 2.98/kWh for the year 2011-12 (Adjusted for previous years income).
- Cost plus regime coupled with operational efficiency has resulted in satisfactory and stable profitability. Further, the new tariff regime applicable since April 2009 has resulted in improved profitability for NHPC's power projects. Exemption to hydro power plants from competitive bidding till 2016 will also protect NHPC's growth going forward.
- Deemed hydrology clauses (applicable during the first 10 years of plant operations) protect the debt servicing capability of newly commissioned projects.
- Healthy capital structure as reflected in moderate debt levels in relation to the capital intensive nature of the business. Strong cash position will enable equity funding for projects under construction.
- Ability to contract loans of longer tenure at satisfactory rates.

Credit Concerns

- Weak counterparty credit profile has resulted in a decline in collection performance in FY 2012 and H1 FY 2013 although the same can be also attributed to billings of past arrears – in actual amounts cash collections have significantly increased NHPC. Concerns remain regarding the sustenance of collection efficiency once the incentive scheme for timely repayment ceases to exist from October 2016, given the exposure to some of fundamentally weak SEBs and EDs of North and North Eastern states- NHPC's customer profile is significantly less diversified as compared to NTPC or PGCIL. However, some positives can be derived from recent measures such as tariff hikes, the stated intention of the state governments to reverse the growing losses in power distribution and debt restructuring scheme of utilities.
- Project execution risks inherent in hydel projects with possibility of time and cost overruns due to geological surprises, flash floods, law and order problems as well as infrastructural constraints. Many of NHPC's ongoing projects have already seen significant cost and time overruns and further overruns/ slippages cannot be ruled out either.
- Some of the power projects under construction are expected to incur very high costs per MW of capacity, thereby resulting in high tariffs - although the blended average for all units put together is likely to remain competitive.
- While GoI support is a positive, it may also result in continued pressure to take up unviable projects for strategic objectives.

Rating Rationale

ICRA's AAA rating reflects NHPC's established position in hydro power generation in India, its significant size of operating projects, strategic importance to the GoI which is also reflected in the consistent support from GoI in terms of low cost subordinated debt for some of its projects, highly competitive tariffs of its plants with an average tariff of Rs 2.98/kwh during FY 2011-12 (adjusted for previous years income) and strong operating efficiencies, as reflected by average plant availability factor (PAF) of 83.3% during FY 2011-12. Further with three additional projects being completed in FY 2013 ytd and four more projects in the final stages of completion, there is significant visibility on increase in revenue and profit streams. The rating continues to reflect low business risks arising out of favourable demand outlook in view of the power deficit scenario and cost plus tariff mechanism applicable for its power generating stations. Further, the rating continues to factor in the healthy track record of power generation from operational projects arising out of favourable hydrology of the rivers (which are both snowfed and rainfed) on which these projects are

located and ability to maintain high operating availability which enables NHPC to earn full returns on these projects. The credit profile is also supported by a conservative capital structure and strong liquidity despite the large size of projects under construction as reflected in a gearing of 0.59 times as on September 2012 (which is very low in relation to the capital intensive nature of its business), healthy cash position (including liquid investments) of over Rs. 5868 crores (as on September 2012) and very long tenure debt.

ICRA however notes the execution risks, including risks of cost and time overruns, inherent in Greenfield hydro power projects. ICRA notes that several of NHPC's recent hydro power projects have seen significant cost and time overruns and further overruns cannot be ruled out for three large projects in early stages of implementation, namely the Lower Subansiri HEP in Arunachal Pradesh, Parbati-II HEP in HP and Kishanganga HEP in J&K. Further, while some of these expansion projects have relatively high tariffs, the overall weighted average tariff of NHPC's projects is likely to remain competitive, which will be a protective factor going forward. Further, counterparty credit risks which impact collection efficiencies would continue to remain an issue if sectoral reforms do not result in a fundamental improvement in the financial position of the state power utilities. However, ICRA has noted recent measures including tariff hikes for 23 states by SERCs in tariff orders issued for FY 2012-13, stated intention of the state governments to reverse the growing losses in power distribution and debt restructuring scheme of utilities. Timely assessment of such losses and speedy initiation of measures for reducing these losses including inter-alia technical and commercial loss reduction measures and timely tariff revisions would be critical for improving the sectors financial viability, hence reducing counter party credit risks of entities serving the power sector, including gencos like NHPC.

Going forward, NHPC's ability to complete projects without further time and cost overrun and maintain healthy collections would remain key sensitivities.

Business Risks and Competitive Position

Dominant position in domestic hydro power sector

NHPC is the largest Hydro power generator in the country with 15 HEPs under operation, with an installed capacity of 5526 MW (including 2 HEPs totaling 1520 MW of its 51% owned subsidiary NHDC) as on September 30th, 2012 against a total installed capacity of around 39,291 MW in the Hydel sector. NHPC accounts for 14.1% of the total hydel generating capacity in the country. Apart from these projects, NHPC has 9 HEPs under construction totaling 4271 MW. Of these, six projects totalling to 1141 MW are likely to become operational in the near-term substantially adding to NHPC's revenue streams from FY 2014 onwards.

Cost plus tariff norms continue to protect debt servicing

NHPC's operations are characterized by low business risks because of its satisfactory operating profile and a tariff structure which is determined by a cost plus mechanism (subject to meeting certain operational parameters) which results in adequate cost coverage as well as stable and predictable revenue streams. Currently it is being determined by the tariff norms applicable for the period 2009-14- the earlier tariff period ran from 2004-09- vide its ruling in February 2009.

Highly competitive power tariffs and strong operating efficiencies

Despite higher initial capital costs for hydro power projects, their tariffs are usually lower than those of thermal power plants in the long-term owing to the fixed and non-inflationary nature of cost of generation for hydro power, whereas the fuel cost component of thermal projects are subject to significant inflationary risks. With a large portfolio of significantly old and depreciated (and hence substantially debt free) power plants under operation, NHPC benefits from a relatively low cost of generation. Barring Dulhasti and Sewa II, all the plants of NHPC have competitive tariff (of less than Rs. 3.50/unit), which is reflected in NHPC average selling price of electricity in FY 2011-12 being very attractive at Rs 2.98/unit (adjusted for previous years income). This competitiveness is further emphasized given the suitability of hydro power for meeting peaking requirements. NHPC also demonstrated strong operating performance as reflected in machine availability of operating power stations, measured by Plant Availability Factor (PAF) of 83.3% during 2011-12.

Snapshot of Operational projects of NHPC Limited

Projects	State	Capacity (MW)	Design Energy(MUs)	Tariff 2011-12@	Actual gen. in FY12 (MUs)	Actual PAF FY 12 (%)
Bairasiul	HP	180	779	1.72	731	94.90%
Loktak	Manipur	105	448	2.32	523	79.60%
Salal	J&K	690	3082	2.17	3219	63.70%
Tanakpur	Uttarakhand	120	452	2.27	488	64.80%
Chamera I	HP	540	1665	1.54	2660	87.30%
Uri I	J&K	480	2587	2.42	2704	75.90%
Rangit	Sikkim	60	339	3.33	353	93.10%
Chamera II	HP	300	1500	3.29	1522	96.70%
Dhuliganga I	Uttarakhand	280	1135	3.39	1157	93.80%
Dulhusti	J&K	390	1907	6.54	2199	96.20%
Teesta V	Sikkim	510	2573	2.59	2568	87.60%
Sewa II	J&K	120	534	4.87	562	85.30%
Chamera III	HP	231	1086	NA	NA	NA
TOTAL		**4,006**	**18,087**	**3.37**	**18,683**	**83.30%**

@ Adjusted for prior period income, average tariff for 2011-12 stood at Rs. 2.98/kwh
Source: Company Data, CERC Tariff orders, ICRA estimates

Limited demand risks for projects (operational and under implementation) on account of high level of power deficits in Northern and North eastern states….

Past Trends in Power Deficit Levels in Northern, eastern and North-Eastern Region

	Northern region			North-east region			Eastern region		
	2010-11	2011-12	2012-13E	2010-11	2011-12	2012-13E	2010-11	2011-12	2012-13E
Peak Deficit (MW)	(3,330)	(3,131)	(5,524)	(353)	(138)	(507)	(682)	(708)	44
Peak Deficit (%)	-8.90%	-7.80%	-12.30%	-18.50%	-7.20%	-21.90%	-5%	-4.80%	0.30%
Energy Deficit (MU)	(20,795)	(17,739)	(31,672)	(869)	(1,047)	(1,692)	(4,032)	(4,687)	(5,328)
Energy Deficit (%)	-8.00%	-6.40%	-10.60%	-8.80%	-9.50%	-14.10%	-4.30%	-4.70%	-4.80%

Source: CEA website

NHPC's power projects (operational as well as those under-construction) are located in northern, eastern and north-eastern states of the country and serve utilities located in these states. While this poses risks arising out of geographical concentration of customers, persistent power deficit faced by these regions mitigate the demand risks from these projects.

Decline in collection efficiency in FY 2011-12 driven by poor discom finances and substantial arrear burdens….however actual collection amounts increase

Owing to location of NHPC projects in North and North-East Region, the utilities located in these regions account for over 85% of NHPC's electricity sales. Among the individual states, Uttar Pradesh (UP) accounts for the largest chunk of power sales, followed by states of Punjab, Rajasthan, Jammu and Kashmir, Delhi and Haryana among others. The financial profile of utilities in these states have remained weak, thereby exposing NHPC to significant counterparty credit risk and this in turn had been reflected in weak collection performance from these utilities. The cash collections for NHPC as measured by cash collections/current billings, which had been at around 100% in FY 2010-11, declined to 75% for FY 2011-12 before improving to around 99% for the first nine months of FY 2012-13. However, the sharp decline in FY 2012 can be largely attributable to significant prior period billings, amounting to Rs. 2600 crores in

FY 2011-12 with issuance of final tariff orders for 2009-14 by CERC, which created a substantial burden on these utilities. While collection efficiency declined during the aforementioned period, actual collection amount increased by 22% over the previous year in FY 2011-12. ICRA also notes that during FY 2012-13 (ytd), collection performance has again improved substantially and in fact arrears from several states have been recovered in FY 2012-13.

ICRA notes that NHPC's collections are protected by the Ahluwalia Committee scheme for securitization of dues owed by SEBs to NHPC and other CPSUs has had a positive impact on NHPC's cash collections. Under the securitization scheme, the principal outstanding as on September 30, 2001, plus 40% of surcharge on delayed payments, was converted into 8.5% tax-free bonds, issued by respective State Governments. Besides the settlement of outstanding dues, the scheme has also laid down incentives and penalties for ensuring timely settlement of current dues. In terms of the tripartite agreement among the GoI, the RBI, and the State Governments, the penalties leviable for default on current dues include graded reduction in supplies from all CPSUs and suspension of funds under the Accelerated Power Development and Reforms Programme (APDRP); and also adjustments against release of Plan assistance and States' share of Central taxes to the State Governments concerned in case of defaults on servicing of bonds issued. At the same time, in case a utility opens and maintains Letters of Credit (LCs) for an amount equivalent to 105% of the average monthly billings for the past 12 months, NHPC would be required to provide cash incentives aggregating a certain percentage of the amount of bonds issued.

Nevertheless, there are concerns regarding the sustenance of collection efficiency once the incentive scheme for timely repayment ceases to exist from October 2016, given the exposure to some of fundamentally weak SEBs and EDs of North and North Eastern states. Viewed against the backdrop of NHPC's large capital expenditure programme, the success of the securitization exercise in ensuring settlement of past dues and binding SEBs to make prompt payments against current bills is critically important. The ability of SEBs to continue adhering to payment discipline if sectoral reforms do not lead to a fundamental improvement in their financial position remains to be seen. Timely assessment of such losses and speedy initiation of measures for reducing these losses including inter-alia technical and commercial loss reduction measures and timely tariff revisions would be critical for improving the sectors financial viability, hence reducing counter party credit risks of entities serving the power sector. However, ICRA takes note of the recent measures such as tariff hikes, stated intention of the state governments to reverse the growing losses in power distribution and debt restructuring scheme of utilities.

Significant addition to generation capacity from projects under construction in the near term….however cost and time overruns likely for a few ongoing projects

NHPC is currently undertaking construction of 9 HEP plants with a total installed capacity of 4,271 MW and 6 of these projects totaling 1141 MW are scheduled for completion by 2013-14. Considering its existing installed capacity of 4006 MW (on a standalone basis), these projects will result in significant increase in NHPC's installed power capacity and total energy sales. The tariff for these projects will be determined as per CERC's tariff regulations. Similar to its operational projects, all these projects are located in the North and North-Eastern region of the country. While these regions provide significant opportunities for hydro power projects, difficult terrains, natural calamities, prolonged monsoons and geological surprises pose considerable project execution challenges as do infrastructural constraints, law and order issues and local protests. These factors have in fact resulted in significant cost and time overruns since the time these projects were conceived. A brief snapshot of these projects is as follows:

Snapshot of projects under construction (As on September 2012)

	State	Capacity (MW)	Design Energy (MUs)	Sch. comm. as per CCEA	Anticipated Comm Schedule	Sanctioned cost (Rs cr)	Latest revised cost (Rs cr) Sep 2012	Cost/MW (Rs Crore)
Chutak	J&K	44	213	Feb-11	Nov-12	621	913	20.8
Nimmo bazgo	J&K	45	239	Aug-10	Jan-13	611	936	20.8
URI II	J&K	240	1124	Nov-09	Mar-13	1725	2081	8.7
Parbati III	HP	520	1977	Nov-10	Jun-13	2305	2716	5.3
Teesta III	W Bengal	132	594	Mar-07	Feb-13	769	1628	12.3
Teesta IV	W Bengal	160	720	Sep-09	Oct-13	1061	1502	9.4
Parbati II	HP	800	3109	Sep-09	Yet to be finalized	3920	5366	6.7
Subansiri	Arunachal	2000	7422	Sep-10	Yet to be finalized	6285	10667	5.3
Kishan Ganga	J&K	330	1350	Jan-16	Dec-16	3642	3642	11.0
TOTAL		**4271**				**20,939**	**29,451**	

ICRA notes the execution risks, including risks of cost and time overruns, inherent in Greenfield hydro power projects. ICRA notes that several of NHPC's recent hydro power projects have seen significant cost and time overruns and further overruns cannot be ruled out for three large projects in early stages of implementation, namely the Lower Subansiri HEP in Arunachal Pradesh, Parbati-II HEP in HP and Kishanganga HEP in J&K. While work on the Subansiri project has been stalled since December 2011 because of local agitation, work at Parbati-II HEP has slowed down on account of poor geological conditions and contractual disputes. The implementation of the Kishanganga project may be impacted because of an ongoing legal dispute with Pakistan pending in the International Court of Justice. ICRA however has taken note of steps being taken by NHPC to resolve these disputes- it is actively engaging stakeholders in Assam for expediting the Subansri project while a key execution contract for Parbati-II contract has been rescinded and a new contract is expected to be signed shortly.

As can be seen from the table above most projects have seen significant time and cost overruns because of factors enumerated above, which is likely to result in the tariffs of these projects being relatively higher than tariffs for existing projects. Notwithstanding this, ICRA expects the tariffs of five of these projects (Uri-II, Parbati-III, Parbati-II ,Subansiri and Teesta IV) to be competitive with expected levellised tariffs at less than Rs. 4.50/unit. However, the other projects are likely to be more expensive with ICRA expecting Teesta-III and Kishenganga HEPs to have levellised tariffs of around Rs. 5.50-6.00/unit and Chhutak and Nimmo Bazgo having tariffs of greater than Rs. 7.00/unit. ICRA has however noted that some of these more expensive projects may be eligible for benefits under the Clean Development Mechanism (or CDM), which can potentially reduce tariff, albeit marginally. Further, ICRA has noted that the power from Chhutak and Nimmo Bazgo will be supplied mainly for meeting local requirements in the Ladakh and Kargil region where the alternative cost of supplying power (i.e. diesel based generation) is much higher.

NHPC is well placed for equity funding of capital expenditure towards projects under construction. The company had cash (and equivalents) of Rs. 5868 crores as on September 2012 and in addition can be expected to generate internal resource generation (i.e net cash accruals flow less debt repayment) of at least Rs. 1000 crores p.a. going forward, which is expected to be sufficient for funding the equity requirements (both for the equity component of its own projects as well as equity requirements in its JVs) in the medium term, especially as significant equity infusion for the aforesaid projects has already happened. The company expects to meet the debt requirement for these projects through a mix of term loans from banks/institution, placement of bonds and mobilization of foreign currency loans.

Financial Position

Substantial increase in revenues in 2011-12 on account of booking prior period income

NHPC reported a marginal growth of 0.39% in energy sales during FY 2011-12 over the previous year to 16,357 MUs with generation capacity remaining the same as last year. However, the operating income and OPBDITA increased significantly in FY 2011-12 on account of increase in tariffs, mainly because of significant booking of past period incomes with the issuance of final tariff orders for 2009-14 by CERC, along with the imposition of water cess by GoJK for all JK based power plants. The booking of prior period income also resulted in substantial increase in net profits for FY 2011-12. In addition to tariff income, NHPC continues to earns a significant interest income on account of huge cash balances and large liquid investments portfolio of over Rs. 7269 crores as on March 2012, generated mainly out of accruals apart from unutilized IPO proceeds and 8.5% tax-free bonds of Rs 1011 crore. NHPC's ROCE (return on capital employed) increased by 260 basis points over the previous year on account of higher realizations to 16.8% in FY 2012 (from 13.5% in FY 2011). However, the company's RoNW (return on net worth) still remains relatively low due to significant blockade of equity in CWIP/Bonds/Cash.

Gearing, liquidity and coverage indicators remain strong on account of healthy accruals and significant equity funding

NHPC's debt levels and gearing are low in relation to the capital intensive nature of the company's operations as a large number of its older plants were funded conservatively in 1:1 debt equity ratio and have over the period of years become depreciated and practically debt free. Further, funding of a number of projects with relatively high proportion of equity funding; and substantial equity accretion through IPO funding and internal generation has kept debt levels relatively low. However, the absolute debt levels of NHPC have increased significantly over past years on account of significant capital expenditure undertaken by the company towards recently commissioned and under-construction projects. The capital structure of NHPC has remained comfortable with gearing of 0.67 times as on March 31, 2012 despite increased debt levels. The company also has significant cash and liquid investments which were in excess of Rs. 7,200 crores as on March 2012. Net of cash, the company's gearing was even lower at around 0.39 times as on March 2012. Low gearing coupled with healthy operating profitability have resulted in satisfactory coverage indicators. NHPC's interest coverage indicators as defined by OPBDIT/Interest stood at 6.9 times and 11.3 times in FY 2011 and FY 2012 respectively, while NCA/Total Debt stood at 16% for FY 2011 and 15% for FY 2012.

Company Profile

NHPC, a Mini Ratna category I public sector utility, is the flagship hydroelectric generation company promoted by the Government of India. NHPC was incorporated in 1975, and has since grown to become the largest hydro electric generating utility in the country with an installed capacity of 5526 MW (including 1520 MW of its 51% owned subsidiary NHDC) as on November 2012 against a total installed capacity of around 39,291 MW in the Hydel sector, thus accounting for 14.1% of the total hydel generating capacity in India. The company supplies power to distribution companies/state electricity boards located mainly in Northern, Eastern and North Eastern India under terms of long-term PPAs signed with them.

NHPC reported a PAT of Rs. 2772 crores on operating income of Rs. 5655 crores for FY 2011-12, and a PAT of Rs. 1454 crore on operating income of Rs. 3197 crore for H1 FY 2013.

January 2013

Annexure : Rating Details

Credit Facility	Amount in Rs. Crore^	Rating Action
		January 2013
Rs. 1500 crore non convertible redeemable Q-Series bonds programme	1500.00	[ICRA]AAA reaffirmed
Rs. 1500 crore non convertible Taxable R-Series bonds programme including Green Shoe Option	1500.00	[ICRA]AAA assigned

^ 100 lakh = 1 crore = 10 million

ICRA Limited

An Associate of Moody's Investors Service

CORPORATE OFFICE
Building No. 8, 2nd Floor, Tower A; DLF Cyber City, Phase II; Gurgaon 122 002
Tel: +91 124 4545300; Fax: +91 124 4545350
Email: info@icraindia.com, Website: www.icra.in

REGISTERED OFFICE
1105, Kailash Building, 11th Floor; 26 Kasturba Gandhi Marg; New Delhi 110001
Tel: +91 11 23357940-50; Fax: +91 11 23357014

Branches: **Mumbai**: Tel.: + (91 22) 24331046/53/62/74/86/87, Fax: + (91 22) 2433 1390 **Chennai**: Tel + (91 44) 2434 0043/9659/8080, 2433 0724/ 3293/3294, Fax + (91 44) 2434 3663 **Kolkata**: Tel + (91 33) 2287 8839 /2287 6617/ 2283 1411/ 2280 0008, Fax + (91 33) 2287 0728 **Bangalore**: Tel + (91 80) 2559 7401/4049 Fax + (91 80) 559 4065 **Ahmedabad**: Tel + (91 79) 2658 4924/5049/2008, Fax + (91 79) 2658 4924 **Hyderabad**: Tel +(91 40) 2373 5061/7251, Fax + (91 40) 2373 5152 **Pune**: Tel + (91 20) 2552 0194/95/96, Fax + (91 20) 553 9231