

## India Infrastructure

### Actual spend lagging target

- Capex in key infrastructure sectors seems to be lagging 11th Plan targets-only ~25% has been allocated till FY09:** From the budget documents of FY08 and 09, we compiled capex for key central government infrastructure projects. So far, actual spends have been ~10-20% lower than budgeted, with the underachievement more pronounced in FY09. The government plans step up spends by ~33% in FY10, but execution and funding would be key.
- Power sector: 20% slippage in 11th Plan target of 78GW likely, in our view:** From a separate document released by the power ministry, we believe it is realistic to expect 63GW power capacity addition during the 11th Plan. The document points to potential slippage of 2GW for NTPC (OW) and 1.3GW for Reliance Power (UW). The document gives a relatively clean chit to BHEL, which is responsible only for 13% of the slippage, whereas delayed ordering of balance of plants accounts for 54% of the slippage in thermal capacity additions.
- T&D and roads – areas where pick-up is most needed:** Under the T&D flagship scheme of APDRP, only 11% of 11th plan targeted spend has been achieved. The recent revival of the scheme would therefore be an important catalyst for ABB (OW), Areva (NC), Crompton Greaves (N) and Siemens (UW). The government's recent announcement of project approvals and viability gap funding, coupled with newsflow of extension of concession period for BOT projects, portends well for the award of road projects by NHAI. Players with strong balance sheets- L&T (OW) and Reliance Infrastructure (OW) are expected to benefit.
- In capital goods, BHEL is our top-pick** (high OB visibility, govt. mandated capex); L&T (strong OB, strong execution, and diversification) is second. Among utilities we prefer NTPC (defensive, ~29GW of installed capacity, financially sound) followed by Reliance Infrastructure (upside from current levels, strong BS).

#### Infrastructure

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**Table 1: Data points on capex allocation for 11th Plan projects in FY08 & 09: Lagging behind target**

Rs. in billions

	11th Plan Target (Rs. B)	% Capex allocation till FY09
CIL	150	32
APDRP	515	11
RGVY	280	31
NTPC	1,009	24
NHPC	346	18
PGCIL	550	19
NHAI	960	21

Source: J.P. Morgan estimates, Company data.

**Table 2: India Infrastructure: Valuation summary**

Year-end March

Company	Rating	CMP (Rs)	PT (Rs)	Mkt cap (US\$ bn)	P/E(x)		EV/EBITDA		P/B (x)		Key risks
					FY09E	FY10E	FY09E	FY10E	FY09E	FY10E	
Larsen & Toubro	OW	666	880	8.1	13.3	11.3	10.7	9.6	1.2	1.0	Severe cancellations and project delays
Punj Lloyd	N	92	130	0.6	13.1	5.3	5.6	5.3	0.9	0.8	Poor quality of orders
NTPC	OW	178	190	30.1	18.1	16.0	11.5	10.2	2.6	2.3	Coal availability
Reliance Infrastructure	OW	533	670	2.5	10.2	10.9	12.7	14.3	0.7	0.7	Lack of near-term catalysts
Tata Power	N	776	670	3.5	10.2	9.4	8.4	8.8	1.8	1.5	Funding, further correction in coal prices
GMR Infrastructure	N	79	64	3.0	NM	NM	34.8	21.4	2.4	2.4	Funding, prolonged air traffic downturn
Reliance Power	UW	103	85	5.1	44.6	38.1	NM	NM	1.8	1.7	Debt funding, execution hiccups
BHEL	OW	1,401	1,400	14.0	20.9	16.2	11.5	9.9	5.3	4.3	Evidence of severe price competition
ABB	N	417	500	1.8	15.2	13.7	9.3	8.2	3.9	3.1	Slowdown in domestic T&D and industrial ordering
Siemens	UW	222	188	1.5	14.8	13.0	6.5	5.6	2.8	2.3	Higher than expected order flows in T&D space
Crompton Greaves	N	132	150	1.0	9.7	9.0	5.7	5.0	2.8	2.2	Slowdown in T&D and industrial ordering

Source: J.P. Morgan estimates, Company data. Note: Price on market close of 16th Feb09.

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## Progress on 11th Plan infrastructure projects

Based on actual, revised and budgeted estimates available over FY08-10, we estimate that capex allocation in key infrastructure sectors is lagging- a) only 25% of the 11th plan target is expected to be spent by FY09 and b) only 35-50% is expected to be spent by FY10, which covers 60% of the 11th plan (FY08-12E) timeframe. Further there are a few red flags-

- **Budgeted estimates are significantly higher than actual spend.** When actual numbers are published for FY09 and revised estimates are available for FY10, the situation may turn out to be bleaker. The sectors that are most likely to see a downgrade in allocation if the current pace of execution continues are roads, power distribution, and hydro power in our view.
- **APDRP revived but ordering activity needs to be stepped up:** The government had focused on the substantially rejuvenated RGGVY, while APDRP had been put on the backburner. Till FY10 only 26% of capex allocation has been done of the Rs515B planned spend. ABB (OW), Crompton Greaves (N), Siemens (UW) and Areva (NC) would be key beneficiaries of APDRP revival which in our view should happen in early part of FY10.
- **PGCIL capex broadly on track, however slippage in power capacity addition may delay transmission capex.** We expect PGCIL tenders to translate into substation orders for ABB Ltd, Areva, Crompton Greaves and Siemens India. Areva is most leveraged to the domestic T&D spending, followed by ABB, CRG and Siemens.
- **NTPC (OW)** has no problem in achieving financial closure for its 11th Plan projects totaling to 22GW, however issues like delay in ordering for BOP and supplier side issues (Barh-1320MW) could lead to slippage of 2GW projects.

On the positive side, the revival of macroeconomic outlook, provision for higher VGF, increase in length of concession period are some of the factors which should see renewed interest in bidding for NHAI projects which was subdued for the better part of FY09. Infrastructure players with strong balance sheets like **L&T** (OW) and **RELI** (OW) are expected to benefit.

Table 3: Progress on capex allocation for 11th Plan projects: Key infrastructure sectors

Rs. in billions, year-end March

	1	2	3	4	5	6	
	FY08A	FY09RE	FY10BE	Total (=1+2+3)	11th Plan Target [a]	% Capex allocation (=4/5)	Comments
AAI	20	27	32	79	108	73	On track, Chennai and Kolkata airports to be modernized at a capital cost of Rs.37.5B over 3 years
CIL	21	28	29	77	150	51	Broadly on track.
APDRP	30	25	80	135	515	26	R-APDRP has to pick up, otherwise capex will fall significantly below estimates. Our current JPM estimate is conservative at Rs370B.
RGGVY	37	49	54	140	280	50	On track
NTPC	116	127	177	420	1,009	42	NTPC's target to add 22GW capacity in 11th Plan; 2GW projects can potentially slip to 12th Plan
NHPC	28	35	47	109	346	31	5.3GW capacity addition in 11th Plan; 1GW has been commissioned and balance is under construction
PGCIL	27	76	115	218	550	40	Balance sheet constraints may limit PGCIL 11th Plan capex to Rs.450B in our view
NHAI	91	111	130	332	960	35	In our view -US\$20B NHAI capex is realistic for the 11th Plan, however in the short to medium term award of projects needs to be beefed up.

Source: J.P. Morgan estimates, Company data, Ministry of Finance. [a] Actual where available else estimate.

## Interim Budget: Increased central budgetary support, execution is key

The interim budget did not bring any significant new development or sops for the infrastructure space, though efforts to improve the funding situation and beefing up capital support to key infrastructure sectors was visible. The key measures and their impact of the infrastructure space have been highlighted below-

**Measure #1:** The budgeted capex for key infrastructure sectors like power, road, aviation, shipping and coal have gone up significantly on a YoY basis in FY10.

**Impact:** Increase in budgeted capex is in line with our expectations given the government push required to meet 11th Plan targets, investment in core sectors should show a rise.

Table 4: Budgeted Central Plan outlay in FY10 (B.E.), FY09 (R.E.), and FY08 (Actual)

Rs. in billions, year-end March

	FY08	FY09	FY10	FY08-09 YoY (%)	FY09-10 YoY (%)
Department of Atomic Energy	47	61	57	28.2	(6.7)
Ministry of Civil Aviation	112	75	122	(33.4)	62.4
Ministry of Coal	49	55	57	12.9	2.7
Ministry of Power	307	363	521	18.3	43.6
Ministry of Shipping, Road Transport and Highways	177	201	250	14.0	24.4
Department of Shipping	31	30	51	(3.1)	70.7
Department of Road Transport and Highways	146	172	200	17.6	16.3

Source: J.P. Morgan estimates, Company data.

We observed that the revised FY09 estimates for key infrastructure sectors are significantly lower than budgeted- especially for civil aviation, shipping, coal and power sectors. This reflects delays in awarding and executing key infrastructure projects. Given slow award of NHAH projects YTD and government retaining its estimates for the fiscal for roads, we expect significant activity in the remaining few weeks of FY09.

Table 5: Capex plans in FY09: Revised estimates (R.E.) vs. Budget estimates (B.E.)

Rs. in billions, year-end March

	B.E.	R.E.	YoY (%)
Ministry of Civil Aviation	100	75	(25.3)
Ministry of Coal	69	55	(19.9)
Ministry of Power	405	363	(10.3)
Ministry of Shipping, Road Transport and Highways	242	201	(16.6)
Department of Shipping	66	30	(54.8)
Department of Road Transport and Highways	176	172	(2.3)

Source: Ministry of Finance, J.P. Morgan.

**Measure #2:** Boost to PPP projects- Under the PPP mode, 54 Central Sector infrastructure projects with a total project cost of Rs.670B have been given in-principle or final approval and 23 projects amounting to Rs.270B have been approved for viability gap funding in FY09.

**Impact:** This would boost award of BOT projects by NHAH, given private players are bidding selectively and less aggressively than earlier. L&T IDPL, Reliance Infra, GMR and a host of other road BOT players are expected to benefit. YTD actual award of NHAH projects has been low due to high interest rate regime, weak macroeconomic outlook and regulatory concerns.

**Measure #3:** IIFCL will refinance 60 per cent of commercial bank loans for PPP projects in critical sectors over the next eighteen months or so. For this purpose, IIFCL has been authorized to raise Rs.100B in the market by the end of FY09. An additional Rs.300B crore can be raised if required.

**Impact:** Funding remains the key issue limiting execution of infrastructure projects in the country; infusion of relatively cheaper funds through IIFCL could benefit projects with capex to the tune of Rs1000B. Government intervention is a must to achieve even a scaled down infrastructure capex of ~US\$375B in the 11thPlan.

## Potential 20% slippage in 11th Plan power capacity addition seems likely as of now

We estimate that capacity addition of ~63GW seems likely in the 11th Plan (FY08-FY12) against the target of 78GW.

Till Dec-08, 11.8GW of capacity has been commissioned in the 11th Plan. State sector has shown maximum efficiency in execution with 27% of the plan projects already commissioned. Private sector lags behind with only 5% of plan projects commissioned.

However with financial closure of most 11th Plan private sector projects already complete or nearing completion (Eg: Sasan UMPP), we estimate that there is a high likelihood of remaining projects getting commissioned. We estimate that slippage would be highest in the Central sector and least for the private sector.

In arriving at our estimate of 63GW we have excluded 11th Plan projects that were difficult to execute given current status (~9GW) and have attributed a 15% probability to projects that could be commissioned with efforts (~9GW). The two categories together comprise our estimated potential slippage of 18GW.

Table 6: Indian Power Sector: Progress on 11th Plan projects

In MW

	Commissioned	Likely with high degree of certainty	With efforts	Difficult /Critical	Total	Commissioned (%)	Likely (%)	Potential Slippage (%)
Central sector	3,990	20,181	3,357	5,996	33,530	12	60	28
State sector	6,832	13,182	2,350	3,000	25,364	27	52	21
Private sector	1,000	16,467	2,990	640	21,097	5	78	17
<b>All India</b>	<b>11,822</b>	<b>49,830</b>	<b>8,697</b>	<b>9,636</b>	<b>79,991</b>	<b>15</b>	<b>62</b>	<b>23</b>
Probability of commissioning	1.0	1.0	0.15	0.00				
<b>JPM 11th Plan estimate</b>	<b>11,822</b>	<b>49,830</b>	<b>1,305</b>	<b>0</b>	<b>62,957</b>			

Source: Infraline, J.P. Morgan estimates.

Delay in ordering for balance-of-plant (BOP) is the single biggest reason for slippage of 11th Plan thermal power projects. **Rosa-II (600MW) of Reliance Power (UW)** is an instance. Land acquisition delays would potentially **delay U2 (660MW) of Sasan UMPP** awarded to Reliance Power, as per this document. The document gives a relatively clean chit to BHEL, which is responsible only for 13% of the slippage.

Table 7: Reasons for delay of 11th Plan power projects and % contribution to potential slippage

	MW	%	Comments
<b>Thermal Power Projects</b>			
Order for BOP not yet placed	5,975	54	This is the most common reason for potential slippage in the 11th Plan. BOP work is done by the likes of BGR Energy, Punj Lloyd etc. Rosa-II (600MW) of Reliance Power; Mundra (Adani) U2 (800MW), NTPC Vallur (Ennore) JV U2 (500MW) etc.
Equipment supplier side issues: BHEL	1,476	13	Bokaro Expansion project of DVC (500MW) and ONGC (726MW)
Equipment supplier side issues: Other	1,920	17	Likely delay in supply and erection of Main plant and equipment by Dongfang, China to Anpara C U2 of Lanco (600MW); NTPC Barh U1&2 (1320MW) getting delayed with discussion over boiler erection is still ongoing with Technopromexport, Russia
PPA/Financial closure not yet achieved	540	5	Goindwal Sahib project of GVK, BHEL is supplying BTG and Punj Lloyd has been awarded BOP work
Land acquisition not completed/ pending environment clearance	1,160	10	Land acquisition of U2 Sasan UMPP (660MW) needs to be expedited
<b>Total</b>	<b>11,071</b>	<b>100</b>	
<b>Share of NTPC projects</b>	<b>2,070</b>	<b>19</b>	NTPC Vallur (Ennore) JV U2 (500MW);NTPC Barh U1&2 (1320MW);Bongaigaon TPPU3 (250MW)
Total NTPC projects targeted for commissioning in 11th Plan	22,430		
% slippage of NTPC projects	9		
<b>Hydro Power Projects</b>			
Delay in award of works	1182	20	
Other miscellaneous issues	4730	80	Includes technical, geological, environmental and other issues
<b>Total</b>	<b>5912</b>	<b>100</b>	

Source: J.P. Morgan estimates, Infraline.

2GW of **NTPC's (OW)** 11th Plan projects (22GW) can potentially slip. Barh U1&2 (1320MW) getting delayed as discussion over boiler erection is still ongoing with Technopromexport, Russia. However robust balance sheet and track record of

execution make us fundamentally positive that NTPC is well placed to achieve its target of 75GW capacity by 2017 (vs. 29GW at present)

**BHEL** (OW) has ~60% market share of BTG orders for 11th Plan projects commissioned or likely to be commissioned (~61GW). The market share is as high as 83% in the state sector and 12% in the private sector. Equipment supplier side issues are also a major contributor to slippage of targets as shown in table above. However, given resilience of government mandated capex (state and central), BHEL's OB of Rs.1135B affords confidence in the stock, with earnings visibility for a significant part of FY12.

Table 8: Share of orders of likely to be commissioned or already commissioned 11th Plan power projects

In MW

Sector	Orders Placed on	Total	Market share (%)
Central	BHEL	16,256	76
	Others	5,240	24
State	BHEL	18,235	83
	Others	3,766	17
Private	BHEL	2,040	12
	Others	15,566	88
Total	BHEL	36,531	60
	Others	24,572	40
<b>Grand Total</b>		61,103	

Source: J.P. Morgan estimates, Infraline.

Given ~50% slippage in the last 3 five year-plans, our estimate of ~20% slippage appears optimistic. 15% target capacity (11.8GW) has been commissioned in 35% time (upto Dec-08). However given government backing of 11th Plan projects, progress on achieving financial closure and ordering of main plant equipment, it appears that 11th plan may turn out better in terms of execution.

Table 9: Historical achievement of plan targets in the power sector is not encouraging

Plan #	Period	Target Capacity addition (MW)	Actual Capacity Addition (MW)	%
1st	(51-56)	1,300	1,100	84.6
2nd	(56-61)	3,500	2,250	64.3
3rd	(61-66)	7,040	4,520	64.2
4th	(69-74)	9,264	4,579	49.5
5th	(74-79)	12,499	10,202	81.6
6th	(80-85)	19,666	14,226	72.3
7th	(85-90)	22,245	21,401	96.2
8th	(92-97)	30,538	16,423	53.8
9th	(97-02)	40,245	19,015	47.5
10th	(02-07)	41,110	21,180	51.8

Source: CEA, compiled by J.P. Morgan.

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