

India Hydro sector: Multiple headwinds; be selective

India hydro sector: Reality out of sync with opportunities

We initiate coverage on NHPC (with an U/P rating) and SJVN (with a Buy rating). We believe the India hydro sector will continue to be affected by multiple handicaps of time and cost overruns, increasing environmental protests, ad-hoc changes in state policies, inherent disadvantage to thermal utilities and under-recoveries. However, initiatives on allowing additional RoE on CWIP and change over to "time-of-day" tariffs could help in reviving investor interest in the sector. In the near-term (FY13-14), capacity additions (1.4GW) will be robust due to bunching up. However, project pipelines beyond FY14 remain susceptible to further delays. We prefer SJVN to NHPC on a higher dividend yield of 6% vs NHPC at 5% and superior RoE of 14% vs NHPC at 9%.

Promise vs delivery: Delays in project execution

In our view, India has great potential to tap opportunities in the hydro generation sector (150GW, current capacity 39GW). But execution historically has been delay-prone and we see no change in this aspect going forward. Share of hydro capacity/generation on all-India basis fell from 34% of total in FY85 (sixth plan) to 22%/15% in FY12 (11th plan). The sector could only achieve 35% of its 11th plan target capacity addition. Both firms that we are initiating on have a pipeline of 8GW of projects over next 10 years (FY13-23E) and we factor in 3-12 months of delays along with cost overruns of 5-20% in our estimates.

Lower returns on long gestation are disincentives

A typical hydro power project takes 7-10 years to build against 4-6 years for coal-based stations. There is an inherent disadvantage of 0.8-1.8% lower equity IRRs on hydro projects despite having similar regulated RoEs of 15.5%. For every year of delay the equity IRR of a hydro project reduces by 0.3-0.5%. As a result, private participation in the sector has been low as compared to thermal where 23% of the capacity is now operated by the private sector.

Why we prefer SJVN to NHPC

We prefer SJVN over NHPC for the following reasons: 1) higher dividend yield of 5-6% in FY13-14E vs NHPC's 4-5%; 2) higher RoE of 14% vs 9% for NHPC; 3) no risk of under-recoveries for SJVN as compared to NHPC's Rs2bn p.a. on Parbati-3 over FY14-17 which may negate positives of 982MW capacity addition in FY13-14; 4) lower capex for SJVN also offers a 9% FCF yield in FY13, vs NHPC's 4%; and 5) continued benefits from superior asset in Nathpa Jhakri project delivering 400bp returns above norms.



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Table 1: BofAML India Power utility valuation matrix

	P/B (x)		RoE (%)	
	FY13E	FY14E	FY13E	FY14E
Hydro utilities:				
NHPC	0.8	0.7	9.2	9.3
SJVN	1.0	0.9	13.5	14.6
JP Power	1.8	1.6	10.9	15.4
Thermal utilities:				
NTPC	1.7	1.5	14.3	14.3
NLC	1.1	1.0	11.2	10.6
GIPCL	0.7	0.6	11.6	11.1
Tata Power	1.7	NA	12.1	NA
Average	1.2	1.1	11.8	12.6

Source: BofA Merrill Lynch Global Research

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Both NHPC and SJVN are dividend-yield plays and offer 4-6% yields in FY13-14E. But prefer SJVN over NHPC for higher RoE, dividend & FCF yield, and no risk of under recoveries

94% of hydro capacity in India is owned by central and state utilities vs 77% in thermal

Executive summary

We believe that the hydro sector in India will continue to be plagued by project delays, cost overruns and a the potential risk of environmental protests. Lower returns (equity IRRs: 10-11%) and long gestation periods (7-10 years) will likely limit the sector's growth. Share of hydro in India's total power capacity has declined to 22% at end of the 11th five-year plan vs 34% in the 6th five-year plan. Further, hydro projects are also vulnerable to change in state policies as witnessed in the case of NHPC (water cess and threat of project buyback by J&K). However, changes in sector policies such as allowing RoEs on equity deployed during construction and the move towards "time-of-day" tariffs should help improve investor interest in the sector. In this report, we initiate coverage on two hydro utilities: NHPC (Underperform) and SJVN (Buy). Both NHPC and SJVN are dividend-yield plays and offer 4-6% yields in FY13-14E. However, we prefer SJVN over NHPC for higher RoE (14%) dividend yield (6%), FCF yield (9%), defensive qualities and a lack of risk of under recoveries.

Hydro sector - Promise vs delivery

The sector has achieved only 40% of its targets since the 8th five-year plan. In the 11th five-year plan, only 35% of the targeted capacity addition was met.

Hydro projects in India take an average 7-10 years to construct (in addition to 3-5 years of project planning). Geological surprises are the most common reason for delays. Lower Subansiri (2GW, NHPC) got delayed by 32 months due to power house slope failure. Contractual disputes (Parbati-2), difficult terrain and inadequate infrastructure (Chutak, Nimmo Bazgo) are other common reasons for project delays.

Going forward, in our view it may only get tougher as in addition to the above issues, the risk of environmental protests has led to NTPC abandoning its 600MW Lohari-Nagpala project after two years of construction – there has been no activity at Lower Subansiri since December 2011 due to protests and blockades.

Lower return profile & long gestation are disincentives for sector growth

A hydro project with a cost-plus model earns 0.8-1.8% lower IRRs than coal-based projects despite having the same regulated RoE of 15.5%. In addition, delays in completion further reduce project NPVs. As a result, we have seen limited private participation in the sector. 93% of hydro capacity in India is owned by central and state utilities vs 77% in thermal.

Recently, the Arunachal Pradesh government has signed LOAs for 42GW – much of them with private IPPs and it will be interesting to monitor whether increased pvt participation can lower construction timelines and improve sector profitability.

Projects subject to change in state policies

Water being a state subject, hydro utilities are vulnerable to changes in state policies. Recently, events such as the introduction of water cess by Jammu & Kashmir government have resulted in an increased cost of Rs6bn p.a. for NHPC (will be passed through). J&K also proposed to buy back two of NHPC's projects in the state, representing 22% of the company's current capacity. Arunachal Pradesh took back 7.3GW of projects from NHPC to be reallocated to private IPPs. This, we believe, will continue to represent a risk for the sector.

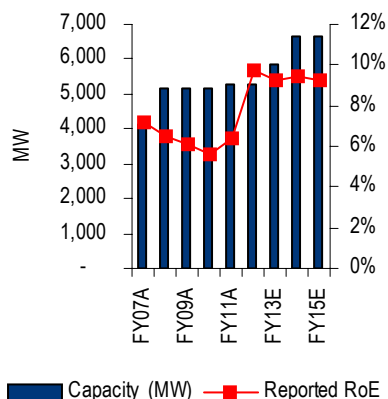
Some positive triggers for the sector

We identify two key policy initiatives that should help revive investor interest in the sector. 1) Allowing additional RoEs to hydro projects for the longer construction timelines. A hydro project that takes eight years to construct will require a

There is no risk of under recoveries for SJVN as compared to NHPC

NHPC, India's largest hydro power utility (5.3GW), has a pipeline of 4.5GW to be completed by FY17

Chart 1: NHPC: Capacity vs. Reported RoE



Source: BofA Merrill Lynch Global Research

regulated RoE of 19.25% (over 35 years) if it were to match the IRR of coal-based project with a similar 15.5% RoE. 2) Tariff system moves from availability based to "time-of-day", which encourages peaking power. Hydro stations with storage capabilities will benefit from an 25% additional fixed cost recovery.

Prefer SJVN over NHPC

We prefer SJVN over NHPC for the following reasons: 1) higher dividend yield of 5-6% in FY13-14E vs NHPC's 4-5%; 2) higher RoE of 14% vs 8% for NHPC; 3) there is no risk of under recoveries in SJVN as compared to NHPC's Rs2bn p.a. on Parbati-3 over FY14-17E, which would negate positives of 982MW of capacity additions in FY13-14; 4) Due to lower capex, SJVN also offers a 9% FCF yield in FY13, vs NHPC's 6%; and 5) continued benefits from superior asset in Nathpa Jhakri project delivering 400bp return above norms.

NHPC - Initiate at Underperform (Rs18.8, B-3-8); PO of Rs17

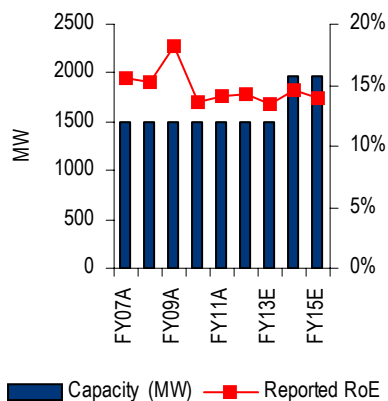
- We initiate coverage of NHPC with an Underperform rating due to delayed capacity addition, potential losses and value trap characteristics.
- NHPC, India's largest hydro power utility (5.3GW), has a pipeline of 4.5GW to be completed by FY18, and 5.1GW awaiting clearance.
- We see near-term capacity additions (FY13-14) of 982MW (~20% of planned cap). However earnings are likely to remain flat (3% CAGR FY12-15E) on MAT grossing in FY13E and Rs2bn under recoveries in Parbati-3.
- Parbati-2&3 and Lower Subansiri (3.2GW, 70% of cap add) are at a risk of further delays. Parbati-2 will now be commissioned in FY16 vs a target of FY14; also delaying interlinked Parbati-3. If work on Lower Subansiri does not begin in 1HFY13, the project could be delayed by 12 months.

Table 2: NHPC: Financial highlights

	FY11A	FY12E	FY13E	FY14E	FY15E
Revenues (Rs bn)	51.2	64.7	69.2	85.5	88.0
% Ch YoY	18%	26%	7%	24%	3%
Recurring EPS (Rs)	1.34	2.17	2.18	2.33	2.41
% Ch YoY	31%	62%	0%	7%	4%
RoE	6.4%	9.7%	9.2%	9.4%	9.3%
Dividend Yield		4.5%	4.7%	5.0%	5.2%
P/B (x)		0.8	0.8	0.7	0.7
PE (x)		8.6	8.5	8.0	7.7

Source: BofA Merrill Lynch Global Research

Chart 2: SJVN: Capacity vs Reported RoE



Source: BofA Merrill Lynch Global Research

SJVN - Initiate at Buy (Rs19.3, B-1-7); PO of Rs21.6

We initiate coverage of Satluj Jal Vidyut Nigam (SJVN), a hydro utility, with a Buy rating and PO of Rs21.6. Key arguments that support our Buy rating are:

- SJVN has a 5-6% dividend yield in FY13-14E, compared to 1.8% for Sensex stocks;
- defensive growth play with no fossil fuel risk;
- better returns than NHPC with higher RoE of 14%, 9% FCF yield in FY13, and no risk of under recoveries.
- Scale up in capacity from 1500MW currently to 5236MW by FY23E

Table 3: SJVN: Financial highlights

	FY11A	FY12E	FY13E	FY14E	FY15E
Revenues (Rs bn)	18.2	20.4	20.3	24.1	26.3
% Ch YoY	3%	12%	0%	19%	9%
Recurring EPS (Rs)	2.36	2.59	2.65	3.07	3.16
% Ch YoY	13%	10%	2%	16%	3%
RoE	14.1%	14.3%	13.5%	14.6%	14.0%
Dividend Yield		5.6%	6.7%	6.9%	6.8%
P/B (x)		1.0	1.0	0.9	0.8
PE (x)		7.4	7.3	6.3	6.1

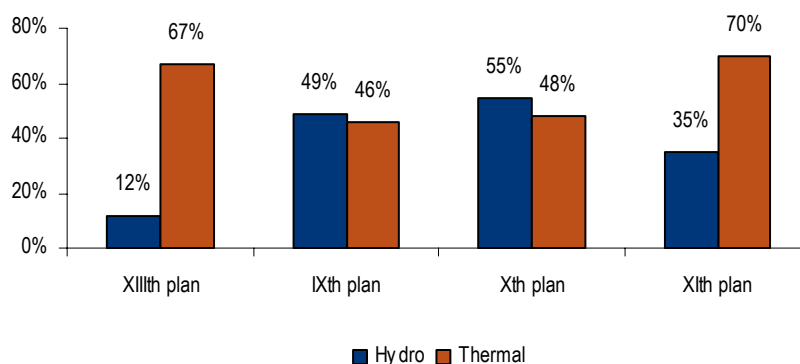
Source: BofA Merrill Lynch Global Research

Hydro sector - promise vs delivery

Plan targets missed, leading to falling contribution

The execution track record of hydro projects in India has been quite poor. The sector has achieved only 40% of its targets since the 8th (1992-97) to 11th five-year plan (2008-12). In the just-concluded 11th plan, the sector could only meet 35% of its targeted capacity, the lowest percentage since the 8th plan.

Chart 3: Hydro projects meet only 35% of 11th plan target vs thermal's 70%

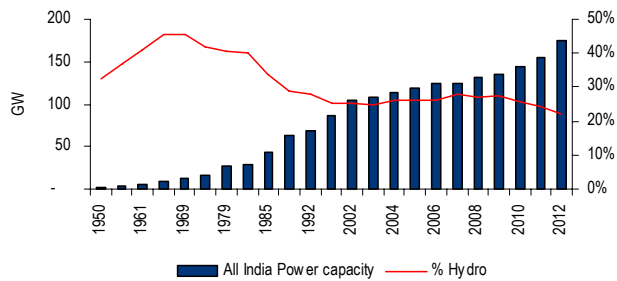


Source: BofA Merrill Lynch Global Research, CEA

Due to its tardy capacity addition, the share of hydro power as a percentage of India's total power installed capacity has declined from 34% in the 6th plan to 22% in the 11th plan. Hydro energy generation has also fallen from 34% in the 6th plan to just 15% in the 11th plan, due to delayed capacity additions and also lower PLFs.

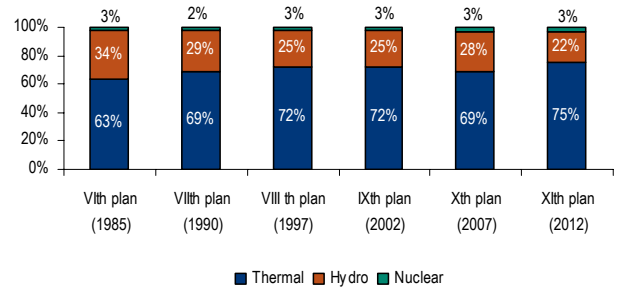
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Chart 4: India: Installed power capacity; declining share of hydro



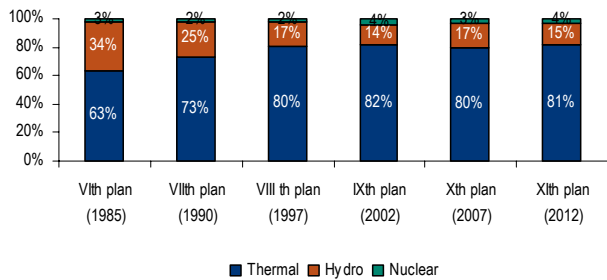
Source: CEA

Chart 5: Share of hydro capacity % of India total has declined from 34% in 6th plan to 22% in 11th plan



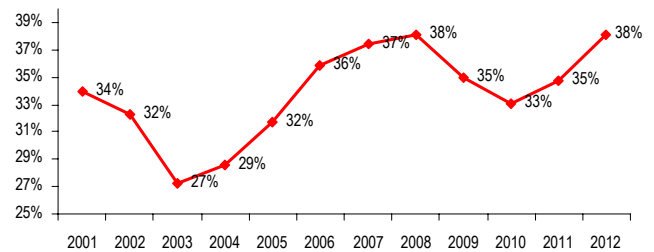
Source: CEA, BofA Merrill Lynch Global Research

Chart 6: Share in total generation at 15% in 11th plan led by poor capacity addition and PLFs



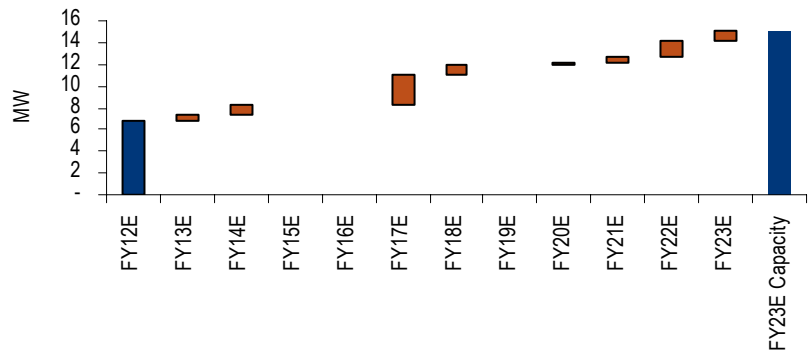
Source: CEA, BofA Merrill Lynch Global Research

Chart 7: FY12 PLF of 38% highest since FY08



Source: CEA, BofA Merrill Lynch Global Research

Chart 8: We estimate NHPC & SJVN to cumulatively add 8.2GW FY13-23E, mostly backended

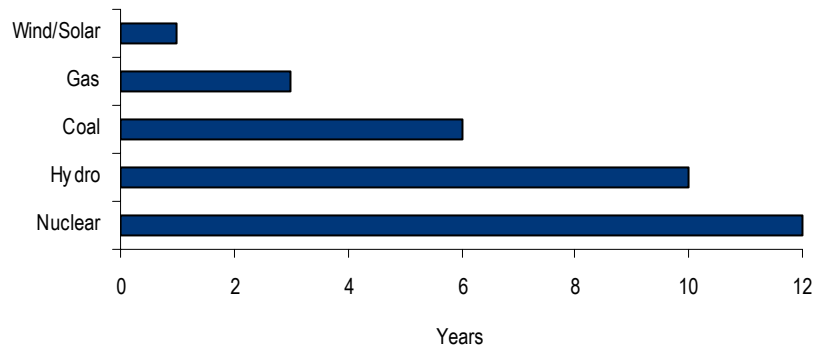


Source: BofA Merrill Lynch Global Research

Geological surprise the most common reason for delays

Average execution (time to construct excludes time taken for approvals) for a hydro project in India is 7-10 years and are often delayed by 2-3 years, versus coal-based projects which typically take 4-6 years to become operational.

Chart 9: Average 'time to construct' hydro project is 7-10 years optimistically



Source: BofA Merrill Lynch Global Research

There are multiple reasons for the delayed execution of hydro projects in India. However, the most common reason for delay has been geological surprises once construction at the site has begun.

See: Case study on why projects are delayed (Page 10)

Reasons for delays in hydro projects:

- **Geological surprises:** Poor soil condition, power house slope failures, etc. NHPC's 2GW (40% of project pipeline) Lower Subansiri project was delayed by 32 months on account of slope failure at its power house in 2008.
- **Contractual issues:** Contractual issues with TBM operator have led to a delay of 48 months for NHPC's Parbati-2 (800MW).
- **Inadequate infrastructure:** Lack of roads, bridges especially in North East India
- **Difficult terrain:** Mostly for upstream projects. NHPC's Chutak (44MW) and Nimmo-Bazgo (45MW) located in J&K have been delayed by 20 and 29 months respectively as construction at the site is only possible for 4-5 months of the year.
- **Protests and blockades:** All construction activity at Lower Subansiri has been halted since December 2011 due to protests by locals and NGO's. Similarly at Uri-II (240MW) protests by project affected persons has stopped all activity since March 2012.

May only get tougher from here

Increased protests against hydro projects will remain a risk to timely project completion in our view. We highlight issues faced by NTPC on its 600MW Loharinagpala project. The company abandoned construction activities after two into the project and incurring capex of Rs7.5bn.

NTPC was implementing 4x150MW (600MW) Loharinag Pala Hydro electric project (HEP) on the river Bhagirathi, the headstream of the Ganges River in Uttarakhand.

The National Ganga River Basin Authority (NGRBA) decided in its meeting in November 2010 to discontinue all hydro electric projects under construction in the upper reaches of the Bhagirathi in view of the necessity of maintaining aviral dhara (continuous flow) in the Bhagirathi. The 135 km stretch towards Gomukh and Uttarkashi has been declared an eco-sensitive zone.

With the decision of NGRBA, the Ministry of Power (MoP) on 24 Dec 2010 had communicated the discontinuation of Loharinag Pala HEP to NTPC. The MoP had sought the details of capex incurred and expenses required to wind up the project.

NTPC had incurred a total cost of Rs7488mn as of Mar 31, 2011 which is to be reimbursed by MoP / Govt of India.

Equity IRR of a hydro project that takes seven years to construct is 10.8% vs a thermal project's 12.2%

Lower return profile and long gestation period are disincentives for sector growth

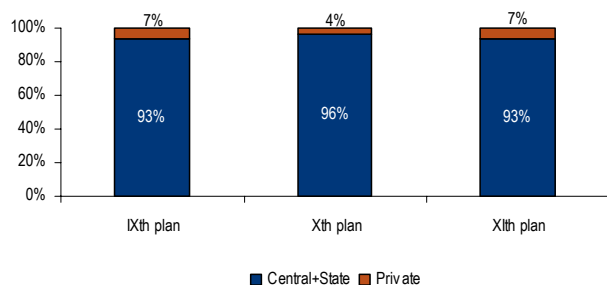
Hydro sector utilities suffer from a two-pronged problem: a) long gestation period of 7-10 years and b) depressed reported RoEs. As per CERC norms, hydro earns a 15.5% RoE similar to that of a thermal project. However, given the longer time to construct hydro projects the equity IRR differs materially versus coal-based projects. The equity IRR of a hydro project that takes seven years to construct is 10.8% vs 12.2% for a thermal project.

This, we believe, has been a major deterrent to private sector participation in the hydro sector as compared to its exposure to the thermal sector. Recently, the Arunachal Pradesh government signed 42GW LOAs, mostly with the private sector. However, the progress so far has not been material.

Majority of capacities still owned by central and state utilities

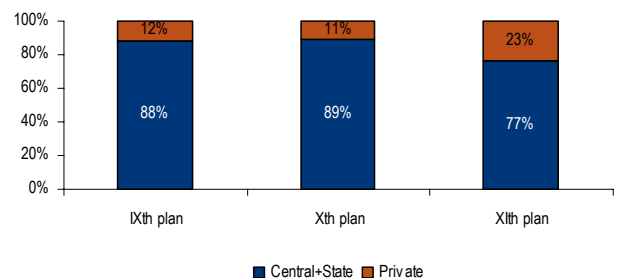
Private sector participation in the power sector increased post the Electricity Act 2003 and as its share in total capacity increased from 10% in the 10th five-year plan to 19% in the 11th five-year plan. However, the majority of this growth took place in the thermal power segment where the share of private capacity has increased from 12% in the 10th five-year plan to 23% in the 11th five-year plan. In the hydro segment, central utilities (31%) and state utilities (63%) still account for 94% of the total hydro capacity.

Chart 10: Ownership in hydro sector still with govt...



Source: CEA, BofA Merrill Lynch Global Research

Chart 11: ...whereas in thermal, share of pvt sector has increased to 23% in the 11th plan



Source: CEA, BofA Merrill Lynch Global Research

Arunachal signed LOAs for 42GW but not much progress has happened

However, from 2006 states like Arunachal Pradesh have signed LOAs for 42GW, majority with IPPs to encourage private sector participation in the hydro sector. But, progress on the allotted projects has not been material to conclude that the private sector has a better track record than central/state utilities in implementing hydro projects as they have demonstrated in the case of thermal projects.

Policy changes carried out by states

The allotment of hydro projects is a state subject, since rivers are considered state resources. Recently, we have witnessed multiple instances wherein states have made ad-hoc changes to their policies and thus have negatively impacted hydro utilities.

In this section, we review and analyze the impact of three such events.

Table 4: Impact of change in States' policies

Policy	Status	Company most impacted	Impact
Water cess by J&K	Implemented	NHPC	~Rs6bn increase in billing; still to be passed by CERC; 9MFY12 receivables increase by Rs5.3bn
J&K take back of projects	Rejected	NHPC	Projects in J&K 22% of current capacity; potential impact of Rs4/sh; J&K assembly rejected the request
Transfer of projects to IPP by Arunachal Pradesh	Implemented	NHPC	NHPC lost out 7.3GW of projects to IPPs in Arunachal Pradesh

Source: BofA Merrill Lynch Global Research

J&K water cess: Increases NHPC's FY13 tariff by 9% (Rs0.28/Kwh)

In FY11, J&K introduced a water-usage charge for hydro projects as part of a new J&K Water Resources Act 2010. As per the new law, Rs0.25/cu meter of discharge will be levied on power projects.

J&K introduced a water-usage charge for hydro projects as part of a new J&K Water Resources Act 2010

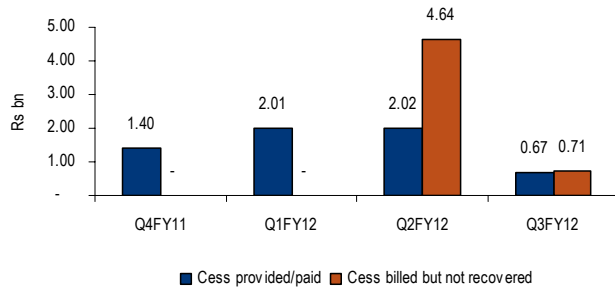
This is mostly applicable to NHPC, which has four operational projects (1680MW) and an additional four projects (659MW) that are under construction. The company expects a recurring annual outflow of about Rs6bn on account of operational projects.

However, this will not negatively impact NHPC, as CERC has agreed to pass this on as an additional charge as per the 'change in law' if NHPC were to lose its case against the J&K government. Based on its October 2011 order, CERC will make amendments to its 2009-14 regulations to include 'water charges' as a part of the primary energy charge.

In the interim, NHPC has been paying/providing for the water expenses and has also provisionally recognized revenues for this. Until 9MFY12, NHPC has provided for Rs6.14bn and recognized revenues of Rs5.34bn. We estimate the cess to add Rs0.28/unit to NHPC's FY12 tariff.

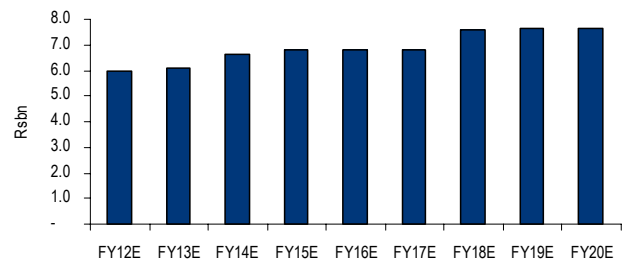
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Chart 12: Rs5bn water cess paid to J&K remain to be recovered from beneficiaries



Source: Company

Chart 13: Our estimates on outgo on account of water cess



Source: BofA Merrill Lynch Global Research

J&K is willing to pay about Rs5bn for Salal (latest approved cost of Rs9.11bn) & Rs21bn for Uri-1 (latest approved cost of Rs34.2bn)

J&K's proposal to buy back 22% of NHPC's capacity... no longer a risk

In FY11, J&K proposed that it would buy back two NHPC projects located in the state. Salal (CoD 1987-95, 690MW) and Uri-1 (CoD 1998, 480MW) account for 22% of NHPC's consolidated capacity. However, subsequently the J&K house of representatives voted against the motion. Hence, this is no longer a risk for NHPC, but it does highlight the uncertainty surrounding changes in state policies.

J&K's stand is that these projects were allotted to NHPC on a "Built Operate Maintain" basis and since the validity of the agreement has expired, NHPC should hand over these projects back to the state. Based on media reports, J&K is willing to pay about Rs5bn for Salal (latest approved cost of Rs9.11bn) and Rs21bn for Uri-1 (latest approved cost of Rs34.2bn).

Had these projects been taken back from NHPC in FY13, it would have negatively impacted our DCF value for standalone operations by 21% (Rs4/share). However, the payment from J&K would have been used as equity infusion for future projects – we estimate a total equity requirement of Rs64bn over FY13-17.

NHPC loses out on 7.3GW projects to IPPs

NHPC has lost out on major projects to IPPs as North Eastern states (mostly Arunachal Pradesh) went on a MoU signing spree.

Upper Subansiri (1.6GW), Middle Subansiri (2GW) Lower Siang (2.7GW) and Siyom (1GW) projects were de-allocated from NHPC and were allotted to Jindal Power, KSK Energy, Jai Prakash Associates and Reliance Power, respectively. This was a result of Arunachal Pradesh signing MoUs for 42GW.

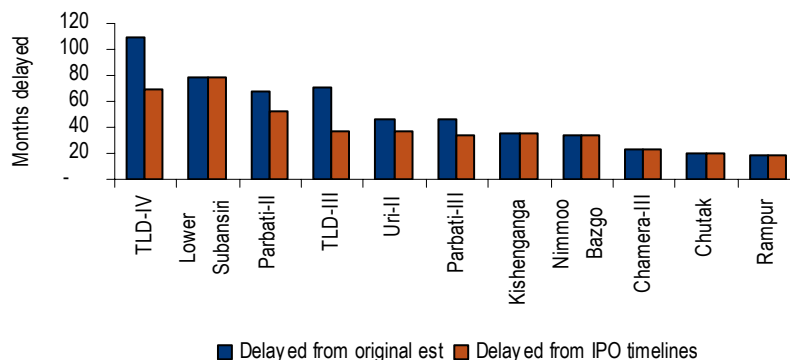
Till FY11, NHPC had spent Rs1.2bn on these projects – funded mostly through internal accruals (equity). It booked profits of Rs955mn on transfer of two projects (Upper & Middle Subansiri) in FY11 and FY12.

Lack of physical progress on the part of NHPC was the reason for the projects' de-allocation. However, little progress has taken place even after the private sector taking over the projects in 2009-10.

Why projects get delayed

Hydro projects in India are commonly delayed due to multiple reasons.

Chart 14: Delay in NHPC & SJVN projects



Source: MOSPI, Company, BofA Merrill Lynch Global Research

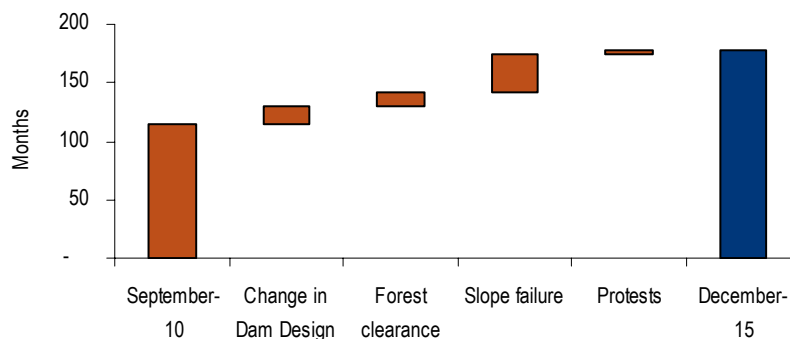
Delay in Lower Subansiri (2000MW): A case study

Lower Subansiri is part of a three project cluster of 5600MW on the Subansiri River in Arunachal Pradesh.

Delay of 63 months and counting

The project, as of 3QFY12, is expected to be commissioned by December 2015 (BofAMLe April 2016), a delay of 63 months from the original target of September 2010. It has been delayed due to 1) change in design of the dam (12-15 months), 2) geological surprises such as poor soil conditions delaying river diversion, power house slope failure (32 months), 3) delayed forest clearance (12 months) and 4) protests and blockades (4 months so far). The project would be further delayed if the ongoing protests continue until monsoon (June).

Chart 15: Causes of delays for Lower Subansiri



Source: BofA Merrill Lynch Global Research

Project cost up 70%; first-year tariff assumption up 80%

Due to delays, the project cost has increased from the original estimate of Rs62bn to Rs107bn over the past five years. As a result of the delay, the first-year tariff of the project has increased by 80% from Rs1.86/kwh (assuming CoD

Lower Subansiri project would get further delayed if the ongoing protests were to continue until monsoon

in Sept '2010) to about Rs3.35/kwh (assuming a Dec '2015 CoD). We have built in a further increase of 15% into the project cost (BofAMLe Rs122bn) for further time and cost overruns.

Progress so far

50% of physical progress and financial expenditure has been completed as of 3QFY12. The activity at the plant site has been stalled since mid-December 2011. 98% of all critical electrical components are at the site.

Table 5: Lower Subansiri progress so far (3QFY12)

Activity	Status	Date of completion
Stage-1,2&3 clearance	Complete	Feb-03
Environmental Clearance	Complete	Jul-03
Forest Clearance	Complete	Jan-2002, Oct-2004, Jan-2008
Land Acquisition	Complete	2004
Dam construction	Concreting 43% complete	
Intake structure	Concreting 92% complete	
Head Race Tunnel	99% excavation complete; 45% lining complete	
Surge Tunnels	90% excavation complete; lining pending	
Power House	Concreting 41% complete	
EM works	36% complete	
HM works	7% complete	
Capex	Rs57bn spent out of latest TPC of Rs107bn	

Source: CEA

Regulatory framework for hydro utilities

Regulated returns @ 20% tell a different story

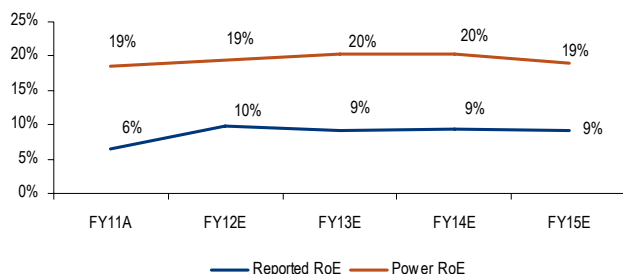
The most common argument against hydro utilities are they make low RoEs as the equity is deployed in CWIP over 7-10 years period versus thermal's 4-5 years

NHPC has 4502MW under construction, coupled with delays in projects such as Teesta-3&4, Parbati-2 and Lower Subansiri (70% of pipeline). Its reported RoEs in FY11-15E are 6.4-9%. In SJVN's case, only Rampur (412MW) is under construction; hence, its reported RoEs are higher than NHPC at 14%. However, reported RoE of both companies undermine operational efficiencies.

The most common argument against hydro utilities is that they make low RoEs as the equity is deployed in CWIP over 7-10 years period versus thermal's 4-5 years.

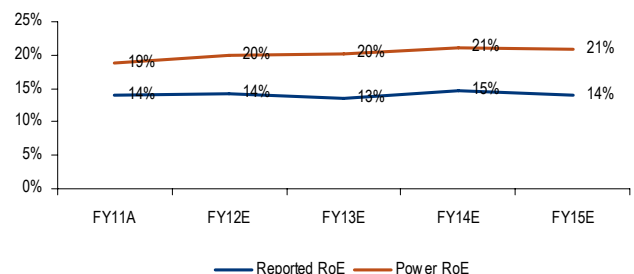
However, on a regulated equity base, we estimate NHPC makes 19-22.5% and SJVN 19%-20%. In addition to the normative 15.5% RoE, companies outperform the norms to earn incentives which add an incremental 3-5ppt to RoE.

Chart 16: NHPC disconnect between power & reported RoEs



Source: BofA Merrill Lynch Global Research, company

Chart 17: SJVN has higher reported RoEs vs NHPC due to lack of major project pipeline



Source: BofA Merrill Lynch Global Research, company

Design Energy

Design Energy (DE) is the minimum amount of energy that can be produced by a hydro power plant with almost 90% certainty. A tentative estimate of design energy is calculated in the pre-feasibility report of a project (stage-1) but it is finalized only in the detailed project report (DPR) which is stage-2 in the clearance process.

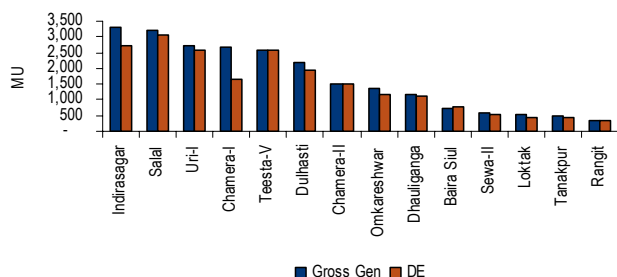
In such a case where generation is lower than DE, the plant recovers only 50% of its fixed costs (AFC). DE is also used as a base to calculate implied PLF and secondary energy incentives.

NHPC

NHPC currently has 14 plants (including two in subsidiary NHDC 1520MW) with total installed capacity of 5280MW and design energy of 20.9bn units (BU) which implies a PLF of 45%. In FY12, two (Baira Sul, Teesta-V) plants have generation below their DE and hence will not be recovering their full AFCs. However, lower income from these plants will be set off by higher generation at Chamera-1 and Dulhasti.

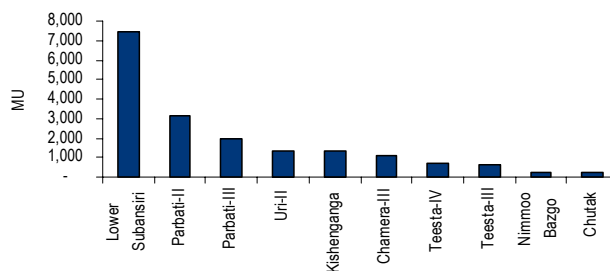
Based on our commissioning estimates, we expect NHPC's DE to increase from the present 20.9BU to 39BU by FY18E.

Chart 18: NHPC: FY12 generation 12% higher than Design Energy



Source: Company, CEA, BofA Merrill Lynch Global Research

Chart 19: NHPC: Design energy of under-construction plants

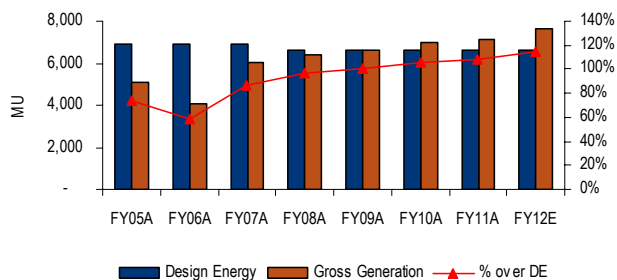


Source: Company, BofA Merrill Lynch Global Research

SJVN

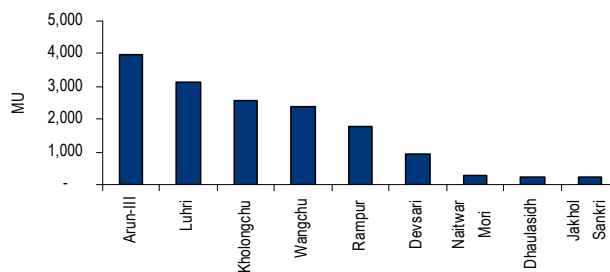
At present, SJVN has only one operational plant (1500MW Nathpa Jhakri). Due to high silt content in water, CERC allowed a reduction in Nathpa Jhakri's (NJPS) design energy by 5% to 6.6BU from 6.9BU in FY08, which implies a 50% PLF.

Chart 20: SJVN: NJPS performance has improved in FY09-12



Source: Company, CEA, BofA Merrill Lynch Global Research

Chart 21: SJVN: Design energy of projects in pipeline



Source: Company, BofA Merrill Lynch Global Research

Incentives

In addition to UI income, performance-based incentive income allows hydro projects to earn RoEs above the regulated 15.5%. There are two types of incentives available to hydro projects.

- **Availability based:** When Actual Plant Availability Factor (PAF) > Normative Plant Availability Factor (NPAF). As per the 2009-14 regulations, it is added to the Capacity Charges of the plant.

$$\text{Capacity Charges} = (\text{AFC} \times 50\%) \times (\text{PAF}/\text{NPAF})$$

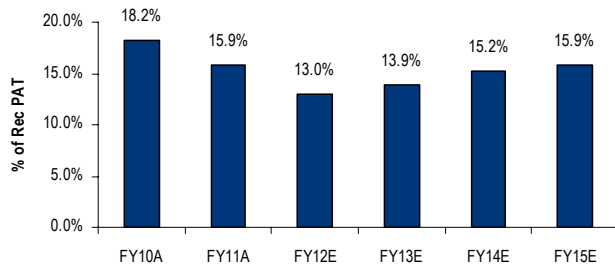
- **Secondary energy:** Secondary energy incentives are available when actual generation > Design Energy. Secondary energy incentives are linked to energy charge of a plant. However, secondary energy rate has been capped at Rs0.80/Kwh.

$$\text{Secondary energy} = (\text{Net saleable energy} - \text{Net saleable Design energy}) \times \text{Rs}0.80$$

NHPC

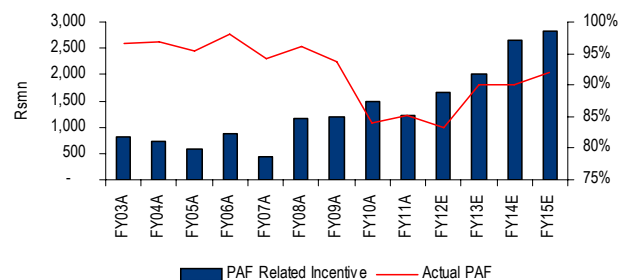
We expect incentive income, including UI, to represent 13% of NHPC's FY12 Rec PAT vs 18.2% in FY10. Incentives would contribute to 400bp of additional RoE in FY12. In FY13-15, incentive income would be negatively hit due to lower cost recovery of Parbati-3 due to the delay of Parbati-2 commissioning.

Chart 22: NHPC: Share of incentives in Recurring PAT increases FY12-15 upon 982MW cap add



Source: BofA Merrill Lynch Global Research

Chart 23: NHPC: PAF incentive income may decline due to Parbati-3

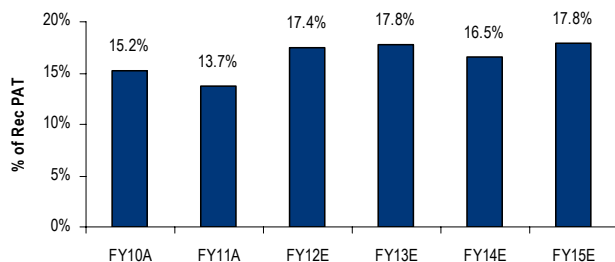


Source: BofA Merrill Lynch Global Research, company

SJVN

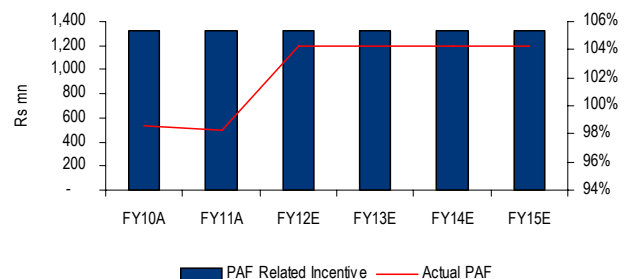
We believe that incentives derived from NJPS will peak in FY12 and will be flat until commissioning of Rampur (2HFY14). The company has consistently outperformed its normative PAF (82%) since FY07. In FY12, its PAF was 104%. We estimate a total incentive income (including UI) of Rs1.8bn in FY12, which would account for 17.4% of its PAT and add 400bp to its power RoEs.

Chart 24: SJVN: Incentive % of Rec PAT peaks in FY13 until FY15 when Rampur kicks in



Source: BofA Merrill Lynch Global Research

Chart 25: SJVN: We expect PAF to remain 104% for NJPS



Source: BofA Merrill Lynch Global Research

Something to look out for... key upside triggers

The hydro sector is impacted by longer project gestation periods, project delays leading to cost and time overruns due to geological and environmental issues and seasonality impacting recovery of fixed costs.

We highlight three initiatives that could not only increase the focus on the sector but also make it competitive vs thermal projects. These requests have been in the public domain for quite some time. Our interaction with CERC suggests it plans to address the additional RoE to hydro projects in the near term.

Upside triggers:

- Additional RoE to make up for longer project construction timelines
- Move to “time-of-day” tariff from the current availability based
- CDM benefits for hydro projects

Additional RoE on CWIP... consensus required but can be implemented

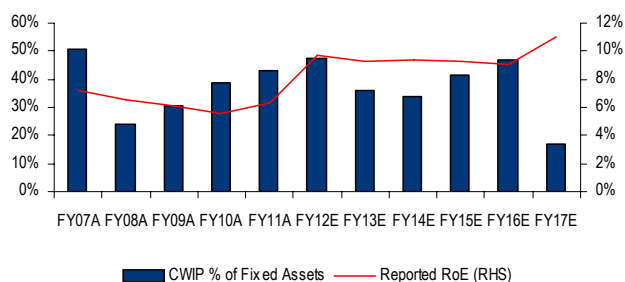
The average time taken for completion of a hydro project – post all clearances – has been 7-10 years, vs 4-6 years for a coal-based project. The longer gestation period implies equity being deployed in capital work in progress (CWIP) for an additional 3-5 years for a hydro station, thus reducing its competitiveness (lower IRR/NPV) when compared to thermal stations.

Given the difficult terrain in which hydro projects are built, one major cause of delay is due to unforeseen geological risks (Parbati-2, Rampur), and local agitation (Teesta low dam, Lower Subansiri, Uri-2). As a result, the hydro utilities have petitioned the CERC to allow them to claim return on equity (RoE) deployed during the construction period of a project.

Based on our interactions with CERC, it is in the process of publishing a paper for discussion on the above request. If accepted by stakeholders (mostly SEBs), this, we believe, would improve core RoEs. NHPC should benefit as 43% of fixed assets are in CWIP (FY11) and reported RoEs are in the 6-8% range, secondly project IRRs should also improve for the sector by 0.8-1.85%.

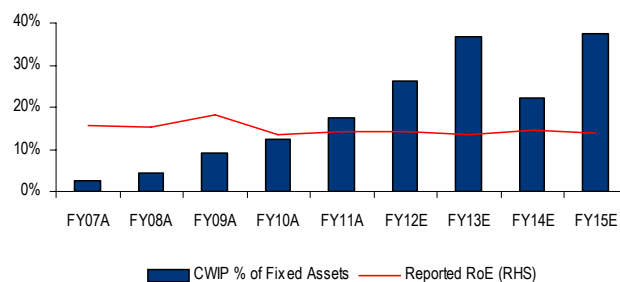
Hydro utilities have petitioned the CERC to allow them to claim RoE deployed during construction period of a project

Chart 26: NHPC: Subdued RoEs due to higher CWIP



Source: BofA Merrill Lynch Global Research

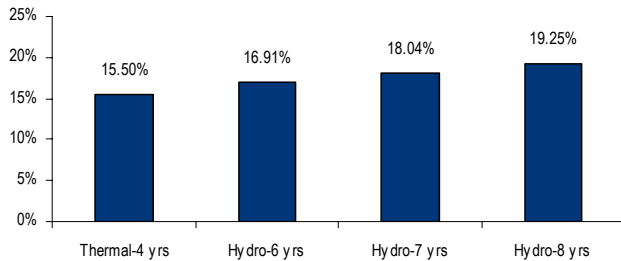
Chart 27: SJVN: RoEs to inch lower as capex on pipeline beyond Rampur starts in FY13



Source: BofA Merrill Lynch Global Research

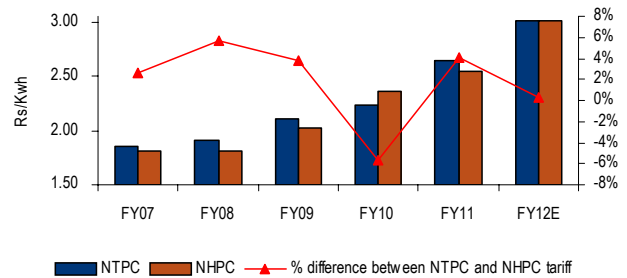
08 May 2012

Chart 28: 19% RoEs required by hydro projects to match thermal plant IRRs



Source: BofA Merrill Lynch Global Research

Chart 29: Thermal vs hydro tariff's case to increase RoE exists



Source: BofA Merrill Lynch Global Research

We believe that of the three initiatives, this can be implemented the earliest if a consensus can be achieved among the SEBs. Also, the average tariff of NHPC (hydro sector) is lower than NTPC (thermal) and an increase in RoEs for hydro projects would only bring it on a par with thermal tariffs. A key risk to implementing this, in our view, would be whether this benefit should be passed on to existing stations or only for upcoming projects.

All of SJVN's stations are run-of-river based and would benefit only during period of excess water flow (monsoon)

Move to "time-of-day" allowing peaking tariffs positive for NHPC

Hydro projects are best placed to benefit from peaking power rates. However, this would benefit storage/pondage-based hydro stations. Peaking tariff as a concept would be implemented when the Time-of-Day (ToD) tariff system is adopted by India versus the current availability based tariff (ABT) system. This would be positive for NHPC as 2.1GW (40% of total) of its current capacity and 2GW of future capacity is reservoir/storage-based. All of SJVN's stations are run-of-river based and would benefit only during period of excess water flow (monsoon).

Peaking tariffs would allow storage-based hydro projects to earn incentives for supply of low-cost electricity during the peak hours (three hours for hydro projects and six hours for thermal projects).

As per the March 2010 paper published by CERC, it suggests 50% additional recovery of AFC for power supplied during peak hours against off-peak hours.

Peak hours: Recovery of capacity charge for hydro stations (recommended)

$$= (\text{Annual Fixed Cost} \times 75\%) \times (\text{PAF/NPAF})$$

Versus

Off-peak hours: Recovery of capacity charge

$$= (\text{Annual Fixed Cost} \times 50\%) \times (\text{PAF/NPAF})$$

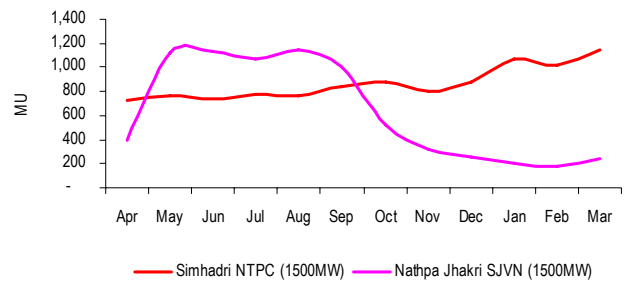
08 May 2012

Table 6: NHPC projects with storage/reservoir to benefit from peaking power

Project	Capacity (MW)	Type
NHPC Operational projects	2,150	
Loktak	90	Reservoir
Chamera-I	540	Storage
Indirasagar	1,000	Storage
Omkareshwar	520	Storage
NHPC Future projects	2,000	
Lower Subansiri	2,000	Reservoir

Source: Company

Chart 30: Typical generation trends of hydro (peaking) and coal (base) plants



Source: BofA Merrill Lynch Global Research

CDM benefits... progressive but insignificant impact for now, in our view

Two of NHPC's projects (Chutak 44MW & Nimmo Bazgo 45MW) and SJVN's (Rampur 412MW) have been registered for CDM benefits. In addition, NHPC has also applied for VERs for all its existing projects; however, it has only been collecting for Teesta-V 510MW and for the other operational projects the company is in the process of re-applying to the executive board.

NHPC has also applied for VERs for all its existing projects

With a robust pipeline of projects, we expect both NHPC and SJVN to benefit from CDM income. However, in the near term, we see minimal contribution to revenues from this source.

40% merchant sales on timely project completion... this one's tough

National Hydro Policy 2008 mandates that if a hydro project were to be completed in a timely fashion, it has the option to sell 40% of its saleable energy in merchant. For every six months delay, 5% would be reduced.

However, given the delays in project completion we do not see majority of hydro stations benefitting from this regulation.

Table 7: NHPC & SJVN: Key financial comparison

	Price (Rs)	Shs O/s Mn	Mkt Cap Rsbn	Capacity (GW)			Revenues (Rsbn)			Rec EPS (Rs)			P/E (x)		
				FY13	FY14	FY15	FY13	FY14	FY15	FY13	FY14	FY15	FY13	FY14	FY15
NHPC	18.30	12,301	225	5.9	6.7	6.7	69.2	85.5	88.0	2.2	2.3	2.4	8.4	7.8	7.6
SJVN	19.15	4,137	79	1.5	2.0	2.0	20.3	24.1	26.3	2.6	3.1	3.2	7.2	6.2	6.1
	Regulated Equity (Rsbn)			Power RoE			Reported RoE			BV (Rs)			P/BV (x)		
	FY13	FY14	FY15	FY13	FY14	FY15	FY13	FY14	FY15	FY13	FY14	FY15	FY13	FY14	FY15
NHPC	94.7	110.9	122.8	20%	20%	19%	9%	9%	9%	24.4	25.7	27.0	0.75	0.71	0.68
SJVN	41.1	43.5	47.2	20%	21%	21%	13%	15%	14%	20.3	21.9	23.5	0.94	0.88	0.82
	DPS (Rs)			Div Yield (%)											
	FY13	FY14	FY15	FY13	FY14	FY15									
NHPC	0.9	0.9	1.0	4.8%	5.1%	5.3%									
SJVN	1.1	1.3	1.3	5.7%	6.7%	6.9%									

Source: BofA Merrill Lynch Global Research

Peer comparison

Table 8: Peer comparison

Region	Company	BofAML Ticker	Bloomberg Ticker	ML Rating	CMP Local curr	Currency	Mkt Cap US\$ mn	P/E (x)			P/B (x)			RoE (%)		
								FY12E	FY13E	FY14E	FY12E	FY13E	FY14E	FY12E	FY13E	FY14E
India	Adani Power Ltd	XADPF	Adani IN	UNDERPERFORM	60.4	INR	2,696	23.3	12.4	7.3	2.0	1.7	1.4	9.2	15.0	21.1
	Lanco	LNIF	LANCI IN	BUY	12.9	INR	580	31.3	12.3	3.0	0.7	0.6	0.5	2.1	5.2	19.1
	Jindal Steel & Power	XJDLF	JSP IN	UNDERPERFORM	485.3	INR	8,407	11.4	10.9	9.7	2.5	2.0	1.7	25.1	20.4	18.9
	Gujarat Inds	GUJIF	GIP IN	NEUTRAL	66.0	INR	186	7.6	5.7	5.5	0.7	0.6	0.6	9.4	11.6	11.1
	Jaiprakash Power	XJSHF	JPVL IN	BUY	39.2	INR	1,921	25.3	17.4	11.1	2.0	1.8	1.6	7.8	10.9	15.4
	NTPC Ltd	NTHPF	NTPC IN	UNDERPERFORM	155.0	INR	23,852	13.5	11.6	10.7	1.7	1.6	1.5	13.4	14.3	14.3
	Neyveli Lignite	NEYVF	NLC IN	UNDERPERFORM	78.9	INR	2,470	10.2	9.5	9.3	1.1	1.0	1.0	11.2	11.2	10.6
	Reliance Infra.	RCTDF	RELI IN	BUY	494.6	INR	2,429	9.0	9.8	8.2	0.7	0.7	0.6	8.1	7.0	7.8
	Tata Pwr. Co.	XTAWF	TPWR IN	NEUTRAL	100.1	INR	4,432	13.8	14.3		1.8	1.7		13.2	12.1	
	NHPC	XNTHF	NHPC IN	UNDERPERFORM	18.3	INR	4,202	8.4	8.4	7.8	0.8	0.7	0.7	9.7	9.2	9.4
	SJVNL	XJVNF	SJVN IN	BUY	19.2	INR	1,479	7.4	7.2	6.2	1.0	0.9	0.9	14.3	13.5	14.6
	Indian Average							14.6	10.9	7.9	1.4	1.2	1.0	11.2	11.9	14.2
HK/Chinese IPP	China Power	CPWIF	2380 HK	BUY	1.8	CNY	1,595	9.0	8.0	6.9	0.7	0.6	0.6	8.4	9.0	9.8
	CR Power	CRPJF	836 HK	BUY	13.8	HKD	8,551	10.3	8.9	7.6	1.3	1.1	1.0	13.1	13.5	14.1
	CLP Holdings	CLPHF	2 HK	UNDERPERFORM	66.9	HKD	20,739	15.2	14.0	13.5	1.8	1.7	1.7	12.4	12.8	12.6
	Datang Intl	DIPGF	991 HK	NEUTRAL	2.7	CNY	5,762	15.3	10.7	8.6	0.9	0.9	0.8	6.1	8.4	10.0
	HKE	HGKGF	6 HK	UNDERPERFORM	58.8	HKD	16,155	13.7	14.0	14.2	2.0	1.9	1.8	15.3	14.1	13.2
	Huadian	HPIFF	1071 HK	BUY	1.9	CNY	1,986	9.1	6.3	5.8	0.6	0.6	0.5	7.6	9.6	9.7
	Huaneng Power	HUNGF	902 HK	NEUTRAL	4.6	CNY	10,186	13.9	12.3	12.2	1.1	1.1	1.1	8.6	9.1	8.8
	HK/Chinese Average							12.4	10.6	9.8	1.2	1.1	1.1	10.2	10.9	11.2
Thailand IPP	EGCOMP	EYGGF	EGCO TB	BUY	98.8	THB	1,681	8.5	9.0	9.5	0.8	0.8	0.8	10.2	9.1	8.2
	Glow Energy	GWEFF	GLOW TB	BUY	65.0	THB	3,075	14.6	11.8	11.5	2.5	2.3	2.1	18.1	20.2	18.8
	Ratch	RCHPF	RATCH TB	UNDERPERFORM	42.5	THB	1,993	11.2	11.0	10.1	1.2	1.2	1.1	11.2	10.9	11.3
	Thailand Average							11.4	10.6	10.4	1.5	1.4	1.3	13.2	13.4	12.7

Source: BofA Merrill Lynch Global Research

Initiating at UPF: Execution challenges make it value trap

NHPC: Value trap; and we see risks to robust pipeline

We initiate on NHPC, India's largest hydro utility (capacity 5.23GW), at Underperform owing to delayed capacity add, potential losses, and value trap concerns. NHPC has a pipeline of 4.5GW thru FY18 and another 5.1GW awaiting clearance. Despite strong near term capacity add of 982MW (c.20% of planned) we see flat earnings FY12-15E on MAT (minimum alternate tax) grossing in FY13 and Parbati-3 under recoveries. However, Parbati-2&3 and Lower Subansiri (3.2GW, 70% of planned) are at risk: Parbati-2 will start in FY17 vs. the FY14 target, also delaying the interlinked Parbati-3. If work on Lower Subansiri does not start by 1H13, the project could be delayed by another 12 months.

Near term risk of Parbati-3, Rs2bn under-recoveries?

Per its guidance, NHPC plans to commission Unit-1 (130MW) of Parbati-3 by Oct 2012 and is yet to take a final decision on the three other units (390MW) which depend on Parbati-2 for water availability. In the most logical scenario, we believe NHPC will CoD (commercial operation date) one unit and show the balance units available. In that case, we see Rs2bn in annual under recoveries through FY14-17, until P-2 is operational.

Subansiri can be further delayed; capex already up 70%

Lower Subansiri (2GW) is 40% of NHPC's project pipeline 4.5GW. Its commissioning has been delayed by 63 months to Dec'15, if construction activity does not resume in 1H13 it may be further delayed by 12 months. Project cost of Rs106bn is up 70% from its original estimated first year tariff Rs3.35 is up 80%. We build in further cost escalation of 15% on cost over runs and compliance to Tahitte committee recos, we expect CoD in FY17, could slip into 13th plan.

Value trap at 0.8x FY13E P/B, but RoE 9%; PO Rs17

With 0.8x FY13E P/B and 5% dividend yield, NHPC is a value trap, in our view. Reported RoEs will likely stay at 8-9% on continued capex on 11GW of pipeline beyond FY18, & earnings growth will moderate at 3% CAGR over FY12-15E. Our DCF PO of Rs17 is adjusted for a 5% yield downside. Risks to our call: CERC allowing a rise in RoEs for hydro sector; capacity add ahead of our estimates.

Estimates (Mar)

(Rs)	2010A	2011A	2012E	2013E	2014E
Net Income (Adjusted - mn)	12,546	16,453	26,736	26,850	28,683
EPS	1.84	1.88	2.44	2.18	2.33
EPS Change (YoY)	88.7%	2.5%	29.7%	-10.6%	6.8%
Dividend / Share	0.571	0.600	0.830	0.873	0.933
Free Cash Flow / Share	0.476	0.259	(0.163)	1.11	(0.424)

Valuation (Mar)

	2010A	2011A	2012E	2013E	2014E
P/E	10.24x	9.98x	7.70x	8.61x	8.06x
Dividend Yield	3.04%	3.19%	4.42%	4.64%	4.96%
EV / EBITDA*	11.47x	10.53x	7.81x	7.83x	6.13x
Free Cash Flow Yield*	2.44%	1.38%	-0.869%	5.92%	-2.25%

* For full definitions of *iQmethod*SM measures, see page 55.

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Stock Data

Price	Rs18.80
Price Objective	Rs17.00
Date Established	8-May-2012
Investment Opinion	B-3-8
Volatility Risk	MEDIUM
52-Week Range	Rs17.50-Rs27.00
Mrkt Val / Shares Out (mn)	US\$4,317 / 12,300.7
Market Value (mn)	Rs231,254
Average Daily Volume	3,894,681
BofAML Ticker / Exchange	XNTHF / NSI
Bloomberg / Reuters	NHPC IN / NHPC.BO
ROE (2012E)	9.7%
Net Dbt to Eqty (Mar-2011A)	44.2%
Est. 5-Yr EPS / DPS Growth	5.6% / 10.5%
Free Float	13.6%

08 May 2012

iQprofileSM NHPC

Key Income Statement Data (Mar)	2010A	2011A	2012E	2013E	2014E
(Rs Millions)					
Sales	43,451	51,196	64,727	69,181	85,549
Gross Profit	33,134	36,071	48,628	48,519	62,010
Sell General & Admin Expense	NA	NA	NA	NA	NA
Operating Profit	20,451	24,405	37,352	36,819	46,378
Net Interest & Other Income	(1,065)	1,362	1,434	1,269	(1,630)
Associates	NA	NA	NA	NA	NA
Pretax Income	19,386	25,767	38,786	38,089	44,748
Tax (expense) / Benefit	(5,820)	(7,848)	(10,416)	(9,604)	(14,431)
Net Income (Adjusted)	12,546	16,453	26,736	26,850	28,683
Average Fully Diluted Shares Outstanding	11,850	12,301	12,301	12,301	12,301

Key Cash Flow Statement Data

Net Income	12,546	16,453	26,736	26,850	28,683
Depreciation & Amortization	12,684	11,666	11,276	11,699	15,631
Change in Working Capital	(4,727)	911	(17,863)	9,300	(1,366)
Deferred Taxation Charge	(1,292)	(1,482)	0	0	0
Other Adjustments, Net	16,919	10,565	5,457	801	(2,598)
Cash Flow from Operations	36,129	38,112	25,606	48,651	40,351
Capital Expenditure	(30,486)	(34,932)	(27,616)	(34,959)	(45,564)
(Acquisition) / Disposal of Investments	(15,996)	(9,739)	27,677	2,818	2,818
Other Cash Inflow / (Outflow)	4,218	6,540	0	0	0
Cash Flow from Investing	(42,264)	(38,131)	62	(32,142)	(42,746)
Shares Issue / (Repurchase)	40,470	100	0	0	0
Cost of Dividends Paid	(2,603)	(8,028)	(11,949)	(12,566)	(13,424)
Cash Flow from Financing	41,961	(19,223)	(2,075)	2,856	9,127
Free Cash Flow	5,644	3,180	(2,009)	13,692	(5,214)
Net Debt	101,620	125,063	111,865	107,088	118,676
Change in Net Debt	(20,014)	20,722	(13,198)	(4,776)	11,587

Key Balance Sheet Data

Property, Plant & Equipment	363,636	399,003	415,343	438,603	468,535
Other Non-Current Assets	37,354	46,839	19,162	16,344	13,526
Trade Receivables	15,338	22,166	35,296	26,767	33,074
Cash & Equivalents	61,895	42,653	66,246	85,612	92,343
Other Current Assets	17,553	18,285	23,135	24,222	28,756
Total Assets	495,775	528,946	559,182	591,548	636,234
Long-Term Debt	163,515	167,716	178,111	192,700	211,019
Other Non-Current Liabilities	17,919	17,849	17,849	17,849	17,849
Short-Term Debt	NA	NA	NA	NA	NA
Other Current Liabilities	47,373	60,721	60,839	62,697	72,171
Total Liabilities	228,808	246,286	256,799	273,246	301,039
Total Equity	266,968	282,660	302,383	318,301	335,195
Total Equity & Liabilities	495,775	528,946	559,182	591,548	636,234

iQmethodSM - Bus Performance*

Return On Capital Employed	4.4%	4.8%	6.9%	6.6%	6.8%
Return On Equity	5.6%	6.4%	9.7%	9.2%	9.4%
Operating Margin	48.3%	49.4%	59.4%	54.8%	55.7%
EBITDA Margin	76.3%	70.5%	75.1%	70.1%	72.5%

iQmethodSM - Quality of Earnings*

Cash Realization Ratio	2.9x	2.3x	1.0x	1.8x	1.4x
Asset Replacement Ratio	2.4x	3.0x	2.4x	3.0x	2.9x
Tax Rate (Reported)	30.0%	30.5%	26.9%	25.2%	32.2%
Net Debt-to-Equity Ratio	38.1%	44.2%	37.0%	33.6%	35.4%
Interest Cover	2.8x	3.6x	5.0x	4.0x	3.6x

Key Metrics

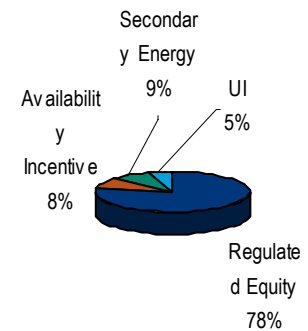
Company Description

NHPC is India's largest hydroelectric power company with a capacity of 5280MW including 1520MW subsidiary Narmada Hydroelectric Development corporation. It has 13 operational hydro power stations - 11 of parent and 2 of subsidiary. The company is also developing 10 hydro power projects with a capacity of 4502MW which we expect to be operational by FY18E. The company's business model is based on cost plus CERC regulations. Its recurring earnings have grown at a 15% CAGR FY06-11

Investment Thesis

Our thesis for an Underperform rating on NHPC is based on the following. a) we see risk of delays to 70% of future capacity addition until FY18, b) under recoveries in Parbati-3 and MAT grossing will negate benefits from the 982MW of capacity addition planned in FY13-14, c) we build in optimistic operational performance on FY12 base incentives and secondary energy earnings up 40% and 70% YoY, d) at 0.8x P/B FY13E but 9% RoE and 3% earnings CAGR FY12-15 we believe NHPC is a value trap.

Chart 1: NHPC: Breakdown of FY12 regulated earnings



Source: BofA Merrill Lynch Global Research

Stock Data

Price to Book Value 0.8x

08 May 2012

Bull & Bear case

Company or Theme	Bull case	Bear case	BofAML view
Capacity Addition	NHPC will be able to commission under-construction projects of 4502MW capacity on latest timelines by FY17.	- Much delayed Lower Subansiri (2000MW) could be pushed back beyond 12th plan. - Parbati-2&3 (1320MW) get commissioned in FY17. - The above three projects account for 75% of NHPC's under-construction pipeline.	- We expect commissioning of 4502MW by FY18 and our estimates build in 3-6 months of delay to all projects from management's current timelines. - We currently estimate Lower Subansiri to be operational in FY17 assuming a 6-month delay to management's present guidance of December 2015.
Parbati-3	- CLB allows reduction in depreciation rates and lenders push back debt repayment. - This will help reduce under-recoveries on the plant.	Commercial operation date (CoD) of Parbati-3 (520MW) could be delayed to FY17 along with commissioning of Parbati-2(800MW).	- We build in Unit-1 (130MW) operational and the balance three units to be shown available until FY17. - Full plant to be commissioned only after Parbati-2 CoD in FY17. - As a result, we estimate an Rs2bn p.a. under recovery for P-3 over FY14-17.
RoE	- CWIP (capital work in progress) as % of fixed assets to reduce faster than estimates as capex declines on commissioning of 982MW FY13-14. - As a result, reported RoEs will increase from the current 6-8% range. - Growing share of incentive income will further increase Power RoEs from the current 20%	- Capex on 11GW pipeline should pick up beyond FY14; as a result, CWIP as % of Assets will not decline. - Incentive in FY12 peaks and should decline thereafter	- We do not expect CWIP as % of fixed assets to decline materially as NHPC will start investing in 11GW projects which are awaiting clearances and are under survey. - We currently build in capex on 1.6GW of the 11GW depending on progress made.
Regulatory approval of cost escalations	- All project cost over runs have historically been allowed by the regulator, CERC (Central Electricity Regulatory Commission). - Since majority of upcoming projects have been delayed due to reasons beyond company's control such as power house slope failure and protests at Lower Subansiri. Contractual dispute and flash floods in Parbati-2. Regulator will allow all cost escalations	- Push back by SEB's (State Electricity Board) may compel CERC to refuse entire /part of the cost increases. - This would dampen NHPC as it will have to fund the balance/unallowed cost overruns through its internal accruals on which it will not earn normative returns.	- We assumed all cost escalations will be passed on to beneficiaries. - Lower Subansiri and Parbati-2 costs have already increased by 70% and 37% respectively as of March'12. - We assumed further cost escalations of 15% for Subansiri & Kishenganga and 7.5% for Parbati-2 over March'12 estimated TPC to account for further risks of cost over runs.
Loss of projects to IPP's	Though it accounts for loss of pipeline, NHPC earned a 15% profit on equity invested so far in these projects.	- Projects deallocation by Arunachal Pradesh result in a 40% reduction in future project pipeline (awaiting clearance+Under survey+JV's) of NHPC from 18GW to 11.3GW. - These projects would have contributed ~Rs24bn of RoE earnings.	Take back of projects by Arunachal Pradesh not only reduces the project pipeline for NHPC it could also result in other states using this event as a precedent for future projects also.

Source: BofA Merrill Lynch Global Research

Valuation: More of a value trap

Initiating coverage with Underperform and PO of Rs17

We initiate coverage on NHPC with an Underperform rating, as we believe: a) there are further risk of delays to under-construction projects b) under-recoveries on Parbati-3 could negate the boost from near-term capacity addition in FY13-14, c) generation incentive peaked in FY12 on the highest PLF recorded since FY05. d) 3% recurring PAT growth over FY12-15E, valuations look unexciting.

We assign a September 2013 PO of Rs17 with FCFE of consolidated cash flows. At our price objective, NHPC will trade at 8x P/E and 0.7x P/B FY13 estimates. This excludes a 5% dividend yield boost to total return.

Key assumptions for FCFE

We assume a 14.5% cost of equity (CoE) for NHPC derived. We apply a risk free rate (RFR) of 8.5%, which is inline with 12 month average of 10-yr bond. Beta of 0.8x derived by Bloomberg since the stock listing in Oct 2009 and is slightly higher than 0.7x beta of global utilities covered by BofAML.

Our equity risk premium of 7.5% is slightly lower than 8% of SJVN since our estimates for NHPC already factor in near term negatives of under recoveries in P-3 and also delays in future projects (P-2 & Subansiri). We build in 2% terminal growth rate beyond our forecast period to factor in continued capacity addition (11GW under clearance and survey)

Key assumptions of CoE= 14.5%

RFR = 8.5%

Beta = 0.7x

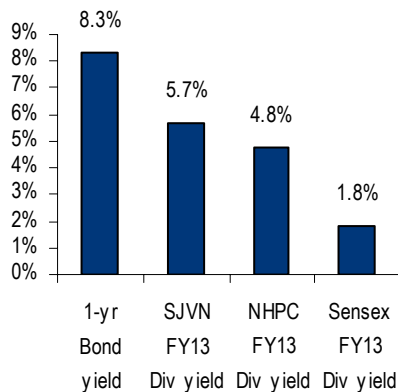
Eq risk prem = 7.5%

Table 1: NHPC: FCFE

Rs mn	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E
Rec. PAT	26,736	26,850	28,683	29,694	30,389	39,180	45,985	48,120	49,886
Add: Depreciation	11,276	11,699	15,631	15,738	15,757	22,753	26,819	26,938	26,957
Add: DTL / (DTA)	-	-	-	-	-	-	-	-	-
Changes in Working Capital	(17,863)	9,300	(1,366)	2,957	1,248	(1,655)	576	1,842	1,904
Capex	(27,616)	(34,959)	(45,564)	(52,867)	(38,357)	(21,709)	(20,060)	(16,141)	(18,082)
Changes in Debt	10,394	14,590	18,319	20,833	8,962	(3,371)	(11,603)	(16,789)	(12,696)
Free Cash Flow to Equity	2,928	27,480	15,703	16,354	17,998	35,197	41,717	43,971	47,968
Proportionate period	-	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Discount factor	1.22	1.07	0.93	0.82	0.71	0.62	0.54	0.47	0.42
PV of FCFE	-	14,665	14,678	13,351	12,839	21,908	22,678	20,876	19,931
Risk Free Rate	8.5%								
Beta (x)	0.80								
Equity Risk Premium	7.5%								
Cost of Equity	14.5%								
Terminal Growth	2.0%								
PV of FCFE (Rs mn)	140,925								
Terminal Cash Flows (Rs mn)	67,573								
Equity Value (Rs mn)	208,499								
Shares O/s (mn)	12,301								
Equity Value (Rs/Sh)	17.0								
Potential % Downside	-7%								
FY13E dividend yield	4.8%								
Potential total downside	-3%								

Source: BofA Merrill Lynch Global Research

Chart 2: NHPC FY13 Div yields lower than SJVN

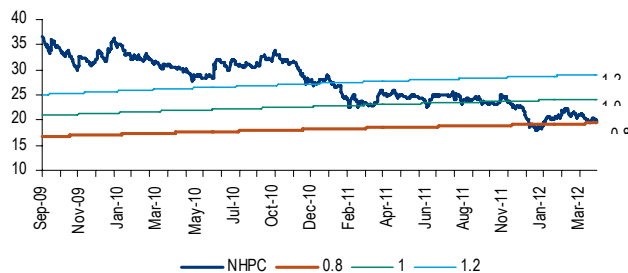


Source: Bloomberg, BofA Merrill Lynch Global Research

NHPC has underperformed the Sensex by 50% since listing in FY10 and by 10% over the past 12 months

We see downside risks to capacity addition plans and so believe the stock will continue to underperform

Chart 3: NHPC - 1-year forward P/BV band



Source: Bloomberg, BofA Merrill Lynch Global Research

Does yield matter? Capital destruction = Higher yields

Regulated utility stocks are good dividend yield plays. NHPC's payout ratio has been reasonable at 30-35% translating into a 5% dividend yield at current price for FY13E, as compared to 1.8% for Sensex stocks. Our PO is lifted by 5% upside on account of the dividend yield.

Past Underperformance... well documented

NHPC's stock has underperformed the benchmark Sensex by 50% since its IPO in FY10 and by 10% over the past 12 months. This was mainly due to the delay in project commissioning (13-78 months delay since IPO timelines), negative news flows regarding J&K project take back, J&K water cess not being passed through and continued depressed reported RoEs.

Table 2: NHPC versus Sensex and BSE Power

	3-M	6-M	1-Yr	Since IPO (Aug-09)
NHPC	-8%	-20%	-27%	-47%
Sensex	-2%	7%	-6%	6%
BSE Power	-5%	-5%	-24%	-31%

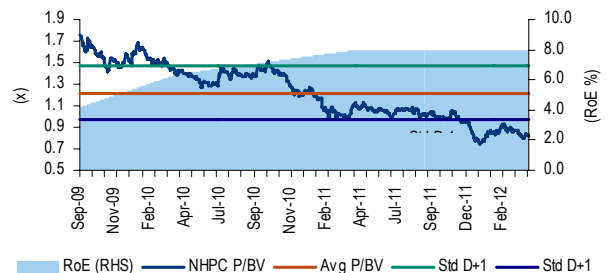
Source: Capitaline

Currently trades at 0.8x FY13E P/B but RoE of 9% and 3% PAT CAGR

At its IPO price band of Rs30-36, the stock was trading at a reported P/B of 1.5-1.75x FY10; currently at 0.8x FY13E P/B. However, on its core book value (regulated equity), the stock trades at 2.7x. Despite optically attractive valuations we believe the 9% RoE and 3% earnings CAGR FY12-15E make NHPC a value trap.

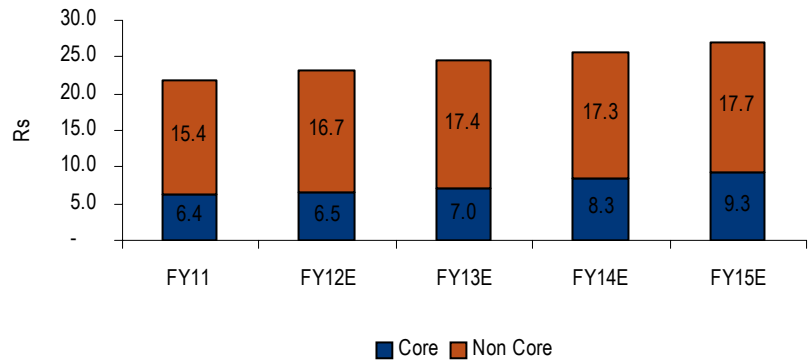
We believe NHPC will continue to invest initial equity higher than normative of 30%, thereby depressing RoEs.

Chart 4: NHPC - P/BV versus RoE



Source: Bloomberg, BofA Merrill Lynch Global Research

Chart 5: Contribution of core ops to increase from 30% to 35% in FY12-15E



Source: BofA Merrill Lynch Global Research

BofAML versus consensus: Our FY12/13/14E earnings are 26/14/9% above consensus

Table 3: BofAML v/s Consensus

	FY12E	FY13E	FY14E
Revenues (Rs mn):			
BofAML	64,727	69,105	85,395
Consensus	56,122	63,258	71,401
% difference	15%	9%	20%
Recurring EPS (Rs):			
BofAML	2.17	2.18	2.32
Consensus	1.73	1.91	2.14
% difference	26%	14%	9%

Source: BofA Merrill Lynch Global Research, Bloomberg

Our estimates differ from consensus mostly on assumptions of RoE grossing up and capacity addition. We believe that in FY12 the company will gross up its RoE's by full tax against its provisions in 9MFY12 on MAT. However, we expect NHPC to slip into MAT in FY13 as it adds 582MW (capex Rs72bn), but should be full tax again in FY14.

NHPC still needs to catch up with NTPC operationally

Though NHPC nearly matches up with NTPC in terms of core operational profitability with Power RoEs of +20% vs. NTPC's 25%, its reported RoEs are however well below those of NTPC despite our assumption of lower CWIP as a % of fixed assets as compared to NTPC. NHPC trades at a 50% discount to NTPC on P/B.

Table 4: Regulated Equity and Power RoE's NHPC v/s NTPC

	FY10	FY11	FY12E	FY13E	FY14E
Regulated Equity (Rs bn):					
NTPC	253	272	319	414	460
NHPC	77	79	80	86	102
Power RoE's:					
NTPC	26.2%	26.2%	22.7%	25.3%	25.2%
NHPC	18.2%	18.5%	19.4%	20.4%	20.4%

Source: BofA Merrill Lynch Global Research

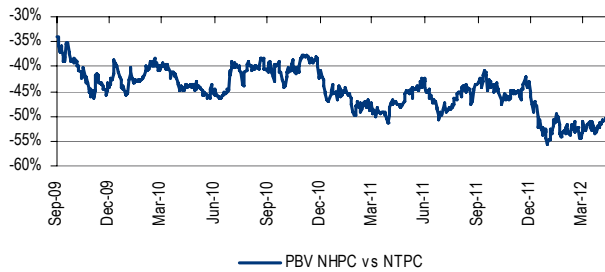
Table 5: Rec PAT and Reported RoE NHPC v/s NTPC

	FY10	FY11	FY12E	FY13E	FY14E
Recurring PAT (Rs bn):					
NTPC	85	89	95	110	120
NHPC	13	16	27	27	29
Reported RoE's:					
NTPC	14.1%	13.7%	13.4%	14.3%	14.3%
NHPC	5.6%	6.4%	9.7%	9.2%	9.4%

Source: BofA Merrill Lynch Global Research

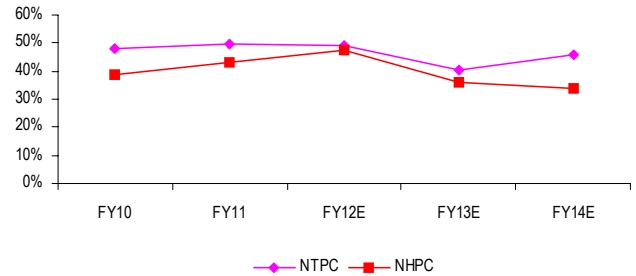
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Chart 6: NHPC trades at a 50% discount to NTPC P/B



Source: BofA Merrill Lynch Global Research

Chart 7: NHPC v/s NTPC CWIP % of Fixed Assets



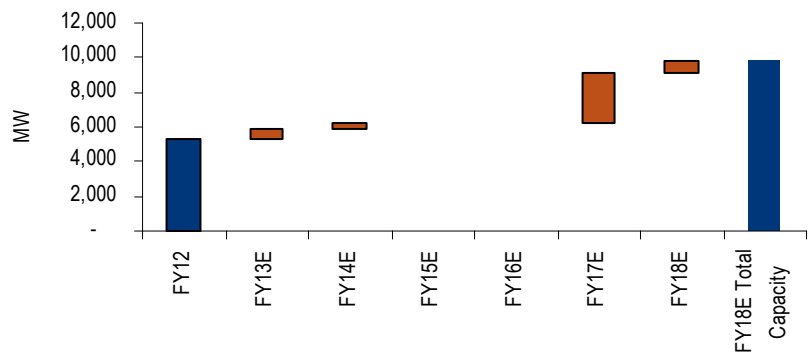
Source: BofA Merrill Lynch Global Research

Contractual issues, low water availability, and continued protests at site could lead to a delay in project completion

See risks to robust capacity pipeline

NHPC plans to add 4,502MW of new capacity by FY17, up from the current 5,280MW. However, we believe three projects (Parbati-2&3, Lower Subansiri) representing 75% of the planned capacity add carry downside risks. Despite achieving substantial progress, these projects may be further delayed due to contractual issues, low water availability, and continued protests at site.

Chart 8: NHPC: 4.5GW capacity addition program over FY13-18E



Source: Company, BofA Merrill Lynch Global Research

Table 6: NHPC: Increase in projects costs 15-112%

Projects	Original Est (Rsbn)	Latest Est (Rsbn)	BofAMLe (Rsbn)	% Increase Original to Latest	% Increase Original to BofAMLe
Teesta-III	7.7	16.3	16.3	112%	112%
Lower Subansiri	62.9	106.7	122.7	70%	95%
Nimmoo Bazgo	6.1	9.4	9.4	53%	53%
Chamera-III	14.1	20.8	20.8	48%	48%
Chutak	6.2	9.1	9.1	47%	47%
Teesta-IV	10.6	15.0	15.0	42%	42%
Parbati-II	39.2	53.7	57.7	37%	47%
Uri-II	17.2	20.8	20.8	21%	21%
Parbati-III	23.0	27.2	27.2	18%	18%
Kishenganga	36.4	36.4	41.9	0%	15%

Source: Company, BofA Merrill Lynch Global Research

Parbati-2 (800MW) has been delayed by 9 years initially due to poor geological conditions, followed by a contractor dispute. As a result, 390MW of the 520MW of Parbati-3 (520MW) which is interlinked to Parbati-2 will be delayed due to low water availability and the project will be operating only one turbine (130MW) until Parbati-2 gets commissioned in FY17, by our estimates. Lower Subansiri (2000MW), as discussed earlier in the report, (Page 10) has been delayed by 63 months due to poor soil conditions, change in dam design and protests.

Parbati-2&3... losses in P-3?

Parbati-2 contractual issues resolved; CoD pushed to FY17; TPC up 37%

Parbati-2's original commissioning target was September 2007. However, the project got delayed due to poor geology in one of the four tunnels (adits) that was being excavated using a tunnel boring machine (TBM). Subsequently, since 2007, the project has been delayed due to a dispute with the civil contractor operating the TBM (Himachal JV) in regards to refurbishment costs and contract renegotiation (original contract value for TBM was Rs4.3bn).

Other than the dispute, the project has made good progress. The construction of Dam and HRT (by Patel Eng & SEW JV) is 94% and 51% complete, respectively, and the Power House (by Gammon) is 63% complete. However, we expect the project to be operational only by FY17 as against management's earlier target of FY14-15.

From our industry checks, we gather that NHPC has terminated the civil contract with the TBM operator and is in the process of re-tendering for the contract. 5kms of tunneling is to be completed with poor soil condition, which will take about two years for tunnel day lighting and an additional two years for tunnel lining. Hence we assume a FY17 CoD for Parbati-2.

Due to the delay, the project cost has also increased by 37% to Rs54bn but still does not include the increased cost on account of the new order for TBM operations. Hence we have built in a 7.5% increase to the Rs54bn project cost into our estimates to account for new contracts and further time and cost overruns. Based on our estimated project cost of Rs58bn, the levelized tariff of the project works out to be Rs4.5/kwh.

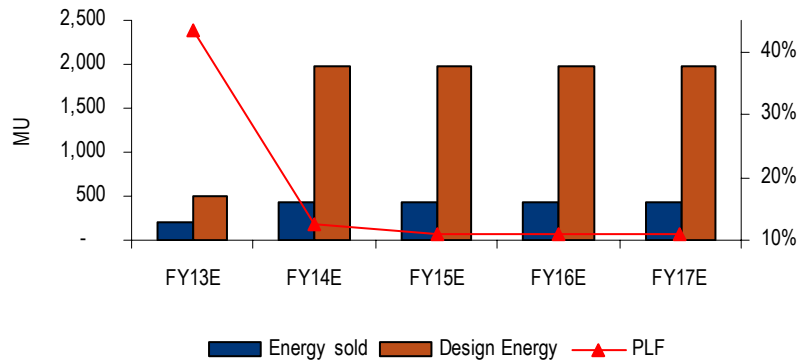
Parbati-3: alternatives available to reduce losses but it will be tricky

Due to the delayed commissioning of P-2, Parbati-3, which is a downstream project, will not only be delayed (low water availability) but also could incur losses/under recoveries/deferred revenues of Rs2bn per annum until it becomes fully operational in FY17.

We expect Parbati-2 project to be operational only by FY17 as against management's earlier target of FY14-15

Total project cost (TPC) increased by 37% to factor delays; we build in a 7.5% increase to the revised project cost.

Chart 9: Parbati-3 Energy sold v/s Design energy and PLF



Source: BofA Merrill Lynch Global Research

NHPC will only be able to generate power from Unit-1 (130MW) of P-3 in FY13-17 which will receive water diverted from other sources. The balance 3x130MW are dependent on P-2 to and can be operational only after P-2 is commissioned.

Most probable alternative is to show full availability; tariff at Rs8 over FY14-17

Management said that it can resort to multiple options that can reduce or avoid the loss. The most probable alternative that we believe the company can adopt is to show the full project (520MW) as available (water availability is not a pre-requisite for plant availability), but operate only Unit-1, thus recovering 50% of AFC of the full plant and only the energy charges for Unit-1.

Average tariff seen at Rs8 over FY14-17.
But risks seen as SEBs may not buy
'expensive' power

Even after assuming this scenario, we believe there would be revenue under recovery of Rs2bn p.a. The average tariff for the first four years would be Rs8/kwh which we believe will be a risk as beneficiaries (SEBs) may not buy expensive power as they had done earlier for Dulhasti.

Table 7: Parbati-3 under-recovery calculation

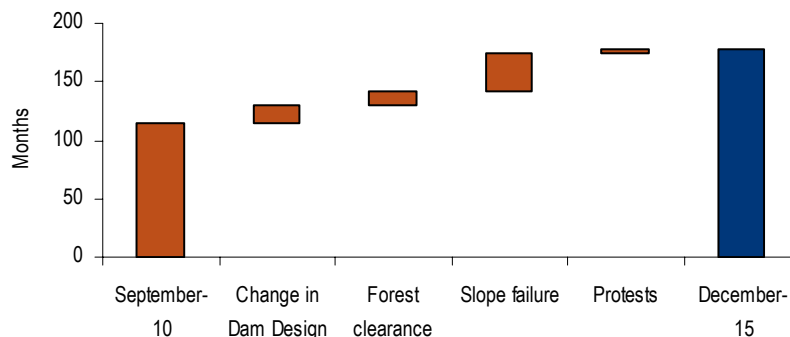
Rs mn	FY14E	FY15E	FY16E	FY17E
Annual Fixed Cost to be recovered assuming all units available (A)	4,807	5,517	5,390	5,265
However, only 50% recoverable	2,403	2,759	2,695	2,633
Add: Energy charge of Unit-1	726	711	695	680
Actual recovered (B)	3,130	3,469	3,390	3,312
Under recovery to be recovered after FY17 (B-A)	(1,677)	(2,048)	(2,000)	(1,953)
Net Generation (MU)	426	426	426	426
PLF	13%	11%	11%	11%
ASP (Rs/kwh)	7.34	8.14	7.95	7.77

Source: BofA Merrill Lynch Global Research

Lower Subansiri 63 months delayed and counting

The project as of 3QFY12 is expected to be commissioned by December 2015, a delay of 63 months from the original target of September 2010. It has been delayed due to 1) change in the designs of the dam, 2) geological surprises such as poor soil condition, delayed river diversion by 32 months, and slope failure of power house, 3) delayed forest clearance and 4) protests and blockades. The project would get further delayed if the ongoing protests were to continue until the monsoons (June).

Chart 10: Lower Subansiri reasons for the 63-month delay

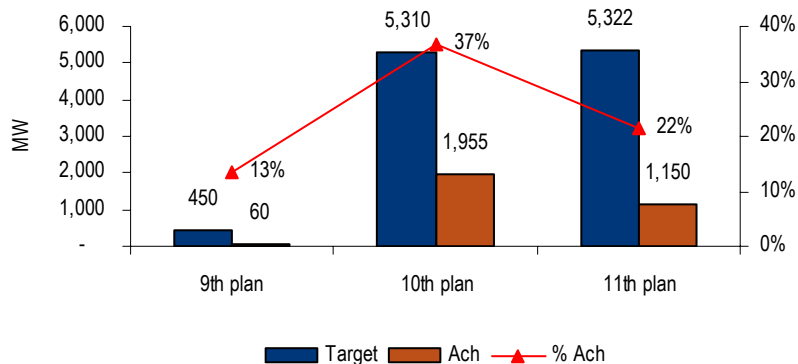


Source: BofA Merrill Lynch Global Research

Planned vs. IPO timelines vs. actual performance... vast divergence

NHPC's actual capacity addition during the past three five-year plans has been much below target. With the recently concluded 11th plan, the company has been able to meet only 22% of its target capacity additions.

Chart 11: NHPC has met 13%, 37% & 22% of its 9th, 10th, 11th plan targets respectively



Source: BofA Merrill Lynch Global Research, CEA

Missed IPO timelines major reason for stock underperformance

NHPC's projects have been delayed by 13-78 months from the timelines mentioned by the company at the time of its IPO in 2009. This has led the stock to be a major underperformer against its peer group (BSE Power) and the benchmark (Sensex). In FY12, it planned to add 313MW; however, it could not add any project during the year.

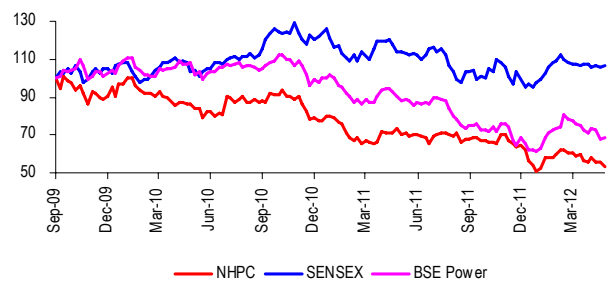
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Table 8: NHPC: Deviation in project commissioning timelines since IPO 20-78 months

	Timeline Latest Co in DRHP guidance	Delay from IPO BofAMLe timelines(Months)
Parbati-3	Nov-10 Oct-12 Oct-2012 & Apr-2017	78
Parbati-2	Dec-10 2016 Aug-16	69
Lower Subansiri	Jan-12 Dec-15 Apr-16	52
Uri-2	Aug-10 2012 Sep-13	38
TLD-3	Dec-09 Aug-12 Dec-12	37
Kishenganga	Jul-14 Nov-16 Jun-17	36
TLD-4	Aug-10 Mar-13 Jun-13	35
Nimmo Bazgo	Aug-10 Jan-13 Jan-13	29
Chamera-3	Aug-10 Apr-12 Jun-12	22
Chutak	Feb-11 Sep-12 Oct-12	20

Source: Company, BofA Merrill Lynch Global Research

Chart 12: NHPC stock performance since listing Sept'12



Source: Bloomberg, BofA Merrill Lynch Global Research

Uncertainty on accounting of under-recoveries in Parbati-3 will remain a share price overhang

Capacity addition may pick up but risk of delay on 75% of plans

We expect NHPC to add 4502MW by FY18. However, as highlighted above, we see a risk of delay to 3320MW of capacity (75% of planned). In addition, uncertainty on the accounting of under-recoveries in Parbati-3 will remain an overhang on the stock. As a result, we expect further underperformance despite near-term capacity addition of 982MW in FY13-14.

Risks

Upside Risks:

- Additional RoEs on CWIP for the hydro sector
- Capacity addition by NHPC, faster than our estimates

Increase in RoE for the hydro sector; in the talks for quite some time

The hydro sector has been lobbying for allowance of additional RoEs on their capital work in progress since hydro projects take 3-5 years longer to construct compared to coal-based power plants. Longer gestation periods also lower project IRRs by 0.8-1.8% vs. thermal projects.

Central Electricity Regulatory Commission (CERC), the regulator, has been working on a recommendatory paper on the same though the quantum of additional RoEs and the projects for which it would be considered (retrospectively or in future) are still to be decided.

In case this was to be allowed, we see an upside risk to our estimates. By our estimates, a hydro project that takes eight years for construction would require a 19.25% RoE (vs. current 15.5%) to match IRRs of a coal-based power project.

Near-term capacity addition could be ahead of our estimates

We currently build in 407MW in FY13; however, management expects 1350MW. Our estimates factor in a delay of 3-6 months across all projects. We believe Uri-2, Parbati-3 and Nimmo Bazgo will slip into FY14 due to protests, complexity on under recoveries and lack of evacuation, respectively.

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Financial Analysis

Table 9: NHPC: Key Assumptions

	Unit	FY11A	FY12E	FY13E	FY14E	FY15E
Installed Capacity	MW	5,280	5,280	5,862	6,652	6,652
Effective Capacity	MW	5,280	5,280	5,658	6,176	6,262
Regulated Equity	Rsmn	78,673	80,381	86,298	102,432	114,386
Design Energy	MU	20,887	20,887	22,873	27,040	27,108
Gross Energy	MU	21,801	23,319	25,329	28,073	28,755
PLF	%	47%	50%	51%	49%	49%
Energy Sold	MU	19,482	20,939	22,429	24,795	25,390
Energy Sales	Rsmn	49,410	62,851	67,135	83,327	85,661
ASP	Rs/kwh	2.54	3.00	2.99	3.36	3.37
Other revenues	Rsmn	1,787	1,876	2,046	2,222	2,310
O&M Expenses	Rsmn	15,126	16,099	20,662	23,540	24,845
Per Unit	Rs/kwh	0.69	0.69	0.82	0.84	0.86
Depreciation	Rsmn	11,666	11,276	11,699	15,631	15,738
Per Unit	Rs/kwh	0.54	0.48	0.46	0.56	0.55
Interest Expenses	Rsmn	6,709	7,470	9,182	12,745	12,422
Per Unit	Rs/kwh	0.31	0.32	0.36	0.45	0.43
Other income	Rsmn	8,071	8,904	10,451	11,115	11,306
Tax	Rsmn	7,848	10,416	9,604	14,431	14,943
ETR	%	30%	27%	25%	32%	32%
Power PAT (incl incentives)	Rsmn	16,116	17,252	19,334	22,592	23,383
Regulated Equity	Rsmn	78,673	80,381	86,298	102,432	114,386

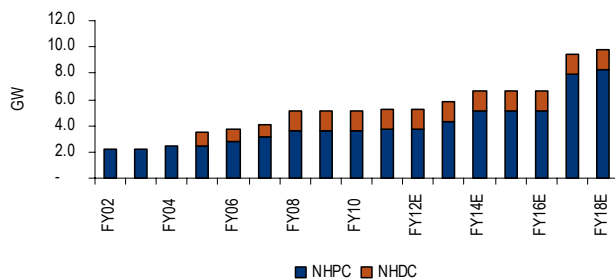
Source: BofA Merrill Lynch Global Research

Capacity addition and Energy Sales

Our estimates build in a capacity addition of 4502MW by FY18. In the near term, we expect bunching up of capacity addition with 982MW (22% of planned cap add) to be added in FY13-14. This will mainly be from the 313MW that was to be commissioned in FY12, but slipped into FY13.

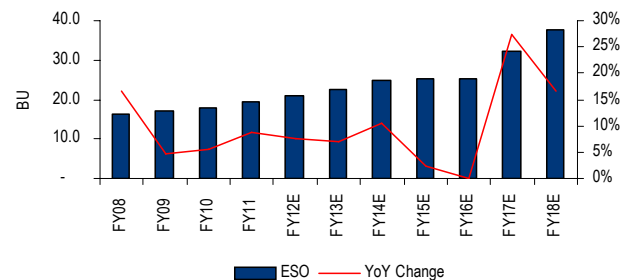
Therefore, we expect energy sales to achieve a 7% CAGR over FY12-15, from 20.9BU to 25.4BU.

Chart 13: Installed capacity will increase from 5.3GW to 9.8GW FY12-18



Source: BofA Merrill Lynch Global Research, Company

Chart 14: Energy sales 7% CAGR FY12-15 as 982MW will be added



Source: BofA Merrill Lynch Global Research, Company

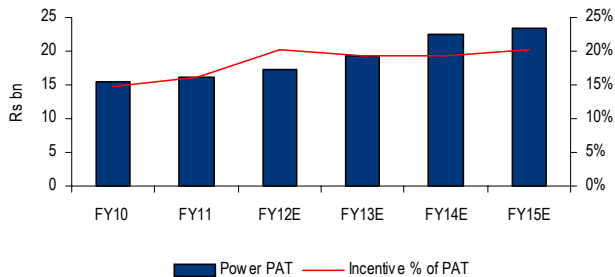
Power PAT CAGR 10% however Rec PAT only 3% CAGR FY12-15E

We expect NHPC's core PAT (power) to achieve a 10% CAGR over FY12-15 on the back of a 12% CAGR in regulated equity and incentives, accounting for 19-20% of core earnings.

Despite a 10% CAGR in Power PAT we expect Rec PAT of NHPC to be only 3%. Earnings will likely remain flat over FY12-15 despite strong near term capacity addition of 982MW on 1) Rs2bn pa under recovery by Parbati-3. 2) company will

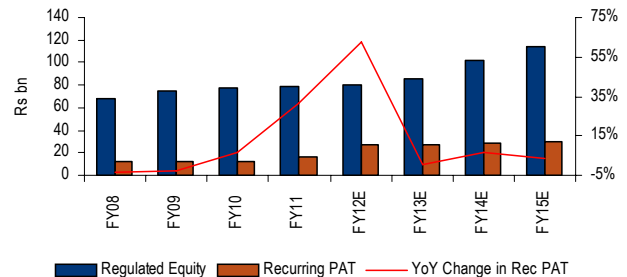
be claiming MAT in FY13 as a result company wide regulated equity will be grossed by MAT and lead to a Rs2.5-3.0bn lower earnings in FY13E.

Chart 15: Incentives % of PAT peak in FY12 as FY13-14 CoD projects contribution to incentives will be lower



Source: BofA Merrill Lynch Global Research

Chart 16: Under recoveries in P-3 negate positives of 982MW cap add over FY13-14



Source: BofA Merrill Lynch Global Research

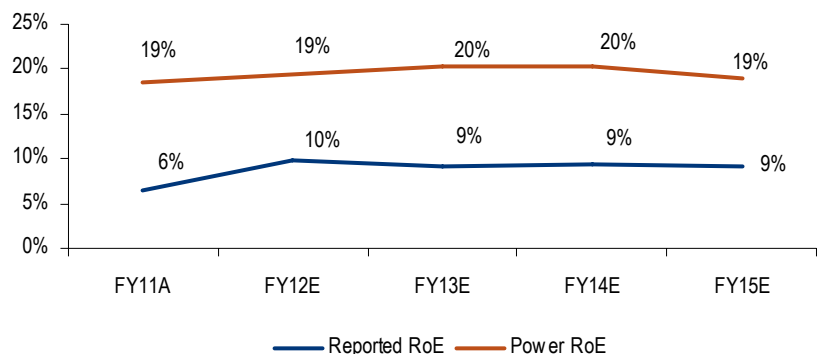
MAT grossing in FY13 to depress earnings

Based on our estimates we expect NHPC to move to MAT in FY13 on strong capacity addition. This we believe will lead to grossing up of RoE by MAT and hence will result in flat earnings despite a strong capacity addition of 582MW (effective 378MW) during the year. However thereafter we expect the company to move back to full tax for FY14-15.

Power RoE seen at +20%; Reported RoE 9%: CWIP, lower yield to blame

Power RoEs (Normative RoE + Incentive + UI) of NHPC are attractive at 20-22% over FY12-15E. Despite robust core operations, we expect reported RoEs to be considerably lower in the 8-9% range due to the perennial issue of equity deployed in construction work in progress (CWIP) over 7-10 years and lower yields on surplus cash as against core operations. We believe the company will continue to invest the initial equity higher than normative of 30%, thereby depressing RoEs.

Chart 17: Reported RoE to remain depressed despite +20% Power RoEs



Source: BofA Merrill Lynch Global Research

Table 10: NHPC: Projects awaiting clearances

Projects	Capacity (MW)	% of total
Projects awaiting clearances:		
Kotli Bhel IA	195	2%
Tawang-I	600	5%
Tawang-II	800	7%
Dibang	3,000	27%
Teesta-IV	520	5%
Total-A	5,115	
Projects under survey & investigation:		
Karmoli Lumti Tulli	55	0.5%
Garba Tawaghat	630	6%
Chungar Chal	240	2%
Lachen	210	2%
Dhauliganga Intermediate	210	2%
Gauriganga IIIA	120	1%
Bursar	1,020	9%
Total-B	2,485	
JV's projects:		
Tapaimukh (26%)	1,500	13%
Loktak (74%)	66	1%
Pakal Dul (49%)	1,000	9%
Other projects in J&K	1,120	10%
Total-C	3,686	
Total Pipeline of projects (A+B+C)	11,286	

Source: Company

FY12 gross generation 112% of design energy; but PAF at 83.3% is lower YoY due to R&M in ~25% of capacity

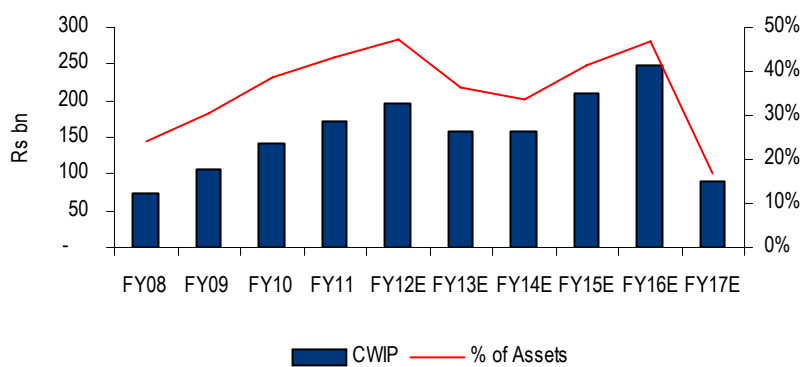
Capex on strong project pipeline will continue to depress reported RoEs

We expect reported RoEs to remain subdued as NHPC has built a pipeline of 5.1GW projects which are currently awaiting clearance.

We expect NHPC to incur a capex of Rs203bn until FY18, mostly on under-construction projects. Our estimates beyond FY15 also build in a capex of Rs116bn on 1.6GW of the 5.1GW projects awaiting clearances.

In our current estimates, CWIP as a % of fixed assets declines after FY15 mainly because we have not included projects after Kotli Bhel-1A (190MW) and Tawang-1&2 (1400MW). However, we do expect NHPC to start investing in JV projects such as Pakal Dul (1GW) and Tipaimukh (1.5GW) over the next two years.

Chart 18: We currently build in capex on 1.6GW of the 11GW pipeline

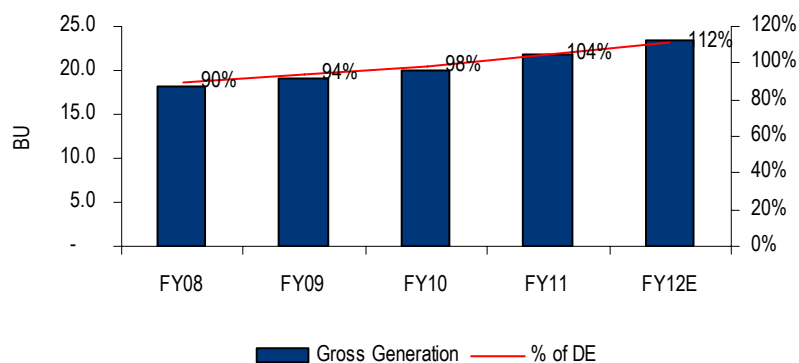


Source: BofA Merrill Lynch Global Research

Our estimates build in optimistic cap add & operating performance

We believe that our estimates for near-term capacity addition of 982MW (FY13-14) and thereby addition to regulated equity are probably optimistic. We also build in incentive revenues for existing plants on a base of FY12, a year with good monsoon. We estimate PAF to revive to 90% FY13 onwards from a low of 83.3% in FY12 (caused by R&M activities at three major plants). PLF at 50% was the highest since FY05. Incentive and secondary energy revenues were up 40% and 68% YoY, respectively, and NHDC's gross generation was up 46% YoY in FY12.

Chart 19: FY12 gross generation % of DE the highest since FY08



Source: BofA Merrill Lynch Global Research

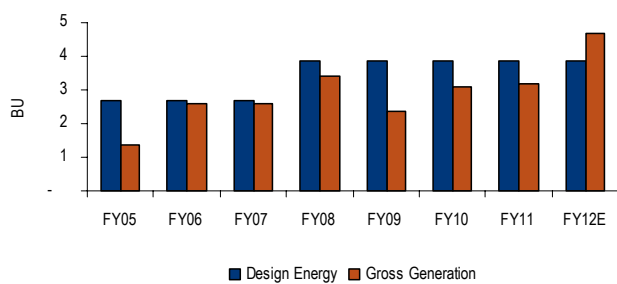
NHDC: 30% of capacity; 22% of Reg Equity & 16% of FY12 PAT

NHDC a 51:49 JV of NHPC and Govt of MP operates two projects 1520MW (Indirasagar and Omkareshwar) and accounts for 30% of NHPC's capacity. It contributes 22% of consol regulated equity and Rs3.3bn (16%) to RoE's.

In FY12 NHDC's gross generation has increased by 46% YoY. Both projects have surpassed their design energy for the first time since FY08. We expect NHDC to contribute Rs1-1.1bn of incentive income (19% of consol incentives) in FY12. We assume a similar generation pattern for the future years.

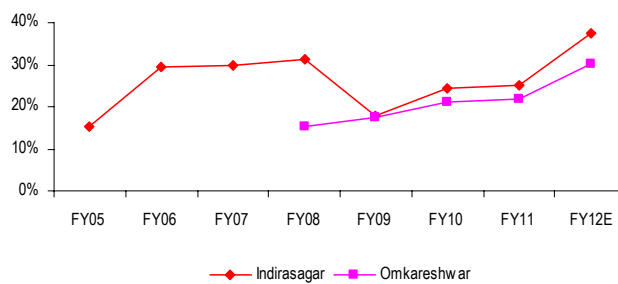
The company also plans to venture into thermal (Rewa 1320MW) and wind (100MW), however we have not assumed any contribution from these in our estimates.

Chart 20: NHDC projects surpass their design energy in FY12; full AFC recovery and incentives



Source: Company, CEA

Chart 21: NHDC projects PLF trends; a sharp pick up since FY09



Source: BofA Merrill Lynch Global Research

Delayed SEB payments (Rs12bn) and Water cess (Rs6bn) key for receivables peaking in FY12

Debtors bloat on delayed SEB payments in FY12, assumed decline in FY13

We expect debtors to peak in FY12E at Rs34bn (186 days of revenues) mainly due to 1) SEBs delayed payment beyond six months of Rs12bn, 75% of which is due from two SEB (UP and BSES-Delhi) 2) Rs6bn of water cess, which will be paid only after the high court (J&K) verdict.

On SEB dues, the company mentioned it has entered into an arrangement with UP SEB which owes Rs4.5bn for a repayment mechanism. UP will pay Rs1.4bn in April 2012 and the balance of Rs3.1bn plus interest will be repaid in 10 monthly installments.

NHPC also mentioned that it is in the process of arriving at a similar resolution with BSES-Delhi and the Bihar SEB. We expect the receivables days for the company to moderate to around 150 days in FY13-14E from 186 in FY12.

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Table 11: NHPC - Receivables from SEBs

	Rsmn
Total due from SEB more than 6 months	12,000
UP	4,500
BSES Delhi	4,300
Bihar, Jharkhand, Orissa	1,500
Others	1,700

Repayment arrangement with UP	
April'12	1,400
Balance in 10 monthly installments plus interest	3,100

Source: Company

Table 12: NHPC - Breakdown of 9MFY12 debtors

Debtors	Rs mn
Unbilled debtors:	5,670
Water cess	5,340
RoE	600
Chamera-II	280
Tax	(770)
MEA	220
Billed debtors:	21,090
December sales	1,820
UI charges	440
Apr-Nov sales	8,590
Arrear sales	9,280
Interest on arrear sales	620
More than 1 year	340

Total Debtors **26,760**

Source: Company

Financial Summary

Table 13: NHPC: Consolidated Income Statement

Rsmn	FY11A	FY12E	FY13E	FY14E	FY15E
Total Revenues	51,196	64,727	69,181	85,549	87,971
% Ch YoY	18%	26%	7%	24%	3%
O&M Expenses	(15,126)	(16,099)	(20,662)	(23,540)	(24,845)
% of Sales	30%	25%	30%	28%	28%
EBITDA	36,071	48,628	48,519	62,010	63,125
EBITDA Margin	70%	75%	70%	72%	72%
Depreciation	(11,666)	(11,276)	(11,699)	(15,631)	(15,738)
EBIT	24,405	37,352	36,819	46,378	47,387
Net Interest	369	520	(833)	(4,232)	(4,218)
Other Income	993	913	2,102	2,602	3,102
PBT	25,767	38,786	38,089	44,748	46,271
Tax	(7,848)	(10,416)	(9,604)	(14,431)	(14,943)
ETR	30%	27%	25%	32%	32%
Minority Interest	(1,466)	(1,634)	(1,634)	(1,634)	(1,634)
Rec PAT	16,453	26,736	26,850	28,683	29,694
% Ch YoY	31%	62%	0%	7%	4%
Exceptional	6,804	3,303	-	-	-
Rep PAT	23,257	30,038	26,850	28,683	29,694
Rec EPS (Rs)	1.34	2.17	2.18	2.33	2.41

Source: BofA Merrill Lynch Global Research

Table 14: NHPC: Consolidated Balance Sheet

Rsmn	FY11A	FY12E	FY13E	FY14E	FY15E
Share capital	123,007	123,007	123,007	123,007	123,007
Reserves & surplus	142,295	160,384	174,669	189,928	205,725
Networth	265,303	283,392	297,676	312,935	328,732
Debt	167,716	178,111	192,700	211,019	231,852
Minority Interest	17,357	18,991	20,626	22,260	23,894
DTL	2,774	2,774	2,774	2,774	2,774
AAD	15,076	15,076	15,076	15,076	15,076
Capital Employed	468,225	498,343	528,851	564,063	602,327
Fixed Assets	399,003	415,343	438,603	468,535	505,664
Investments	46,839	19,162	16,344	13,526	10,708
Interest Accrued	1,579	2,025	2,253	2,929	3,032
Inventories	392	662	849	967	1,021
Contract WIP	199	270	300	391	404
Sundry Debtors	22,166	35,296	26,767	33,074	31,998
Cash & Bank balances	42,653	66,246	85,612	92,343	99,253
Other Current Assets	5,787	6,714	7,420	9,441	9,741
Loans & Advances	10,328	13,465	13,400	15,028	15,275
Current Assets	83,104	124,678	136,601	154,173	160,724
Accounts payable	7,809	7,767	10,020	11,438	12,072
Other current liabilities	16,334	16,860	17,371	17,897	18,439
Provisions	36,578	36,212	35,306	42,836	44,257
Current Liabilities & Provisions	60,721	60,839	62,697	72,171	74,769
Net Current Assets	22,384	63,839	73,905	82,002	85,955
Capital Deployed	468,225	498,343	528,851	564,063	602,327

Source: BofA Merrill Lynch Global Research

Table 15: NHPC: Consolidated Cash Flow

Rsmn	FY11A	FY12E	FY13E	FY14E	FY15E
PBT	32,572	42,089	38,089	44,748	46,271
Depreciation	10,685	11,276	11,699	15,631	15,738
Net Interest	(280)	520	(833)	(4,232)	(4,218)
Taxes	(6,060)	(10,416)	(9,604)	(14,431)	(14,943)
Change in Working Capital	911	(17,863)	9,300	(1,366)	2,957
Others	284	-	-	-	-
Cash flow from operations	38,112	25,606	48,651	40,351	45,804
Capex	(34,932)	(27,616)	(34,959)	(45,564)	(52,867)
(Inc)/Dec in investments	(9,739)	27,677	2,818	2,818	2,818
Others	6,540	-	-	-	-
Cash flow from investing	(38,131)	62	(32,142)	(42,746)	(50,049)
Inc/(Dec) in Debt	1,480	10,394	14,590	18,319	20,833
Dividend+Dividend Tax	(8,028)	(11,949)	(12,566)	(13,424)	(13,897)
Net interest	(13,068)	(520)	833	4,232	4,218
Others	392	-	-	-	-
Cash flow from financing	(19,223)	(2,075)	2,856	9,127	11,154
Net Change in cash	(19,242)	23,593	19,366	6,731	6,910
Add: Opening cash balance	61,895	42,653	66,246	85,612	92,343
Closing cash balance	42,653	66,246	85,612	92,343	99,253

Source: BofA Merrill Lynch Global Research

Table 16: NHPC: Key financial ratios

	FY12E	FY13E	FY14E	FY15E
CMP (Rs)	18.30	18.30	18.30	18.30
Shares O/s (mn)	12,301	12,301	12,301	12,301
Market cap (Rsmn)	225,104	225,104	225,104	225,104
Rep EPS (Rs)	2.4	2.2	2.3	2.4
EPS Growth %	30%	-11%	7%	4%
P/E (x)	7.5	8.4	7.8	7.6
CEPS (Rs)	3.4	3.1	3.6	3.7
BVPS (Rs)	23.3	24.4	25.7	27.0
P/BV (x)	0.8	0.7	0.7	0.7
Debt:Equity (x)	0.6	0.6	0.7	0.7
DPS (Rs)	0.8	0.9	0.9	1.0
Dividend Yield (%)	4.5%	4.8%	5.1%	5.3%
EV/EBITDA (x)	8.4	8.4	7.8	7.6
RoE (%)	9.75	9.24	9.39	9.26
ROCE (%)	6.86	6.58	6.81	6.45

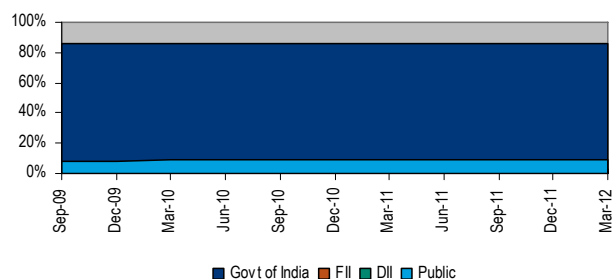
Source: BofA Merrill Lynch Global Research

Table 17: NHPC: RoE decomposition-Dupont Analysis

	FY07A	FY08A	FY09A	FY10A	FY11A	FY12E	FY13E	FY14E	FY15E
EBIT Margin	63%	58%	48%	47%	48%	58%	53%	54%	54%
Asset Turnover	9%	9%	10%	11%	11%	13%	13%	16%	15%
Tax impact	78%	79%	79%	65%	64%	69%	70%	64%	64%
Leverage impact	171%	177%	186%	184%	178%	176%	177%	179%	182%
Interest impact	97%	89%	89%	95%	106%	104%	103%	96%	98%
RoE	7.2%	6.5%	6.1%	5.6%	6.4%	9.7%	9.2%	9.4%	9.3%

Source: BofA Merrill Lynch Global Research

Chart 22: NHPC: Govt may have to divest 11% of its stake to comply with norms by FY14



Source: Company

Table 18: NHPC: Management team

Name	Designation
Mr ABL Srivastava	Chairman, Managing Director & Director Finance
Mr DP Bhargava	Director Technical
Mr JK Sharma	Director Projects
Mr Radheshyam Mina	Director Personnel

Source: Company

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Annexure

Table 19: NHPC - Operational projects (incl. NHDC)

Projects	Capacity (MW)	State	CoD	Latest Approved Capital Cost (Rs mn)	Cost/MW (Rs mn)	Regulated Equity (Rs mn)	Design Energy (MU)	Type
NHPC Projects:								
Baira Siul	180	HP	1982	1,820	10.1	799	779	RoR with small pondage
Loktak	90	Manipur	1984	1,424	15.8	718	448	Reservoir
Salal	690	J&K	1987-95	9,116	13.2	5,013	3,082	RoR
Tanakpur	120	Uttarakhand	1993	3,930	32.8	999	452	RoR
Chamera-I	540	HP	1995	20,327	37.6	6,206	1,665	Storage
Uri-I	480	J&K	1998	34,226	71.3	10,901	2,587	RoR
Rangit	60	Sikkim	2000	4,935	82.3	1,883	339	RoR with small pondage
Chamera-II	300	HP	2004	19,893	66.3	6,149	1,500	RoR with small pondage
Dhauliganga-I	280	Uttarakhand	2006	17,534	62.6	4,784	1,135	RoR with small pondage
Dulhasti	390	J&K	2008	51,161	131.2	19,867	1,928	RoR with small pondage
Teesta-V	510	Sikkim	2008	25,005	49.0	11,186	2,573	RoR with small pondage
Sewa-II	120	J&K	2011	10,614	88.5	3,061	535	RoR with small pondage
	3,760					71,564		
Existing Subsidiary (NHDC) projects:								
Indirasagar	1,000	MP	2005	29,499	29.5	11,289	2,698	Storage
Omkareshwar	520	MP	2007	19,735	38.0	5,921	1,166	Storage
	1,520					17,210		
Total	5,280					88,774		

Source: Company

Table 20: NHPC: Under construction projects

Projects	Capacity (MW)	State	Expected CoD	Latest TPC (RsBn)	Debt (RsBn)	Equity (Rsbn)	Cost/MW (Rs mn)	Invested until Mar 2012 (RsBn)	Design Energy (MU)	Type
Chamera-III	231	HP	Jun-12	21	15	6	90	18	1,108	RoR with small pondage
Chutak	44	J&K	Oct-12	9	6	3	208	7	213	RoR
Uri-II	240	J&K	Sep-13	21	15	6	87	17	1,370	RoR
Teesta-III	132	WB	Dec-12	16	11	5	123	14	594	RoR
Parbati-III	520	HP	Oct-12	27	19	8	52	17	1,977	RoR
Nimmoo Bazgo	45	J&K	Jan-13	9	7	3	208	7	239	RoR with small pondage
Teesta-IV	160	WB	Jun-13	15	11	5	94	11	720	RoR with small pondage
Lower Subansiri	2,000	Assam/Arunachal Pradesh	Apr-16	107	75	32	53	55	7,421	Reservoir
Parbati-II	800	HP	Aug-16	54	38	16	67	35	3,109	RoR with small pondage
Kishenganga	330	J&K	Jun-17	36	25	11	110	11	1,350	RoR
Total	4,502			315	221	95	70			

Source: Company

Yields at play; strong defensive; New Buy

PO of Rs21.6 with 18% upside potential

We initiate on Satluj Jal Vidyut Nigam (SJVN) – a state-owned hydro utility JV in India – with a Buy rating and PO of Rs21.6 (potential upside 13% + dividend yield 5% = total upside potential 18%). Key arguments that support our investment rating are: 1) SJVN's FY13-14E dividend yield of 6%, vs. 1.8% for Sensex stocks; 2) SJVN is a defensive play with no fossil fuel risk; 3) SJVN is better than NHPC – higher FY13E RoE of 14% and FCF yield of 9% with no risk of under-recoveries.

Prefer SJVN over NHPC

We prefer SJVN to NHPC given the former's: 1) higher dividend yield of 5-6% in FY13-14E vs. NHPC's 4-5%; 2) higher RoE of 14% vs. NHPC's 8%; 3) no risk of under-recoveries vs. NHPC's Rs2bn p.a. on Parbati-3 FY14-17E which would negate positives of 982MW capacity additions in FY13-14E; 4) lower capex which also offers FY13E FCF yield of 9%, vs. NHPC's 6%; and 5) continued benefits from superior asset in Nathpa Jhakri delivering 400bp returns above normative.

Play for yields in absence of capacity addition

SJVN offers one of the highest dividend yields in our coverage universe. Despite the lack of ST capacity additions we see it as a defensive play in volatile market conditions – demonstrated via its 12m outperformance vs. benchmark. SJVN trades at 0.9x P/B FY13E & 7x P/E. We see further upside on Rampur's commissioning in FY14. Risks include further delays in Rampur; high cash on books depressing returns; geopolitical risks in Nepal and Bhutan projects.

Thin project pipeline is a concern

Key investor concern is SJVN's large gaps in project commissioning. The firm added 1.5GW in FY05; its next capacity addition (Rampur + Wind, 462MW) is in FY14E, after which there are none planned for until FY18. Despite having 3.3GW in project pipeline, we expect capacity addition to pick up only after FY18.

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Date Established	8-May-2012
Investment Opinion	B-1-7
Volatility Risk	MEDIUM
52-Week Range	Rs18.60-Rs23.90
Mrkt Val / Shares Out (mn)	US\$1,490 / 4,136.6
Average Daily Volume	726,817
BofAML Ticker / Exchange	XJVN / NSI
Bloomberg / Reuters	SJVN IN / SJVN.NS
ROE (2012E)	14.3%
Net Dbt to Eqty (Mar-2011A)	-4.3%
Est. 5-Yr EPS / DPS Growth	7.5% / 10.5%
Free Float	10.0%

Estimates (Mar)

(Rs)	2010A	2011A	2012E	2013E	2014E
Net Income (Adjusted - mn)	8,642	9,758	10,727	10,948	12,703
EPS	2.35	2.21	2.59	2.65	3.07
EPS Change (YoY)	-4.2%	-6.2%	17.6%	2.1%	16.0%
Dividend / Share	0.798	0.800	0.934	1.09	1.29
Free Cash Flow / Share	2.93	2.05	1.21	1.64	1.03

Valuation (Mar)

	2010A	2011A	2012E	2013E	2014E
P/E	8.21x	8.75x	7.44x	7.29x	6.29x
Dividend Yield	4.14%	4.15%	4.84%	5.62%	6.68%
EV / EBITDA*	5.39x	5.31x	4.71x	4.77x	4.04x
Free Cash Flow Yield*	15.10%	10.61%	6.26%	8.52%	5.33%

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iQprofileSM SJVN

Key Income Statement Data (Mar)	2010A	2011A	2012E	2013E	2014E
(Rs Millions)					
Sales	17,709	18,180	20,390	20,295	24,059
Gross Profit	NA	NA	NA	NA	NA
Sell General & Admin Expense	(1,781)	(2,018)	(2,152)	(2,294)	(2,831)
Operating Profit	11,608	11,722	13,781	13,716	16,121
Net Interest & Other Income	(1,433)	(160)	836	1,156	286
Associates	NA	NA	NA	NA	NA
Pretax Income	10,175	11,562	14,617	14,872	16,407
Tax (expense) / Benefit	(1,533)	(1,804)	(3,890)	(3,924)	(3,704)
Net Income (Adjusted)	8,642	9,758	10,727	10,948	12,703
Average Fully Diluted Shares Outstanding	4,136	4,136	4,137	4,137	4,137

Key Cash Flow Statement Data

Net Income	8,642	9,758	10,727	10,948	12,703
Depreciation & Amortization	4,333	4,442	4,459	4,287	5,109
Change in Working Capital	1,170	(1,878)	(3,526)	2,157	1,454
Deferred Taxation Charge	(197)	(500)	(450)	(450)	(1,212)
Other Adjustments, Net	1,277	2,128	1,554	1,199	3,319
Cash Flow from Operations	15,224	13,950	12,764	18,141	21,374
Capital Expenditure	(3,171)	(5,477)	(7,764)	(11,340)	(17,118)
(Acquisition) / Disposal of Investments	0	0	0	0	0
Other Cash Inflow / (Outflow)	0	0	0	0	0
Cash Flow from Investing	(3,171)	(5,477)	(7,764)	(11,340)	(17,118)
Shares Issue / (Repurchase)	167	242	0	0	0
Cost of Dividends Paid	(3,393)	(2,894)	(4,518)	(5,252)	(6,242)
Cash Flow from Financing	(9,344)	(3,259)	(4,905)	(421)	3,633
Free Cash Flow	12,053	8,473	5,000	6,801	4,256
Net Debt	1,395	(3,099)	(2,476)	(3,276)	817
Change in Net Debt	(7,315)	(4,494)	623	(800)	4,094

Key Balance Sheet Data

Property, Plant & Equipment	79,291	80,262	83,567	90,620	102,629
Other Non-Current Assets	197	697	697	697	697
Trade Receivables	1,893	2,645	6,704	5,560	5,812
Cash & Equivalents	15,424	20,638	20,733	27,112	35,001
Other Current Assets	7,586	7,049	7,707	7,746	8,856
Total Assets	104,391	111,291	119,408	131,736	152,995
Long-Term Debt	16,819	17,539	18,256	23,836	35,818
Other Non-Current Liabilities	8,494	8,494	8,494	8,494	8,494
Short-Term Debt	NA	NA	NA	NA	NA
Other Current Liabilities	12,541	13,203	14,394	15,447	18,263
Total Liabilities	37,853	39,236	41,144	47,776	62,574
Total Equity	66,538	72,055	78,264	83,960	90,421
Total Equity & Liabilities	104,391	111,291	119,408	131,736	152,995

iQmethodSM - Bus Performance*

Return On Capital Employed	11.9%	11.5%	11.3%	10.3%	11.4%
Return On Equity	13.6%	14.1%	14.3%	13.5%	14.6%
Operating Margin	65.6%	64.7%	67.8%	67.8%	67.2%
EBITDA Margin	90.0%	88.9%	89.5%	88.7%	88.2%

iQmethodSM - Quality of Earnings*

Cash Realization Ratio	1.8x	1.4x	1.2x	1.7x	1.7x
Asset Replacement Ratio	0.7x	1.2x	1.7x	2.6x	3.4x
Tax Rate (Reported)	15.1%	15.6%	26.6%	26.4%	22.6%
Net Debt-to-Equity Ratio	2.1%	-4.3%	-3.2%	-3.9%	0.9%
Interest Cover	6.7x	7.4x	12.5x	18.3x	7.6x

Key Metrics

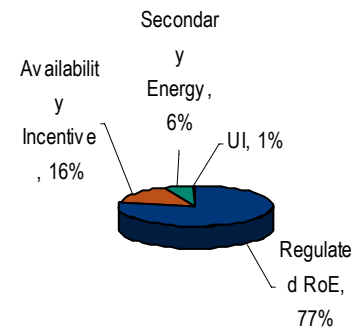
Company Description

SJVN is JV between Govt of India and State of Himachal Pradesh. The company's business model is based on cost plus CERC regulations. It currently has one operational hydro project of 1500MW 'Nathpa Jhakri'. It is India's largest hydro station. In addition it has 412 MW Rampur under construction expected CoD in FY14. It is also seeking clearances for 8 projects totaling 3274MW which we believe will be commissioned over the next ten years. SJVN will also be adding 50MW of wind capacity in FY14.

Investment Thesis

Key arguments that support our Buy rating are 1) SJVN has 5-6% dividend yield FY13-14E vs. 1.8% for Sensex stocks, 2) it is a defensive play with no fuel risk in a volatile market, 3) we prefer SJVN over NHPC on a) higher RoEs of 14% vs. NHPC's 8%, b) dividend yields of 5-6% vs. NHPC's 4-5% FY13-14E, c) its 9% FCF yield FY13E vs. NHPC's 6%, and d) no risks of under-recoveries against NHPC's Rs2bn p.a. FY14-17E on Parbati-3.

Chart 1: SJVN: FY12 breakdown of regulated earnings



Source: BofA Merrill Lynch Global Research

Stock Data

Price to Book Value	1.0x
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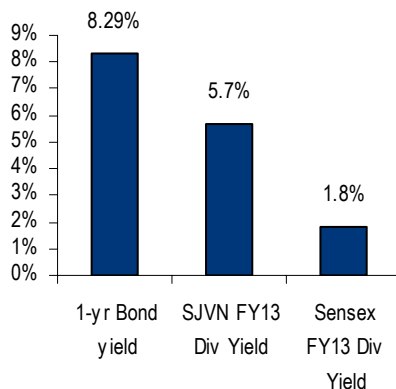
Bull & Bear case

Company or Theme	Bull case	Bear case	BofAML view
Capacity addition	- Rampur 412MW gets commissioned ahead of Sept'13 timeline. 3.3GW future projects come ahead of schedule instead of FY21 guided by the company. This would reduce gap of zero capacity addition during FY15-17.	- Rampur delayed due to poor soil conditions (tunnel-4) and is pushed back to FY15. - Nepal (Arun-III) & Bhutan (Kholongchu & Wangchu) projects - 60% of pipeline may get delayed due to unforeseen geopolitical risks.	- We build in timely completion for Rampur and build CoD in line with guidance of Sept'13. 3.3GW of pipeline after Rampur we build in one-year delays across the board and hence expect all projects to be operational only in FY22-23.
RoE	- Reported RoE: Remain in the 14% range despite increased capex on future projects, due to higher-than-expected cash flows from NJPS and Rampur. - Power RoE: Increase from the current 19-20% on increased incentives on NJPS.	- Reported RoE: Projects beyond Rampur are exposed to time and cost overruns. In this case, the company's initial equity deployed will yield no returns and hence reported RoEs could sharply decline to 8-10% like in NHPC. - Power RoEs: Will decrease from current levels of 19-20% on lower incentives on NJPS and Rampur.	- Reported RoE: Despite addition of Rs31bn FY12-15 to construction work-in-progress (CWIP), RoEs to be in 14.0-13.5% range. Post-FY15, RoEs dip to 11% on Rs230bn of capex in FY12-20E. - Power RoE: Will remain in the 19-20% range in FY12-15E despite our assumption of lower incentives in NJPS and Rampur's contribution only in FY15.
Nathpa Jhakri	NJPS performance in FY12E (104% PAF, 58% PLF) is replicated, FY13-15E.	NJPS' performance peaked in FY12; will see a sharp decline in FY13-15.	We expect NJPS to continue to outperform CERC norms even beyond FY12, we build in PAF of 104% and PLF of 58% for the plant going forward.
Execution Risk	- SJVN has shown good execution track record on NJPS as well as Rampur which will be commissioned within 7 years of construction, which also includes 18 months of delay. - Hence, execution risk in SJVN is relatively lower than NHPC	60% of SJVN's future capacity is in Bhutan and Nepal which can face delays due to geopolitical issues.	- Our estimates build in 12 month delay across all projects (3.3GW) beyond Rampur. - We try to capture execution risk by assigning higher equity risk premiums of 8% in our DCF as compared to 7.5% incase of NHPC.

Source: BofA Merrill Lynch Global Research

Valuation and views

Chart 2: SJVN Div yields vs 1-yr Bond & Sensex div yields



Source: BofA Merrill Lynch Global Research, Bloomberg

A new Buy with Rs21.6 PO: dividend yields, defensive growth; prefer over NHPC

We initiate SJVN at Buy and a DCF-based PO of Rs21.6. Furthermore the stock offers 5% FY13E dividend yield resulting in upside potential of 18%.

Key arguments supporting our Buy rating are: 1) SJVN's FY13-14E dividend yield of 5-6% vs. 1.8% for Sensex stocks and NHPC's 4-5%; 2) SJVN is a defensive play with no fossil fuel risk, 3) we prefer SJVN to NHPC due to higher FY13E RoE of 14% and FY13E FCF yield of 9% with no risk of under-recoveries.

Dividend payout to increase on Rampur CoD?

FY11 payout ratio for SJVN was 36%, which we expect to increase to about 42% in FY14E upon the commissioning of Rampur project. The company paid out 48% in FY05, the year in which Nathpa Jhakri (NJPS) was commissioned.

SJVN's FY13E dividend yield of 5% is amongst top 5 within BofAML India's coverage universe of over 150 cos.

Key assumptions of CoE= 13.3%

RFR = 8.5%

Beta = 0.6x (BofAML global utility avg 0.7x)

Eq risk prem = 8%

Prefer SJVN over NHPC on

- **Higher dividend yield and RoE:** SJVN's FY13-14E dividend yield of 5-6% vs. NHPC's 4-5%. NHPC's RoE we expect to remain at 8% until FY15 whereas SJVN reported RoE of 14%.
- **No risk of under-recoveries.** We see no risk of under-recoveries for SJVN as against NHPC's Rs2bn p.a. on Parbati-3 which would negate positives of 982MW capacity addition in FY13-14E.
- **Lower capex in FY13E = 9% FCF yield.** We expect capex for SJVN to only pick up post FY14, whereas NHPC will be at it peak capex in FY14-15E; as a result, SJVN offers a 9% FCF yield against 6% in the case of NHPC.
- **Superior asset in NJPS:** We expect FY12 incentives of Rs2.7bn (1.5GW) vs. NHPC's Rs4.6bn (3.8GW). Average plant availability factor (PAF) since FY05 for NJPS is 96% vs. 92% for NHPC projects. Power RoE's of 20-21%.

Key assumptions for FCFE

We assume a 13.3% Cost of Equity (CoE) for SJVN . We apply a Risk free rate (RFR) of 8.5%, which is inline with the 12 month average of 10-yr bond. Beta of 0.6x derived by Bloomberg since the stock's listing in May 2010. We stick with the 0.6x beta despite stock's limited trading history given that it its not very different from 0.7x beta of global utilities covered by BofAML.

Our equity risk premium of 8% is slightly higher than 7.5% of NHPC as we capture the higher execution risk for SJVN given the time gap in project commissioning is spread over the next ten years.

Table 1: SJVN: FCFE

Rs mn	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E	FY21E	FY22E
Rec. PAT	10,727	10,948	12,703	13,082	13,124	12,625	12,940	12,991	13,430	17,509	24,872
Add: Depreciation	4,459	4,287	5,109	5,521	5,521	2,704	3,188	3,456	4,097	6,402	8,646
Add: DTL / (DTA)	-	-	-	-	-	-	-	-	-	-	-
Changes in Working Capital	(3,526)	2,157	1,454	602	1,050	1,763	280	494	590	341	4,041
Capex	(7,764)	(11,340)	(17,118)	(22,126)	(28,127)	(35,371)	(36,055)	(41,460)	(38,550)	(28,857)	(12,221)
Changes in Debt	717	5,579	11,982	13,841	18,042	23,112	23,161	27,048	19,825	12,446	5,963
Free Cash Flow to Equity	4,613	11,631	14,131	10,920	9,610	4,834	3,514	2,528	(608)	7,840	31,302
Proportionate period	-	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Discount factor	1.21	1.06	0.94	0.83	0.73	0.65	0.57	0.50	0.44	0.39	0.35
PV of FCFE	-	6,174	13,278	9,056	7,038	3,122	2,003	1,272	(271)	3,072	10,824
Risk Free Rate	8.5%										
Beta (x)	0.60										
Equity Risk Premium	8%										
Cost of Equity	13.3%										
Terminal Growth	2.0%										
PV of FCFE (Rs mn)	55,568										
Terminal Cash Flows (Rs mn)	33,786										
Equity Value (Rs mn)	89,355										
Shares O/s (mn)	4,137										
Equity Value (Rs/Sh)	21.6										
% upside	12%										
FY13 dividend yield	5.6%										
Total Upside	18%										

Source: BofA Merrill Lynch Global Research

SJVN has outperformed the Sensex by 5% over past 12 months due to its defensive qualities

Outperformed benchmark in 12 months - defensive business model

Over the past 12 months, SJVN has relatively outperformed Sensex by 5% and its peers (BSE Power) by 25% (vs. NHPC which has underperformed the benchmark by 10% over the same period). SJVN's outperformance is attributed to its defensive, no-fuel and no-inflation risk business model. However, it has underperformed since listing mainly due to the 18 month delay in Rampur commissioning and no further pipeline until FY18.

Table 2: SJVN versus Sensex and BSE Power

	3-M	6-M	1-Yr	Since IPO (May-10)
SJVN	1%	-13%	-6%	-22%
Sensex	-2%	-1%	-10%	3%
BSE Power	-7%	-10%	-22%	-33%

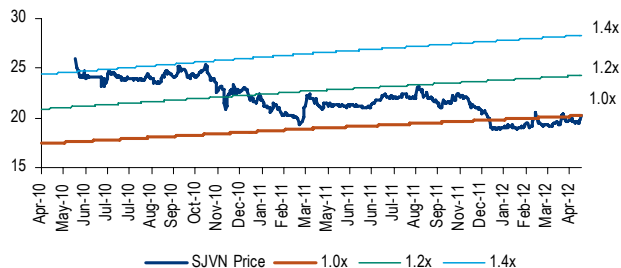
Source: Capitaline

At 0.9x P/B FY13E SJVN currently trades at 17% discount to its average since listing (2010)

Limited trading history; currently at 0.9x FY13E P/B and 7x P/E

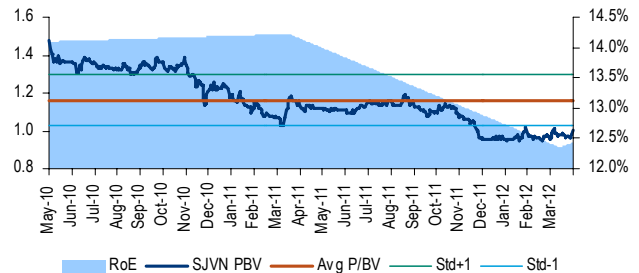
Based on our estimates, SJVN now trades at a P/B of 0.9x FY13E, at a 12% premium to NHPC's 0.8x. This is primarily due to its superior asset and higher dividend yield. Given the stock's limited trading history (listed only since May 2010), it is trading at a 17% discount to its average P/B multiple since listing.

Chart 3: SJVN currently trades at 0.9x P/B FY13



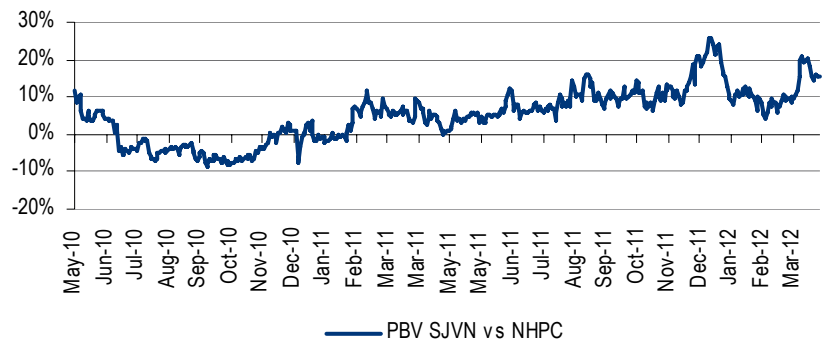
Source: Bloomberg, BofA Merrill Lynch Global Research

Chart 4: SJVN: P/B vs. RoE



Source: BofA Merrill Lynch Global Research

Chart 5: SJVN trades at 16% premium to NHPC on 1- year fwd P/B



Source: BofA Merrill Lynch Global Research

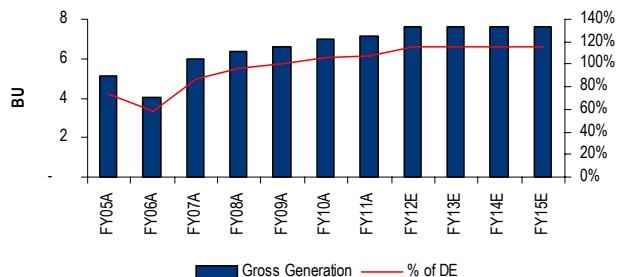
Superior asset gains to continue

Nathpa's FY12 PLF 58% vs. normative 50%;
PAF FY12 104% vs. normative 82%

Consistently outperforming since FY10

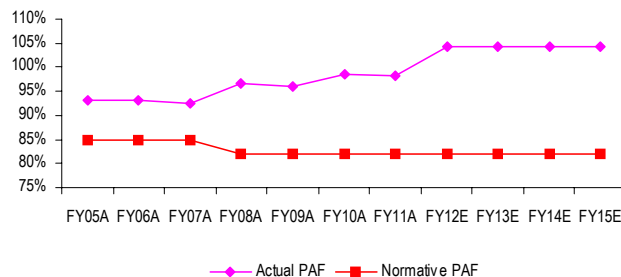
SJVN's 1.5GW NJPS is one of the best-performing hydro stations in India. In the past three years (FY10-12), the plant has consistently been generating (6-15%) over and above its design energy and has maintained PAF (at 99-104%) above the normative rate (82%).

Chart 6: Nathpa's generation has been above DE; FY12-15E 115%



Source: Company, CEA, BofA Merrill Lynch Global Research

Chart 7: Plant availability to remain above normative rate FY13-15



Source: Company, BofA Merrill Lynch Global Research

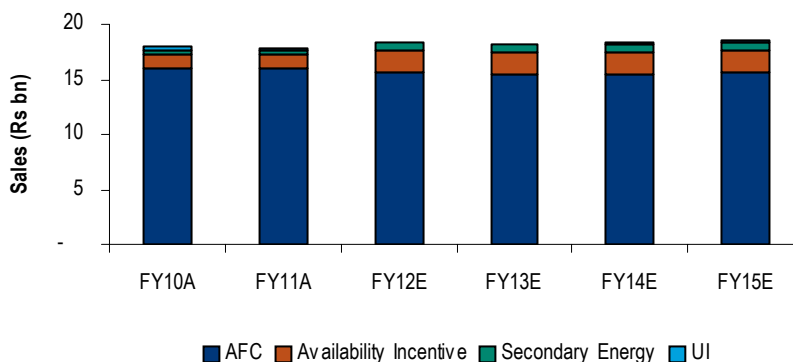
We believe performance of NJPS can continue to perform on FY12 parameters, since operational efficiency is dependent on internal factors (lower plant shutdown, electrical O&M etc) rather than external (snow melting, rains, silt etc)

Above-average performance to continue; 107% PAF in April'12

NJPS' FY12 performance has been phenomenal. It was supported by lower closure days leading to higher plant availability. Mandated plant shutdown was reduced to eight days in FY12 from 22 days in FY11. As a result, FY12 generation came to 7.6BU, 15% above design energy, PAF of 104% against 98% in FY11 and 82% normative rate. FY12 incentive income we believe will account for 17% of recorded PAT vs. 14% in FY11.

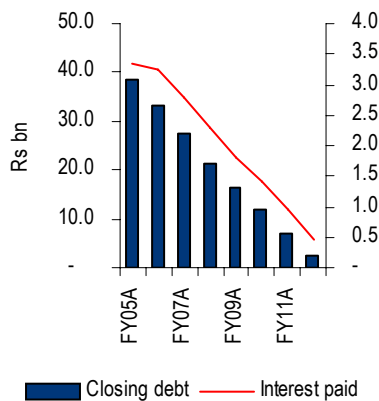
NJPS we believe will be able to replicate its FY12 performance going forward as its operational efficiency is dependent on internal factors such as lower plant shutdown, better electrical O&M, also going forward the company is looking to shutdown turbines in alternate years. As a result we build in 104% PAF and 58% PLF beyond FY12. In fact the plant has achieved a 107% PAF in April'12 compared to 93% in April'11.

Chart 8: NJPS: performance incentives to contribute 15-16% of revenues FY12-15E



Source: BofA Merrill Lynch Global Research

Chart 9: NJPS: completes debt payment in FY13



Source: BofA Merrill Lynch Global Research

Debt repayment ends in FY13E; MAT grossing until FY20E

Based on the 10-year repayment schedule we expect NJPS debt to be fully paid in FY13. However, since the plant is based on the 1:1 debt:equity financing rather than 70:30, we believe it will not materially impact plant tariffs.

We expect NJPS to remain under the 80IA benefit until FY20 given for the initial five years (FY05-10) it had carried forward book losses; it made use of 80IA only in FY11. As a result, the annual fixed charges (AFC) are reduced by Rs1.7bn due to RoE grossing on minimum alternative tax (MAT) at 20% vs. full tax at 33%.

Initial hiccups (FY04-06) caused by silting and floods

After the 2006 flash floods, silt content in the river Satluj increased dramatically and damaged the plant's turbines. Later it has been observed that the coarse content in the water to the plant has increased from an average of 15% (1970-96) to 20-23%, i.e., following the floods. As a result, the plant had to be retrofitted with a de-silting chamber and has some of its critical equipment replaced.

As a result of the silting, the Central Electricity Regulatory Commission (CERC) allowed a reduction in the plant's design energy by 5% from 6,924MU to 6,612MU and also reduced the normative PAF from 85% to 82%. The reduction in normative PAF by 3ppt allows the company to earn ~Rs270mn higher PAF incentives.

SJVN will add Wind 50MW by 4QFY13 and Rampur 412MW by 2QFY14

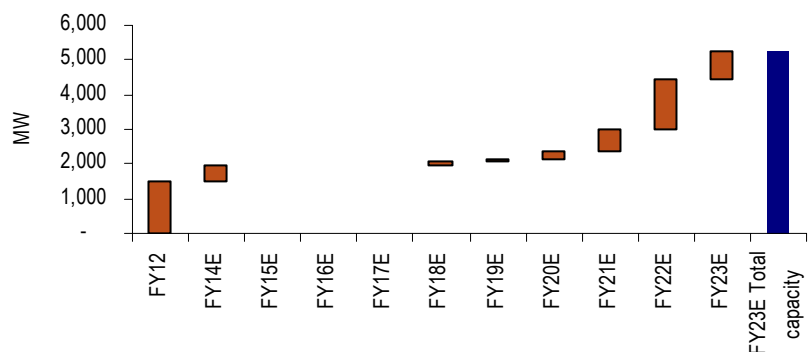
Project pipeline anemic until FY18

462MW in FY14; 3,274MW FY18-23

Our biggest concern with regard to SJVN is its thin project pipeline. SJVN has a long-term capacity addition plan of 3,736MW, which it targets until FY22-23E. However, its near-term capacity addition is anemic with the earliest capacity addition only in FY14 (Sept'13) Rampur 412MW. It now has only one project under construction (Rampur) and the balance of eight are in the clearance stage. After Rampur, next capacity addition is in FY18 Dhaulasidh (66MW) and Naitwar Mori (60MW).

The company plans to set up a 50MW wind project in FY13E, which though may not materially impact revenues will help reduce tax liability.

Chart 10: SJVN: Capacity addition of 3.7GW FY13-23, gaps in FY15-17



Source: BofA Merrill Lynch Global Research, Company

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Table 3: SJVN: Project Pipeline Under construction and awaiting clearances

Projects	Capacity (MW)	Approved costs (Rs bn)	Cost/MW (Rsmn)	Design Energy (MU)	Type	State/Country	Co. guidance CoD	BofAML est of CoD
Rampur	412	20.5	50	1,770	RoR	HP	Sep-13	Sep-13
Wind Project	50	3.1	61	-		TN/AP/Mah/Ker/Raj	Mar-13	Mar-13
Dhulasidh	66	5.0	75	247	RoR	HP	FY17	Jun-17
Naitwar Mori	60	4.6	77	261	RoR	Uttarakhand	FY17	Aug-17
Jakhol Sankri	51	4.7	92	220	RoR	Uttarakhand	FY18	Aug-18
Devsari	252	13.5	53	913	RoR with Pondage	Uttarakhand	FY18	Aug-19
Kholongchu	600	37.4	62	2,564	RoR	Bhutan	FY17	Jun-20
Wangchu	570	46.4	81	2,377	Storage	Bhutan	FY18	Jul-21
Arun-III	900	42.1	47	3,970	RoR	Nepal	FY20	Aug-21
Luhri	775	72.5	94	3,117	RoR with small pondage	HP	FY21	May-22
Total	3,736	250						

Source: Company, BofA Merrill Lynch Global Research

Rampur final project cost we estimate at Rs24.6bn 20% higher than the last approved on 2006 levels

Rampur the next capacity trigger

The 412MW Rampur project is located downstream to SJVN's existing NJPS and will depend on water from the outfall of NJPS. Basic parameters of PAF (82%) and project load factor (PLF, 50%) are similar to NJPS. Management guides for full CoD in Sept'13; we build in the same timeline as the current progress which suggests that the firm will be able to meet it. In FY15 (1-year of full ops) we expect an Rs7.3bn addition to regulated equity and Rs1.1bn (15% of total) to regulated earnings.

Table 4: Rampur project details

Parameters	Units	
Capacity	MW	412
State		Himachal Pradesh
Approved cost @ 2006 levels	Rs bn	20.5
Estimated revised cost	Rs bn	24.6
Cost/MW	Rs mn/MW	59.6
Design energy	MU	1,770
Normative PAF	%	82%
PLF	%	49%
CoD Last unit		Sep-13
Levelised tariff	Rs/Kwh	3.03

Source: Company, BofA Merrill Lynch Global Research

Progress suggests Sept'13 CoD achievable

Construction on Rampur began in 2H08 and is expected to be commissioned by Sept'13. Though it is behind schedule by 18 months from its original target of Mar'12 even if SJVN was to meet its revised timelines, the project would still be completed in a healthy six years vs. 7-10 years taken by most hydro projects.

Based on the progress made until Feb'12, capex totaled Rs17bn, in our view. The approved project cost is Rs20.5bn, however, we expect an upward revision to Rs24.5bn since the previous projections were made on 2006 price levels.

Physical progress report for Feb'12 suggests that lining of three out of the five tunnels is nearly complete. Work in adit-4 has been slow due to poor soil conditions and has been delayed by three months. Power house construction is almost complete. Hydro-testing on two out of the six units is complete. Hence, in our interactions with management, we notice that they appear to be confident about achieving their commissioning timelines of Sept'13.

Table 5: Rampur unit-wise CoD assumption

Unit	Capacity MW	Expected CoD
Unit-1	69	Jun-13
Unit-2	69	Jul-13
Unit-3	69	Aug-13
Unit-4	69	Aug-13
Unit-5	69	Sep-13
Unit-6	69	Sep-13

Source: Company, BofA Merrill Lynch Global Research

Table 6: Rampur project progress

Monitorable	Physical progress
Adit-1 Kazo	Upstream HRT lining 83% complete; downstream lining 100% complete
Adit-2 Kunni	Upstream HRT lining 100% complete; downstream 35% complete
Adit-3 Kasholi	Excavation of bypass Adit 75% complete, lining remains
Adit-4 Goshai	Lining of downstream HRT 91% complete; upstream HRT excavation 92% complete delayed due to poor soil conditions, benching 17% complete
Adit-5 Bayal	68% benching complete
Spill tunnel	85% benching complete
Surge shaft	71% concreting complete
Power house	93% construction complete
Tail Race Tunnel	91% collection gallery completed; work suspended on advise of design/GSI/CWC
EM works	Unit-1 Hydro testing of spiral casing done; Unit-2 Hydro testing of spiral casing complete; Unit-3 Laying of penstock pipe under progress; Unit-4 2nd stage reinforcement in progress; Unit-5&6 Welding and matching of spiral casing in progress
Source: Company	

50MW wind project; efforts to plug in commissioning gap

SJVN is in the final stages of finalizing a 50MW wind farm and is expected to place order for equipment in 1H13. It has shortlisted the five states of Tamil Nadu, Maharashtra, Andhra Pradesh, Kerala, and Rajasthan, and will choose sites depending on negotiations with the equipment suppliers.

50MW wind project may not contribute much to revenues but will help lower tax rate in FY14E

Capex envisaged for the above is Rs3bn and management guides for commissioning by 2H13. Motive behind diversification in wind energy is mainly to fill up gaps in its project pipeline as it has no capacity addition in FY13E and FY15-17E.

Wind IRR below hydro but above cash yields; to lower tax rates

We highlight project IRRs of the wind project (8-10%) are lower than hydro's (10-11%) but are still above cash yields (7%). More than addition to revenues we believe the project will help reduce the company-wide tax liability due to the 35% accelerated depreciation in the first year of operations (FY13).

3274MW projects awaiting clearances capex on them to pick up FY14 onwards

Pipeline FY18-23E; capex to pick up from FY14

On the 3,274MW projects which we expect to be commissioned only during FY18-23, there has not been much physical construction activity on site as most of these projects are in the clearance stage. However, management mentioned it will be placing orders for equipment and civil packages for almost all projects over the next 12-18 months.

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Exhibit 1: Status of projects awaiting clearances

Dhulasidh 66MW

- DPR approved by Govt of Uttarakhand June'11
- Request for Environmental clearance to MoEF Nov'11
- Case for diversion of forest land examined by FAC Nov'11

Naitwar Mori 60MW

- DPR approved by Govt of Uttarakhand March'10
- EAC meeting for environmental clearance held in Dec'11, remarks awaited

Jakhol Sankri 51MW

- DPR submitted to Govt of Uttarakhand in Dec'11
- Draft EIA/EMP report submitted to UEPPCB in Oct'11 for conducting Public hearing

Devsari 252MW

- DPR submitted to CEA in June'10
- EAC meeting for environmental clearance held in Apr'11 and Dec'11. Comments of EAC incorporated

Source: Company, BofA Merrill Lynch Global Research

Exhibit 2: Status of projects awaiting clearances

Kholongchu 600MW (Bhutan)

- DPR submitted to CEA and Royal Govt of Bhutan June'11
- EIA & EMP reported submitted to RGoB in Oct'11

Wangchu 570MW (Bhutan)

- DPR submitted to RGoB in Dec'11

Arun-III 900MW (Nepal)

- DPR submitted to Nepal govt in Mar'11
- Final EIA/EMP scoping document and TOR submitted to MoEF in Sept'11

Luhri 775MW

- CEA has provisionally approved the project with single stage twin tunnel option
- Request for environmental clearance submitted to MoEF in Oct'11
- Request for Forest clearance submitted to MoEF in Nov'11

Source: Company, BofA Merrill Lynch Global Research

Risks

Downside risks to our thesis are:

Delay in Rampur timelines

SJVN has not added any capacity since FY05; Rampur, expected in FY14, is already delayed by 18 months, and any further delay would derail our argument of an earnings recovery in FY14 against a decline in FY13.

Projects in Nepal and Bhutan exposed to geopolitical risks

SJVN will be executing 2GW of projects in Nepal (Arun-III 900MW) and Bhutan (Kholongchu 600MW, Wangchu 570MW). This represents 60% of its 3.3GW project pipeline. We believe this will expose the company to geopolitical risks of these countries and could result in delays in them.

Execution risks since project pipeline is spread over 10 years

We believe that like any other hydro utility in India SJVN too will face execution risks going forward once it starts construction on 3.3GW projects which it plans to commission over the next 10 years.

As mentioned earlier almost 60% of its future projects are in foreign countries and that exposes it to risk of delays on any changes in norms of the home countries.

However, so far with NJPS and Rampur the company has displayed a better execution track record. Rampur despite the 18 months delay will be commissioned in seven years of construction.

Climate risk

Though hydro projects are not prone to fossil fuel risk however, dramatic climate changes do pose a risk to the operations of hydro plants. Flash floods, leading to excess silt content in water, drought leading to lower river flow are risks in our view.

Rising cash per share a risk to returns

We expect SJVN's cash balance to increase to Rs39bn (FY15E) from Rs20.6bn in FY11 and to account for almost Rs9.5/share. However, from FY14 onwards we

expect capex on future projects to pick up – cash to be deployed as initial equity. As a result, cash balance should start declining thereafter. Any delay in timelines for future projects will only delay cash deployment and hence will weigh on valuations as it generates lower returns (7%) vs. 14% on a company-wide basis.

Financial analysis

Regulated model, increasing capex and swing in working capital

SJVN follows the cost plus (CERC pass through) model in this section we discuss the growth in capacity, regulated equity and capex.

Though SJVN will lag NHPC on capacity addition however we believe that it will continue to enjoy higher reported (14%) and power (20%) RoE's than NHPC. As for capex we expect SJVN to spend Rs238bn FY12-20E on its future projects. Capex though will pick up pace only after FY14E, in our view.

Like other utilities SJVN working capital has deteriorated over the past two years (FY11-12) due to late payments by state electricity boards (high receivables). However, as finances of SEB's improve going forward we expect receivable days to reduce from 120 in FY12 to 80 by FY15E. This in turn would lead to a major swing in our working capital over next three years.

Table 7: SJVN: Key Assumptions

	Unit	FY11A	FY12E	FY13E	FY14E	FY15E
Installed Capacity	MW	1,500	1,500	1,500	1,962	1,962
Regulated Equity	Rsmn	41,051	41,051	41,051	45,943	48,420
Design Energy	MU	6,612	6,612	6,612	8,382	8,382
Gross Energy	MU	7,140	7,611	7,611	8,909	9,680
PLF	%	54%	58%	58%	57%	58%
Energy Sold	MU	6,228	6,638	6,638	7,767	8,438
Energy Sales	Rsmn	18,127	20,334	20,236	23,997	26,250
ASP	Rs/kwh	2.91	3.06	3.05	3.09	3.11
Other revenues	Rsmn	53	56	59	62	65
O&M Expenses	Rsmn	2,016	2,150	2,292	2,829	3,184
Per Unit	Rs/kwh	0.28	0.28	0.30	0.32	0.33
Depreciation	Rsmn	4,442	4,459	4,287	5,109	5,521
Per Unit	Rs/kwh	0.62	0.59	0.56	0.57	0.57
Interest Expenses	Rsmn	1,584	1,104	749	2,107	2,665
Per Unit	Rs/kwh	0.22	0.15	0.10	0.24	0.28
Other income	Rsmn	1,378	1,921	1,905	2,394	2,793
Tax	Rsmn	1,804	3,890	3,924	3,704	4,655
ETR	%	16%	27%	26%	23%	26%
Power PAT (incl incentives)	Rsmn	7,698	8,234	8,312	9,220	9,840

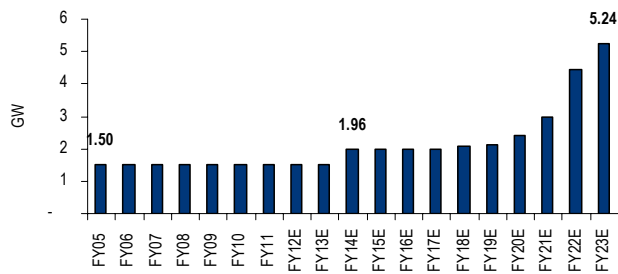
Source: Company, BofA Merrill Lynch Global Research

Energy sales set to grow 8% CAGR FY12-15E as Rampur get commissioned

We expect energy sales to witness 8% CAGR FY12-15E due to the addition of Rampur in FY14E.

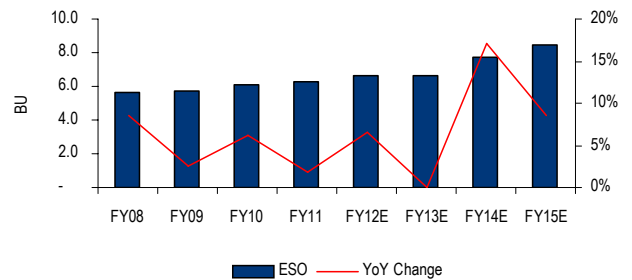
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Chart 11: SJVN: Installed capacity trend



Source: BofA Merrill Lynch Global Research

Chart 12: SJVN: Energy sales 8% CAGR FY12-15 on Rampur addition

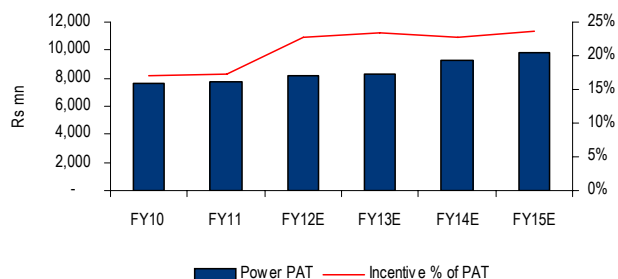


Source: BofA Merrill Lynch Global Research

6% CAGR FY12-15E in power PAT

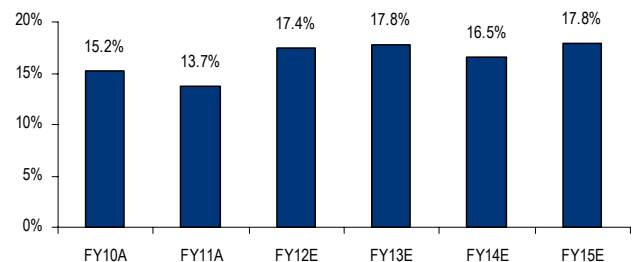
We expect a 6% CAGR in SJVN's power (core) PAT as we build in incentives from NJPS to taper and that of Rampur to only start contributing meaningfully from FY15. For recurring PAT we expect a 7% CAGR FY12-15E.

Chart 13: Incentives % of Power PAT 23-24% FY12-15



Source: Company, BofA Merrill Lynch Global Research

Chart 14: Incentive % of recurring PAT peaks in FY13 but will revive on commissioning of Rampur



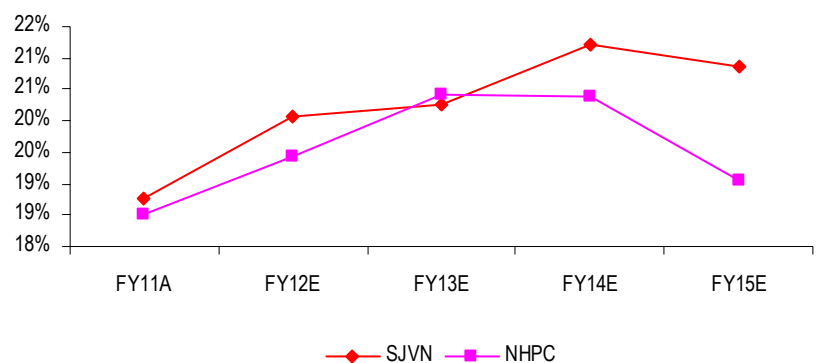
Source: Company, BofA Merrill Lynch Global Research

Reported RoE's of 14% are higher than NHPC's 9% due to lower CWIP

Power RoE 20% in line with NHPC

Power RoE in the range of 19-20% (FY12-15E) is in line with NHPC. Reported RoE 14% FY12-15E higher than 9% of NHPC even as we build in capex on future projects to pick up.

Chart 15: SJVN power RoEs in line with NHPC; rep RoEs subdued due to high cash balance



Source: Company, BofA Merrill Lynch Global Research

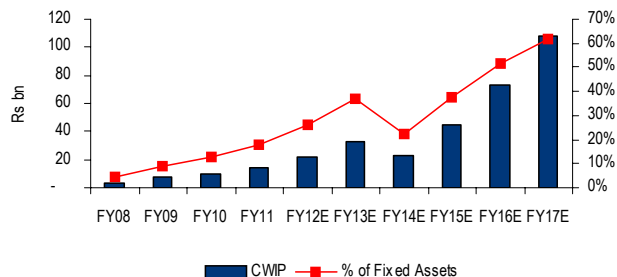
CWIP % of fixed assets to rise to 38% in FY15E from 13% FY10 as capex ramps up

Capex drive kicks in from FY14E; for 3,274MW ex-Rampur

We expect SJVN's capex to pick up from FY14 as it starts investing meaningfully in its 3,274MW of new projects. We estimate a net capex of Rs238bn in FY12-20E.

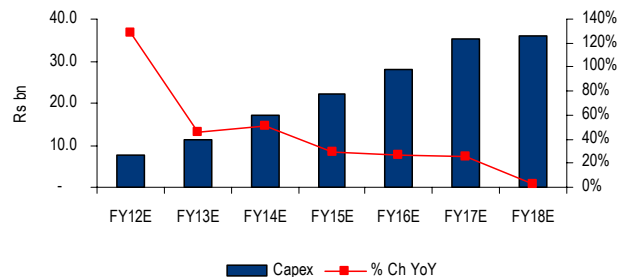
We expect CWIP as a percentage of fixed asset to increase from a low of 13% in FY10 to 38% in FY15E.

Chart 16: Sharp increase in CWIP to fixed asset ratio beyond FY14



Source: Company, BofA Merrill Lynch Global Research

Chart 17: SJVN capex to rise substantially FY14 onwards



Source: BofA Merrill Lynch Global Research

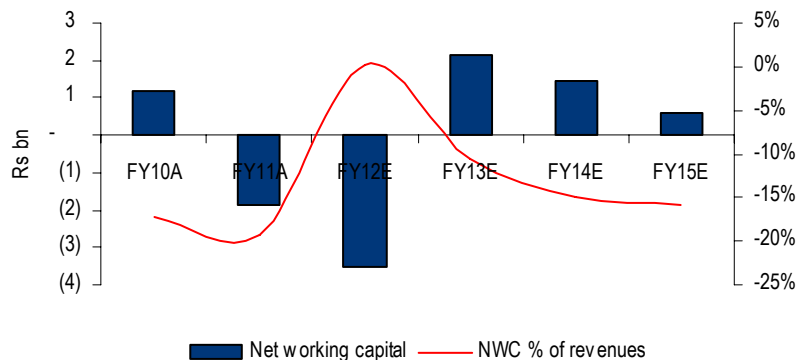
Debtors peak in FY12 on SEB late payments should reduce from FY13E onwards

Lower receivables FY13E onwards leads to swing in working capital

SJVN like its peers has also been impacted due to late payments by state electricity boards (SEBs). Management highlighted that even though in 3QFY12 receivables declined sequentially to Rs3.5bn from Rs5.7bn, it has been receiving delayed payments from BSES Rajdhani. However, since the payment schedules are improving as SEBs are implementing tariff hikes we expect receivables for SJVN to peak in FY12 at 120 days of revenues and decline to about 100-80 days during FY13-15E.

As result of lower receivables beyond FY13 our working capital assumption for the company moves from -Rs3.5bn in FY12 to Rs2.2bn in FY13E.

Chart 18: Swing in NWC mainly due to lower receivables



Source: BofA Merrill Lynch Global Research

FY14 Rampur to contribute to sales and earnings from 1Q; wind farm to aid lower taxes

Financial summary

Table 8: SJVN: Income Statement

Rsmn	FY11A	FY12E	FY13E	FY14E	FY15E
Total Revenues	18,180	20,390	20,295	24,059	26,315
% Ch YoY	3%	12%	0%	19%	9%
O&M Expenses	(2,016)	(2,150)	(2,292)	(2,829)	(3,184)
% of Sales	11%	11%	11%	12%	12%
EBITDA	16,164	18,240	18,003	21,230	23,131
EBITDA Margin	89%	89%	89%	88%	88%
Depreciation	(4,442)	(4,459)	(4,287)	(5,109)	(5,521)
EBIT	11,722	13,781	13,716	16,121	17,610
Net Interest	(317)	706	1,045	175	17
Other Income	111	111	111	111	111
PBT	11,516	14,598	14,872	16,407	17,738
Tax	(1,804)	(3,890)	(3,924)	(3,704)	(4,655)
ETR	16%	27%	26%	23%	26%
Rec PAT	9,758	10,708	10,948	12,703	13,082
% Ch YoY	13%	10%	2%	16%	3%
Exceptional	(637)	19			
Rep PAT	9,121	10,727	10,948	12,703	13,082
Rec EPS (Rs)	2.36	2.59	2.65	3.07	3.16

Source: Company, BofA Merrill Lynch Global Research

Table 9: SJVN: Balance Sheet

Rsmn	FY11A	FY12E	FY13E	FY14E	FY15E
Share capital	41,366	41,366	41,366	41,366	41,366
Reserves & surplus	30,689	36,898	42,594	49,054	55,708
Networth	72,055	78,264	83,960	90,421	97,074
Debt	17,539	18,256	23,836	35,818	49,659
DTL	(697)	(697)	(697)	(697)	(697)
AAD	8,494	8,494	8,494	8,494	8,494
Capital Employed	97,391	104,317	115,592	134,035	154,530
Fixed Assets	80,262	83,567	90,620	102,629	119,233
Investments	-	-	-	-	-
Inventories	237	295	314	388	436
Sundry Debtors	2,645	6,704	5,560	5,812	5,801
Cash & Bank balances	20,638	20,733	27,112	35,001	39,493
Other Current Assets	764	838	834	969	1,088
Loans & Advances	6,048	6,575	6,598	7,499	8,195
Current Assets	30,332	35,143	40,419	49,669	55,013
Accounts payable	2,750	2,945	3,139	3,875	4,361
Other current liabilities	1,352	1,473	1,570	1,938	2,181
Provisions	9,101	9,976	10,738	12,450	13,174
Current Liabilities & Provisions	13,203	14,394	15,447	18,263	19,716
Net Current Assets	17,129	20,750	24,972	31,407	35,296
Capital Deployed	97,391	104,317	115,592	134,035	154,530

Source: Company, BofA Merrill Lynch Global Research

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Table 10: SJVN: Cash Flow

Rsmn	FY11A	FY12E	FY13E	FY14E	FY15E
PBT	11,516	14,617	14,872	16,407	17,738
Depreciation	4,440	4,459	4,287	5,109	5,521
Net Interest	1,584	1,104	749	2,107	2,665
Taxes	(1,567)	(3,890)	(3,924)	(3,704)	(4,655)
Change in Working Capital	(1,878)	(3,526)	2,157	1,454	602
Others	(144)	-	-	-	-
Cash flow from operations	13,950	12,764	18,141	21,374	21,870
Capex	(5,477)	(7,764)	(11,340)	(17,118)	(22,126)
(Inc)/Dec in investments	-	-	-	-	-
Others	-	-	-	-	-
Cash flow from investing	(5,477)	(7,764)	(11,340)	(17,118)	(22,126)
Change in sh capital	242	-	-	-	-
Inc/(Dec) in Debt	720	717	5,579	11,982	13,841
Dividend+Dividend Tax	(2,894)	(4,518)	(5,252)	(6,242)	(6,429)
Net interest	(1,328)	(1,104)	(749)	(2,107)	(2,665)
Cash flow from financing	(3,259)	(4,905)	(421)	3,633	4,747
Net Change in cash	5,214	95	6,380	7,889	4,491
Add: Opening cash balance	15,424	20,638	20,733	27,112	35,001
Closing cash balance	20,638	20,733	27,112	35,001	39,493

Source: Company, BofA Merrill Lynch Global Research

Table 11: SJVN: Key financial ratios

	FY12E	FY13E	FY14E	FY15E
CMP (Rs)	19.30	19.30	19.30	19.30
Shares O/s (mn)	4,137	4,137	4,137	4,137
Market cap (Rsmn)	79,837	79,837	79,837	79,837
Rep EPS (Rs)	2.6	2.6	3.1	3.2
EPS Growth %	18%	2%	16%	3%
P/E (x)	7.4	7.3	6.3	6.1
CEPS (Rs)	3.7	3.7	4.3	4.5
BVPS (Rs)	18.9	20.3	21.9	23.5
P/BV (x)	1.0	1.0	0.9	0.8
Debt:Equity (x)	0.2	0.3	0.4	0.5
DPS (Rs)	0.9	1.1	1.3	1.3
Dividend Yield (%)	5%	6%	7%	7%
EV/EBITDA (x)	4.2	4.3	3.8	3.9
RoE (%)	14.3	13.5	14.6	14.0
ROCE (%)	11.3	10.3	11.4	10.3

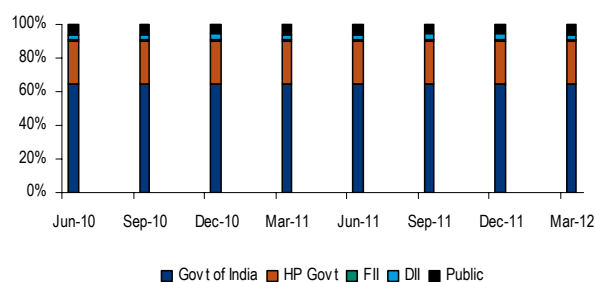
Source: Company, BofA Merrill Lynch Global Research

Table 12: SJVN: RoE decomposition-Dupont Analysis

	FY07A	FY08A	FY09A	FY10A	FY11A	FY12E	FY13E	FY14E	FY15E
EBIT Margin	63%	111%	77%	66%	64%	68%	68%	67%	67%
Asset Turnover	22%	16%	21%	19%	19%	20%	18%	19%	18%
Tax impact	89%	89%	81%	85%	84%	73%	74%	77%	74%
Leverage impact	160%	151%	150%	143%	137%	135%	136%	144%	155%
Interest impact	82%	64%	95%	88%	99%	106%	108%	102%	101%
RoE	15.6%	15.2%	18.2%	13.6%	14.1%	14.3%	13.5%	14.6%	14.0%

Source: Company, BofA Merrill Lynch Global Research

Chart 19: No risk of dilution by central govt as shareholding is 65%



Source: Company

Table 13: SJVN: Management Team

Name	Designation
Mr R P Singh	Chairman cum Managing Director
Mr RN Misra	Director Civil
Mr AS Bindra	Director Finance
Mr NL Sharma	Director Personnel

Source: Company

Price objective basis & risk

NHPC (XNTHF)

We base our price objective of Rs17 per share on FCFE of consolidated cash flows. We assume a 14.5% cost of equity (CoE) for NHPC derived. We apply a risk free rate (RFR) of 8.5%, which is inline with 12 month average of 10-year bond. Beta of 0.8x derived by Bloomberg since the stock listing in Oct 2009 and is slightly higher than 0.7x beta of global utilities covered by BofAML.

Our equity risk premium of 7.5% is slightly lower than 8% of SJVN since our estimates for NHPC already factor in near term negatives of under recoveries in P-3 and also delays in future projects (P-2 & Subansiri). We build in 2% terminal growth rate beyond our forecast period to factor in continued capacity addition (11GW under clearance and survey).

Upside risks to our thesis are 1) CERC allowing higher return on equity (RoE) for present and future hydro projects, and 2) faster-than-expected capacity additions. Downside risks are 1) lower than estimates capacity add and earnings FY12-15, 2) further delays in Lower Subansiri.

SJVN (XJVN)

We base our price objective of Rs21.6 on FCFE of cash flows FY12-22E. We assume a 13.3% Cost of Equity (CoE) for SJVN. We apply a Risk free rate (RFR) of 8.5%, which is inline with the 12 month average of 10-yr bond. Beta of 0.6x derived by Bloomberg since listing in May 2010. We use the 0.6x beta despite its limited trading history given that it is not very different from 0.7x beta of global utilities covered by BofAML.

Our equity risk premium of 8% is slightly higher than 7.5% of NHPC as we capture the higher execution risk for SJVN given the time gap in project commissioning is spread over the next ten years.

Risks to our thesis are 1) delay in commissioning of Rampur 412MW, which is the company's first project addition since FY05, 2) delay in cash deployment on future project pipeline of 3.3GW FY14 onwards would result in increased cash on books and will depress RoEs, and 3) geopolitical risks in 2GW (60% of pipeline) of projects - SJVN is executing in Nepal and Bhutan.

Link to Definitions

Energy

Click [here](#) for definitions of commonly used terms.

Analyst Certification

I, Jonas Bhutta, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

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India - Engineering/Construction/Utilities Coverage Cluster

Investment rating	Company	BofA Merrill Lynch ticker	Bloomberg symbol	Analyst
BUY				
	Essar Ports	ESHPP	ESRS IN	Deepak Agrawala
	Gujarat State Petronet Ltd	GJRSF	GUJS IN	Vidyadhar Ginde
	GVK Power & Infrastructure Ltd.	GVPWF	GVKP IN	Deepak Agrawala
	IRB Infrastructure Developers Ltd.	XIRBF	IRB IN	Deepak Agrawala
	IVRCL Infrastruc	IIFRF	IVRC IN	Bharat Parekh
	Jaiprakash Associates Limited	JPRKF	JPA IN	Bharat Parekh
	Jaiprakash Power Ventures Ltd.	XJSHF	JPVL IN	Bharat Parekh
	Lanco Infratech Ltd.	LNIF	LANCI IN	Deepak Agrawala
	Nagarjuna Const	NGRJF	NJCC IN	Bharat Parekh
	NCC-GDR	XAKUF	NJGR LX	Bharat Parekh
	Reliance Infrastructure	RCTDF	RELI IN	Bharat Parekh
	SJVN	XJVNF	SJVN IN	Jonas Bhutta
	Va Tech Wabag	XVWBF	VATW IN	Jonas Bhutta
NEUTRAL				
	Adani Enterprises Ltd.	ANIEF	ADE IN	Bharat Parekh
	Adani Ports & SEZ Ltd	XMANF	ADSEZ IN	Bharat Parekh
	Bharat Heavy	BHHEF	BHEL IN	Bharat Parekh
	Gujarat Inds	GUJIF	GIP IN	Bharat Parekh
	IL&FS Transportation Networks Ltd	XTPSF	ILFT IN	Deepak Agrawala
	Larsen & Toub -G	LTORF	LTOD LI	Bharat Parekh
	Larsen & Toubro	LTOUF	LT IN	Bharat Parekh
	Tata Pwr. Co.	XTAWF	TPWR IN	Bharat Parekh
UNDERPERFORM				
	ABB	ABVFF	ABB IN	Bharat Parekh
	Adani Power Ltd.	XADPF	ADANI IN	Bharat Parekh
	Crompton Greaves	CPGZF	CRG IN	Jonas Bhutta
	Gail India	XGLAF	GAIL IN	Vidyadhar Ginde
	Gail Limited - G	GAILF	GAID LI	Vidyadhar Ginde
	GMR Infrastructure Ltd.	GMRLF	GMRI IN	Deepak Agrawala
	Neyveli Lignite	NEYVF	NLC IN	Bharat Parekh
	NHPC	XNTHF	NHPC IN	Jonas Bhutta
	NTPC Ltd	NTHPF	NTPC IN	Bharat Parekh
	Siemens Ltd	SMNBF	SIEM IN	Jonas Bhutta
	Suzlon Energy	XZULF	SUEL IN	Bharat Parekh

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iQmethodSM Measures Definitions

Business Performance

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

Numerator

$\text{NOPAT} = (\text{EBIT} + \text{Interest Income}) * (1 - \text{Tax Rate}) + \text{Goodwill}$

Amortization

Net Income

Operating Profit

Expected 5-Year CAGR From Latest Actual

Cash Flow From Operations – Total Capex

Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill

Amortization

Shareholders' Equity

Sales

N/A

N/A

Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt, Less Cash & Equivalents

EBIT

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

Current Share Price

Current Share Price

Annualised Declared Cash Dividend

Cash Flow From Operations – Total Capex

$\text{EV} = \text{Current Share Price} * \text{Current Shares} + \text{Minority Equity} + \text{Net Debt} + \text{Sales}$

Other LT Liabilities

Enterprise Value

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap. = Current Share Price * Current Basic Shares

Sales

Basic EBIT + Depreciation + Amortization

EV / EBITDA

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08 May 2012

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Investment Rating Distribution: Utilities Group (as of 01 Apr 2012)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	72	40.91%	Buy	48	76.19%
Neutral	47	26.70%	Neutral	35	81.40%
Sell	57	32.39%	Sell	38	74.51%

Investment Rating Distribution: Global Group (as of 01 Apr 2012)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	1881	49.24%	Buy	1265	73.38%
Neutral	992	25.97%	Neutral	641	70.75%
Sell	947	24.79%	Sell	548	62.27%

* Companies in respect of which BofA Merrill Lynch or one of its affiliates has received compensation for investment banking services within the past 12 months. For purposes of this distribution, a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster*
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

* Ratings dispersions may vary from time to time where BofA Merrill Lynch Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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