

## Power Transmission Sector

### Gap between opportunity, reality needs to converge...

The government is planning a massive investment in the power transmission sector in the XI-XII Plans to meet the requirements of the higher power generation capacity and historical neglect of the sector. This translates into an investment opportunity of ₹ 3,80,000 crore (US\$84.4 billion) in 2008-17. Transmission sector stocks have underperformed the Nifty in the past year due to the subdued tendering activity by PGCIL and state utilities. With the expected pick-up of tendering activity by PGCIL and state utilities to meet their plan targets and with ordering for mega projects expected to commence, we believe the sector is due for a re-rating. With reasonable sales visibility, positive outlook for new orders and stable margins, we project revenues and PAT of our coverage companies (Jyoti Structures [JSL]; Kalpataru Power Transmission [KPTL]; KEC International [KEC]) will grow at 16.3% and 16.8% CAGR in FY10-13E, respectively. We are initiating coverage on JSL and KPTL with ADD rating and KEC with a BUY rating. Our top pick is KEC due to its strong sales visibility, high RoNW, stable margins and attractive valuations.

### Strong tendering opportunity in next two or three years...

The government has lined up investments worth ₹ 3,80,000 crore (\$84.4 billion) during 2008-17 in the transmission sector. We believe PGCIL and the state utilities will significantly step up their ordering activity over the next two or three years driven by mega transmission projects like the nine high capacity power transmission corridors (HCPTC), and planned expansion of national and state grids. This translates into an ordering opportunity of ~₹ 180,000 crore (\$40 billion) during FY11E-13E.

### ...translates into reasonable earnings growth for companies & competition

We believe our coverage companies will be the key beneficiaries of the huge domestic opportunities due to their strong execution capabilities and diverse client base (PGCIL, state utilities and private sector). We project domestic order inflows of ~₹ 22,000 crore (\$5.5 billion) during FY11E-13E for our coverage companies. Additionally, KEC and KPTL have a sizable international presence (mainly Africa, Middle East and CIS countries). Our coverage companies' earnings are projected to grow at 17% CAGR in FY10-13E fuelled by their robust order book position and stable margins expected.

### Risks exist

The key risks to our call include lower-than-expected tendering of orders by PGCIL and state utilities, delays in power generation capacity addition, execution slippages by coverage companies, etc.

### Recommendation

Power transmission sector stocks have underperformed the Nifty in the last year. We believe the primary reason for the underperformance has been the subdued ordering activity by PGCIL and state utilities, rising competitive intensity as compared to 2005-08, slower execution, rising capital intensity of the business (exposure to BOOT projects). Our three coverage companies are currently trading at a substantial P/E discount to their five year average one-year forward P/E (discount of 56% for JSL, 40% for KPTL and 36% for KEC). We are valuing stocks on P/E as well P/BV basis. We are initiating coverage on JSL and KPTL with ADD rating and KEC (Top Pick) with a BUY rating.

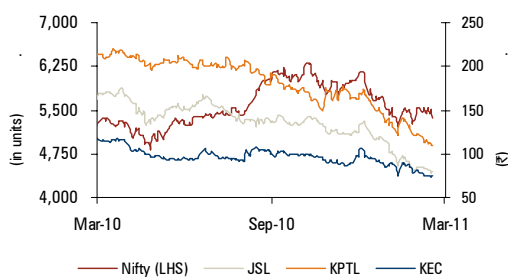
#### Valuation Summary

	CMP	TP	Upside (%)	Rating
JSL	82	89	9%	Add
KPTL	135	147	9%	Add
KEC	82	97	18%	Buy

#### Stock price performance (%)

	1M	3M	6M	12M
JSL	0.4	-16.4	-18.6	-31.0
KPTL	8.6	-17.6	-25.9	-36.1
KEC	5.4	-5.6	-9.4	-24.1

#### Price movement



#### Analyst's name

**Chirag Shah**  
 shah.chirag@icicisecurities.com

**Sanjay Manyal**  
 sanjay.manyal@icicisecurities.com

## Investment Rationale

### Massive investment targeted in XI and XII Plans

#### Aggressive power generation capacity addition targets...

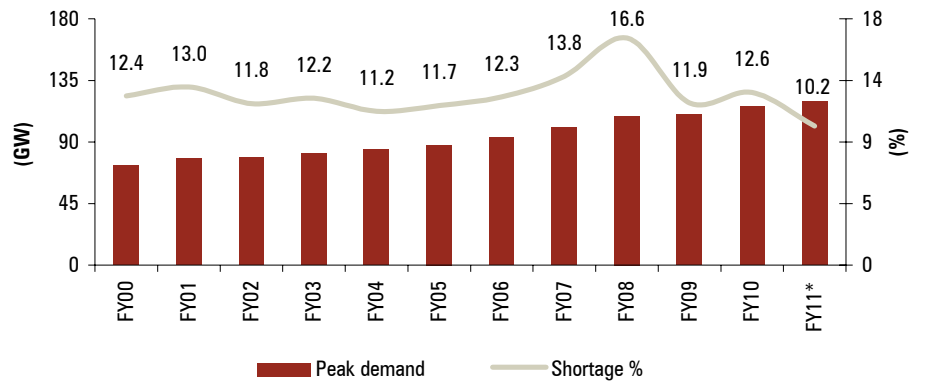
Driven by the need to alleviate the significant power deficits faced by the country, the Government of India has targeted aggressive investments in power generation at ₹ 410,900 crore in XI Plan and ₹ 495,083 crore in XII Plan

India's rapid economic growth during the last decade (8.2% CAGR) has placed tremendous pressure on the existing infrastructure base (power, roads & highway, airports, telecom, etc). The power sector has witnessed a significant demand-supply gap due to the sustained growth of power demand (4.8% CAGR in FY00-10), historical shortfalls in generation capacity addition (53% and 49% in the IX and X Plans, respectively) and high transmission and distribution (T&D) losses. Consequently, the peak load deficit in India has been in the 11-17% range in FY00-10. This has constrained the economic growth of the country.

With the GDP expected to grow at 7.1% CAGR in FY12E-22E, power demand is estimated to increase at 7.8% CAGR (as per Central Electricity Authority [CEA]). This is likely to place a further strain on power infrastructure. The government has aggressive investment plans for the sector, with ~62 GW of generation capacity targeted to be added as per the mid-term appraisal (MTA) of the XI Plan. The scale of opportunity becomes even larger in the XII Plan (100 GW capacity additions targeted). This is a quantum leap from the capacity addition since India's independence (126 GW generation capacity at the end of the Xth Plan).

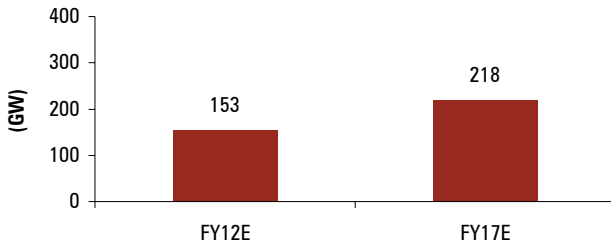
The aggressive power generation capacity targets will entail massive investment estimated at ₹ 410,900 crore (\$91.3 billion) in the XI Plan and ₹ 495,083 crore (\$110 billion) in the XII plan as per CEA. Additionally, this will require an equally large investment in T&D infrastructure.

**Exhibit 1: Sustained growth of power demand in 2000-10; resulting in high peak load deficits**



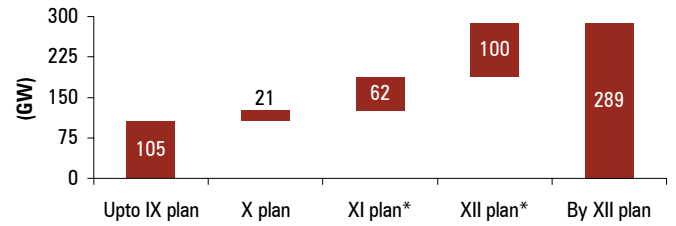
Source: CEA, ICICIdirect.com Research; YTD FY11

**Exhibit 2: Power demand projected to grow at 7% CAGR in FY12E-22E as per CEA**



Source: CEA, ICICIdirect.com Research

**Exhibit 3: Generation capacity of ~162 GW likely to be added over 2008-17**



Source: CEA, ICICIdirect.com Research

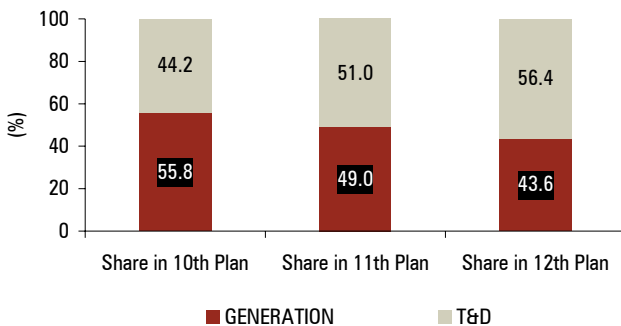
**Exhibit 4: Massive power sector investment targeted in XI, XII Plans (~US\$440 billion)**

(₹ crore)	XI plan	XII plan
Generation	410,900	495,083
% of total power capex	49	44
Transmission	140,000	240,000
% of total power capex	17	21
Distribution	287,000	400,000
% of total power capex	34	35
<b>Total</b>	<b>837,900</b>	<b>1,135,083</b>

Source: CEA, ICICIdirect.com Research

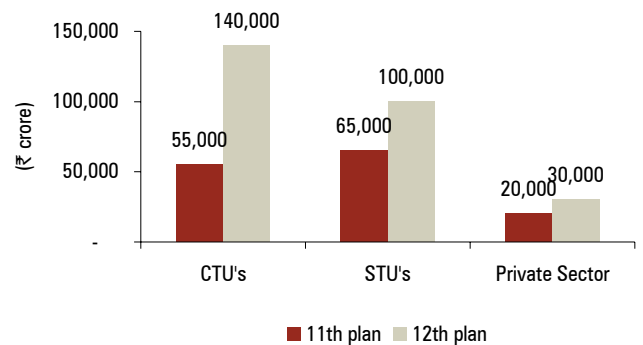
With a decade of underinvestment in the T&D space, the XI Plan and XII Plans are more progressive for the T&D segment. This is clearly evident from the fact that the share of expenditure on T&D in the XI and XII Plans is 51% and 56.4%, respectively, as compared to the 44.2% share in the X Plan. Like the generation segment, there is a structural change in the onus for expenditure in the XI and XII Plans in terms of private sector participation. The recent foray of private companies to build T&D infrastructure is a sign of huge quantum of capex to be committed by them in the next couple of years.

**Exhibit 5: Pie for T&D spend to increase in XI & XII Plan**



Source: CEA, ICICIdirect.com, Research

**Exhibit 6: Total expenditure planned by source**



Source: CEA, ICICIdirect.com, Research

Investment worth ₹ 3,80,000 crore targeted in the XI and XII Plans in the transmission sector to complement the expansion planned in the power generation space

**...translates into transmission sector investment of ₹ 380,000 crore (\$84 billion) in XI-XII Plans**

One of the primary reasons for high T&D losses in India has been the historical neglect of the sector in the previous five-year plan periods. Majority of the investment was directed towards power generation while ignoring the T&D sector. According to internationally accepted benchmarks, an equal investment ratio should be maintained between power generation and T&D. Recognising this, the government has stepped up T&D spending in the XI Plan (51% of the total power sector investment) creating attractive opportunities for companies catering to this sector.

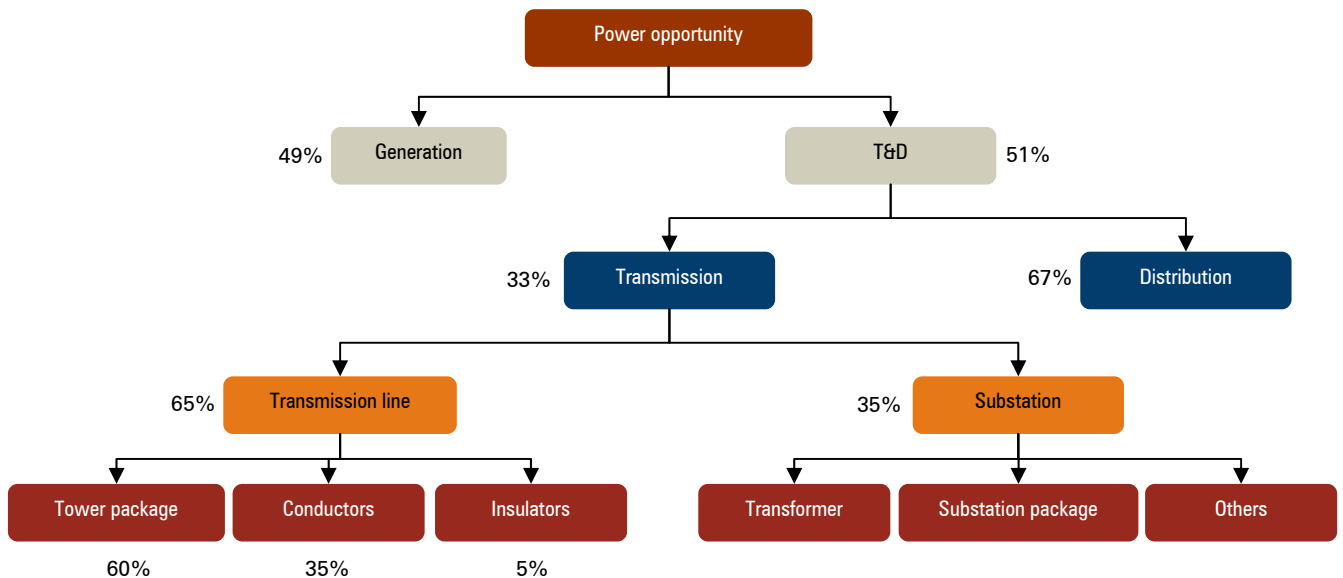
**Exhibit 7: Trend in T&D segment**

(₹ crore)	X plan investment	XI plan investment	XII plan investment
T&D	119,500	427,000	640,000
Transmission	47100	140,000	240,000
Distribution	72400	287,000	400,000
T&D capex as % of total		51	56

Source: Company, ICICIdirect.com Research

Our power transmission coverage universe (JSL, KPTL and KEC) primarily focuses on the transmission sector (33% of T&D investment in XI Plan). With an aggressive XI Plan physical targets for power transmission capacity addition (88,515 ckm during XI Plan vs. 41,374 ckm added during X Plan) and substations (157,691 MVA during XI Plan vs. 76,892 MVA added during X Plan), an investment of ₹ 1,40,000 crore is expected in FY08-12. The scale of opportunity becomes even larger in the XII Plan, which is pegged at ₹ 240,000 crore.

**Exhibit 8: Transmission sector accounts for one-third of T&D sector investment in XI Plan**



Source: Company, ICICIdirect.com Research

**Exhibit 9: Quantum leap in transmission line and substation capacity addition targets in XI and XII Plans**

	Actual capacity addition						11th plan progress		Target addition during 12th plan
	Upto 6th plan	7th plan*	8th plan	9th plan	10th plan	Cumulative Upto 10th plan	Target addition	Addition upto Feb 2011	
<b>Transmission lines (CKM)</b>	<b>52,034</b>	<b>40,719</b>	<b>24,623</b>	<b>34,893</b>	<b>41,374</b>	<b>193,643</b>	<b>88,515</b>	<b>50,611</b>	<b>120,000</b>
765 kV	-	-	-	1,160	1,158	2,318	5,273	1,379	25,000
HVDC +/-500kV	-	1,634	-	3,104	1,134	5,872	5,400	1,580	5,000
400 kV	6,029	20,061	10,052	13,236	23,057	72,435	47,446	28,328	50,000
230/220 kV	46,005	19,024	14,571	17,393	16,025	113,018	30,396	19,324	40,000
<b>Sub stations (MVA)</b>	<b>46,621</b>	<b>39,924</b>	<b>38,497</b>	<b>56,901</b>	<b>76,892</b>	<b>258,835</b>	<b>157,691</b>	<b>82,513</b>	<b>301,000</b>
765 kV	-	-	-	-	2,331	2,331	24,500	4,500	110,000
HVDC +/-500kV	-	-	-	5,200	5,000	10,200	8,500	1,000	16,000
400 kV	9,330	16,230	15,305	19,515	35,390	95,770	51,960	34,120	80,000
230/220 kV	37,291	23,694	23,192	32,186	34,171	150,534	72,731	42,893	95,000

Source: CEA, ICICIdirect.com Research; \*includes addition during 1991-92

Driven by orders from PGCIL, state transmission utilities and private sector, we project transmission orders worth ₹180,000 crore in FY11E-13E

### Transmission orders of ₹ 180,000 crore expected in FY11E-13E

Transmission sector orders largely depend on the power generation capacity being added in the country and are generally placed two years before the actual date of commission of generation capacity. With significant power generation capacity expected to be added by FY15E and remaining XI Plan orders, we estimate a transmission sector ordering opportunity of ~₹ 180,000 crore in FY11E-13E.

Out of the ordering opportunity of ~₹ 180,000 crore over FY11E-13E, we estimate that total opportunity for our coverage companies in the transmission line packages and substation segment would be at ₹70000 crore and ~₹ 62700 crore, respectively.

#### Exhibit 10: Orders worth ₹180,000 crore expected to be tendered in FY11E-FY13E

(₹ crore)	FY11E	FY12E	FY13E	FY14E	FY15E
National grid	6,012	10,084	14,983	16,814	13,395
HCPTC	7,000	23,092	19,541	-	-
Private investment	8,800	8,800	6,800	6,800	4,800
Intra-state transmission	20,263	26,177	27,803	22,303	12,982
<b>Total</b>	<b>42,075</b>	<b>68,154</b>	<b>69,127</b>	<b>45,917</b>	<b>31,177</b>

Source: CEA, MTA, ICICIdirect.com Research

#### Exhibit 11: Break up of the opportunity by type of orders

Opportunity by type of orders (₹ Crore)						
	% orders	FY11E	FY12E	FY13E	FY14E	FY15E
<i>Transmission line</i>	65%	27,349	44,300	44,933	29,846	20,265
<b>Tower packages</b>	60%	16,530	26,775	27,157	18,039	12,248
Conductors	35%	9,467	15,335	15,554	10,331	7,015
Insulators	5%	1,352	2,191	2,222	1,476	1,002
<b>Sub-stations</b>	35%	14,726	23,854	24,194	16,071	10,912
<b>Total</b>		42,075	68,154	69,127	45,917	31,177

Source: Company, ICICIdirect.com Research

PGCIL and state transmission utilities (STUs) will continue to lead investments with ~85% share in both XI and XII Plans. PGCIL has recently announced the creation of nine high capacity power transmission corridors (HCPTC) linking independent power producers (IPP) plants in several states including Orissa, Chhattisgarh, Jharkhand, Sikkim, Andhra Pradesh, Tamil Nadu and Madhya Pradesh to different regions of India. This presents an opportunity of ₹ 49,633 crore (₹ 58,061 crore including IDC). Ordering for this mega project is expected to pick up pace over FY12E-FY13E. Below are the capacity expansion targets of key players in the sector (*detailed information on all agencies is provided in the following sections*)

- **PGCIL:** PGCIL plans to expand the capacity of the National Grid (inter-regional transmission system) to 32.6 GW by the end of the XI Plan (vs. 14.6 GW at the end of X Plan). Investment targets stand at ₹ 55,000 crore (over and above HCPTC spending). In the XII Plan, the government plans to further raise National Grid capacity to 75 GW. We have assumed that approximately 10% orders for the XI Plan and the entire XII Plan orders remain to be tendered. This translates into an ordering opportunity of approximately ₹ 31,100 crore during FY11E-FY13E.
- **State transmission utilities:** Fuelled by power sector reforms (unbundling of state utilities - separation of generation, transmission and distribution functions) in recent years, and focus on reducing T&D losses, state utilities have significantly stepped up spending in the transmission sector. State utilities plan to invest ₹ 65,000 crore in the XI Plan to expand intra-state transmission network (from 131,828 ckm at the end of X Plan to 175,869 ckm in the XI Plan). In the XII plan, state transmission utilities are expected to invest approximately ₹ 100,000 crore. We have assumed that ~70% of XI Plan orders have been placed by FY10-end and entire XII Plan ordering remains to be tendered. This translates into an ordering opportunity of ~₹ 74,250 crore during FY11E-FY13E.
- **Private sector:** In the XI Plan, investment of ₹ 20,000 crore has been envisioned from the private sector directed towards expanding inter-state transmission network. Several PPP projects have been awarded by state utilities including Haryana, Rajasthan, Maharashtra, etc. Of the XI Plan investment target, we have assumed that 50% of the orders have been placed by FY10-end. In the XII Plan, the quantum of private sector investment is expected to increase to ₹ 30,000 crore.

## PGCIL – HCPTC

### Order tendering to pick-up in FY12-FY13E

We expect PGCIL to award new orders worth ₹49,633 crore towards nine HCPTC projects in FY11E-13E

With the higher share of private sector in incremental power generation capacity (57% in XII Plan vs. 14% in XI Plan), we expect strong growth in capacity of IPPs over the next few years (15 GW at present). This will necessitate the need for an inter-state transmission network linking IPPs to various parts of the country. In January 2010, PGCIL announced the creation of nine HCPTC projects at an estimated capex of ₹ 58,000 crore (₹ 49,633 crore excluding IDC). The identified projects will transfer ~50 GW of power generated by IPP plants.

Based on our analysis of commissioning schedule of various IPP projects, we expect ordering for this mega project to get completed by FY13E (assuming an average execution period of two years). However, order tendering by PGCIL has been behind target in H1FY11. Though there may be some ordering for HCPTCs that will be done in FY11, the major pick will be witnessed over FY12E-FY13E.

#### Exhibit 12: Creation of nine HCPTC projects announced by PGCIL; total capex of ₹ 49,633 crore

	Objective of Creating HCPTC	Total cost (₹ crore)	Total cost (excl IDC; ₹ crore)
HCPTC – I	Phase-I Generation Projects in Orissa	8,752	7,481
HCPTC – II	IPP projects in Jharkhand and state sector generation projects in West Bengal	5,709	4,880
HCPTC – III	IPP projects in Sikkim	1,304	1,121
HCPTC – IV	IPP projects in Bilaspur complex, Chattisgarh & IPPs in Madhya Pradesh	1,243	1,062
HCPTC – V	IPP projects in Chhattisgarh	28,824	24,636
HCPTC – VI	IPP projects in Krishnapatnam Area, Andhra Pradesh	2,065	1,765
HCPTC – VII	IPP projects in Tuticorin area, Tamil Nadu	2,357	2,015
HCPTC – VIII	IPP projects in Srikakulam area, Andhra Pradesh	2,986	2,552
HCPTC – IX	IPP projects in southern region for transfer of power to other regions	4,821	4,121
<b>Total</b>		<b>58,061</b>	<b>49,633</b>

Source: PGCIL, ICICIdirect.com Research

#### Exhibit 13: ~ Transmission line orders to constitute ~61% of total capex for HCPTC projects

Transmission system components	Setup cost (₹ crore)	% of total
Transmission lines	30,067	61
Sub-stations	13,670	28
Transformers	3,000	6
Reactors	2,895	6
<b>Total project cost</b>	<b>49,633</b>	<b>100%</b>

Source: PGCIL, ICICIdirect.com Research



National Grid capacity is targeted to expand by 2.7x (from 14.6 GW to 38 GW) in XI Plan

**PGCIL – National Grid**

**Aggressive XI plan targets to expand National Grid...**

At the end of the X Plan, the capacity of the National Grid stood at 14.6 GW dominated by transmission lines and substations in the 400 KV capacity range. Expansion of inter-regional transmission networks is required due to the uneven distribution of power generation capacity across India and need to transport power to areas where high demand exists. Consequently, the government plans to expand the National Grid capacity to 38.2 GW by FY12E.

**Exhibit 14: Majority of National Grid transmission capacity installed at 400 KV level (as on December 2010)**

	Transmission line (CKM)			Sub-stations (MVA)		
	Centre	State	Private	Centre	State	Private
765 kV	3,573	409	-	4,500	-	-
HVDC +/-500kV	5,948	1,504	782	-	-	-
400 kV	68,423	29,931	4,558	61,170	64,447	-
230/220 kV	10,360	121,630	423	5,276	191,389	1,440

Source: CEA, ICICIdirect.com Research;

Total investment of ₹55,000 crore targeted towards upgrading the National Grid in the XI Plan

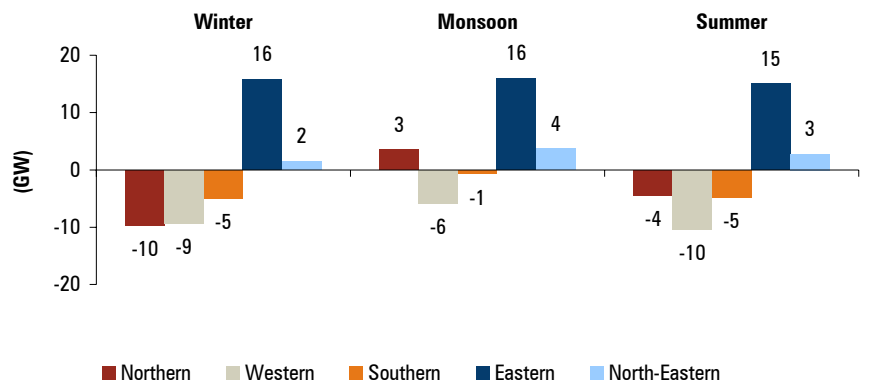
**...translates into high capex for PGCIL**

In the XI Plan, ₹ 55,000 crore is planned for investment by PGCIL, India’s inter-state transmission utility of which only ~₹ 26,000 crore has been spent by PGCIL by FY10. The government’s emphasis on reducing transmission losses will lead to significant investments to be made in high capacity transmission lines (765 KV, +/- 500 kV HVDC Lines). According to the MTA of the XI Plan, transmission capacity of 18.5 GW is likely to be added by FY12E (shortfall of 24% vis-à-vis planned targets).

**Eastern region to account for majority of capex on surplus power availability**

Of the XI Plan target for the National Grid, the north-east and eastern regions will account for majority of investment due to the surplus power generating capacity. With more power generation projects expected to be commissioned in the north-east region (mainly hydro power), surplus power from these projects will need to be transferred to energy deficit regions of the country – driving the need for a larger transmission network.

**Exhibit 15: Power surplus in Eastern India; driving transmission sector investment in region**



Source: Planning Commission, ICICIdirect.com Research;

**Exhibit 16: Majority of National Grid expansion in XI Plan targeted in East and North-east India due to surplus power generation capacity**

(MW)	At the end of X plan	Target addition during XI plan	Achieved till Nov 2009	% completed
<b>Eastern region - Southern region</b>				
Gazuwaka HVDC back to back	1,000	-	-	
Balimela-Upper Sileru 220 kV S/C	120	-	-	
Talcher-Kolar HVDC Bipole	2,000	-	-	
Upgradation of Talcher-Kolar HVDC bipole	-	500	500	100%
<b>Total</b>	<b>3,120</b>	<b>500</b>	<b>500</b>	<b>100%</b>
<b>Eastern region - Northern region</b>				
Muzaffarpur - Gorakhpur 400 kV D/C (Quad Moose)	2,000	-	-	
Dehri-Sahupuri 220 kV S/C	120	-	-	
Sasaram HVDC back to back	500	-	-	
Patna-Balia 400 kV DC quad	1,600	-	-	
Biharshariff-Balia 400 kV D/C quad	-	1,600	1,600	100%
40% series comp on Biharshariff-Balia 400 kV D/C quad	-	200	-	0%
Barh-Balia 400 kV D/C quad	-	1,600	-	0%
40% series comp on Barh-Balia 400 kV D/C quad	-	200	-	0%
Sasaram-Fatehpur 765 kV S/C	-	2,100	-	0%
Gaya-Balia 765 kV S/C	-	2,100	-	0%
Sasaram-Balia 400 kV D/C quad	-	1,600	-	0%
Sasaram bypassing (additional capacity)	500	-	-	
<b>Total</b>	<b>4,720</b>	<b>9,400</b>	<b>1,600</b>	<b>17%</b>
<b>Eastern region - Western region</b>				
Rourkela-Raipur 400 kV D/C	1,000	-	-	
TCSC on Rourkela-Raipur 400 kV D/C	400	-	-	
Budhipara-Korba 220 kV D/C+S/C	360	-	-	
Ranchi-Sipat 400 kV D/C (40% SC)	-	1,200	1,200	100%
Ranchi-Rourkela-Raipur 400 kV D/C	-	1,400	1,400	100%
Ranchi - Sipat Pooling Point 765 kV S/C	-	2,300	-	0%
<b>Total</b>	<b>1,760</b>	<b>4,900</b>	<b>2,600</b>	<b>53%</b>
<b>Eastern region - North Eastern region</b>				
Birpara-Salakati 220 kV D/C	240	-	-	
Malda-Bongaigaon 400 kV D/C	1,000	-	-	
Bongaigaon-Siliguri 400 kV D/C Quad	-	1,600	-	0%
<b>Total</b>	<b>1,240</b>	<b>1,600</b>	<b>-</b>	<b>0%</b>
<b>Northern region - Western region</b>				
Vindhychal HVDC back to back	500	-	-	
Auria-Malanpur 220 kV D/C	240	-	-	
Kota-Ujjain 220 kV D/C	240	-	-	
Agra-Gwalior 765 kV S/C line-1 400 kV op.	1,100	-	-	
Agra-Gwalior 765 kV S/C line-2 400 kV op	-	1,100	1,100	100%
Kankroli-Zerda 400 kV D/C	-	1,000	1,000	100%
<b>Total</b>	<b>2,080</b>	<b>2,100</b>	<b>2,100</b>	<b>100%</b>
<b>Western region - Southern region</b>				
Chandrapur HVDC back to back	1,000	-	-	
Barsur-L.Sileru 200 kV HVDC mono pole	200	-	-	
Kolhapur-Belgaum 220 kV D/C	240	-	-	
Ponda - Nagajhari 220 kV D/C	240	-	-	
Sholapur-Raichur 765 kV S/C line-1	-	1,100	-	0%
Narendra HVDC back-to-back with 400 kV D/C line	-	1,000	-	0%
<b>Total</b>	<b>1,680</b>	<b>2,100</b>	<b>-</b>	<b>0%</b>
<b>North Eastern region / Eastern region - Northern region / Western region</b>				
Biswanath Chariyal-Siliguri-Agra + 800 kV HVDC bi-pole line	-	3,000	-	0%
<b>Total</b>	<b>-</b>	<b>3,000</b>	<b>-</b>	<b>0%</b>
<b>Overall National Grid capacity expansion</b>	<b>14,600</b>	<b>23,600</b>	<b>6,800</b>	<b>29%</b>

Source: Planning Commission, MoP, ICICIdirect.com Research

Substantial spending has been targeted at the state level – ₹ 65,000 crore in XI Plan and ₹ 100,000 crore in XII Plan

Only 65% of physical targets in XI Plan achieved till Q3FY11

## State transmission utilities

### Substantially higher spending by state utilities in XI Plan

For the XI Plan, the aggregate investment by state transmission utilities was ₹ 65,000 crore (plan target). Fuelled by power sector reforms (unbundling of state utilities - separation of generation, transmission and distribution functions) in recent years, and focus on reducing T&D losses, state utilities have significantly stepped up spending in the transmission sector (₹ 25,285 crore in the X Plan). The scale of investment becomes even larger in the XII Plan (₹ 100,000 crore).

Maximum incremental investment in the XI Plan is targeted by power hungry states, including Maharashtra (19% share of incremental spending), Tamil Nadu (9%), Chhattisgarh (9%), Andhra Pradesh (6%), Delhi (4%), etc.

### Large order tendering for XI Plan still needs to be done

Despite the aggressive investment targets, actual transmission capacity added by state utilities is behind schedule (~65% of 44,041 ckm planned in XI Plan capacity has been added by Q3FY11). On the tendering front, we have assumed that 30% of XI Plan orders still need to be done. This has created a large opportunity for power transmission companies catering to this space as state utilities step up tendering activity over the next few quarters to meet their plan targets.

### 220/132 KV projects to dominate state utilities' orders

State utilities will continue to rely on transmission lines and substations in the 220 KV capacity range in the XI Plan. Although the share of higher capacity transmission projects will increase, going forward, they are likely to have a small share in total capacity added by state utilities.

For the XI Plan, approximately 80% of the capacity added by the state utilities till date has been at the 220 KV and 132 KV level while only 4% of the capacity added has been at the 400 KV level.

#### Exhibit 17: Shortfall of ~20% in capacity added by state utilities vis-à-vis XI Plan targets (Q3FY11)

		FY08	FY09	FY10	FY11*	Total
Transmission line	Target	7,237	8,043	8,263	5,362	28,905
	400 kV	2,013	2,367	2,244	1,878	8,502
	230/220 kV	5,224	5,676	6,019	3,484	20,403
	Achievement	5,038	5,637	6,164	5,695	22,534
	400 kV	1,259	1,707	1,552	1,742	6,260
	230/220 kV	3,779	3,930	4,612	3,953	16,274
	<b>Shortfall</b>	<b>30%</b>	<b>30%</b>	<b>25%</b>	<b>-6%</b>	<b>22%</b>
Sub-stations	Target	14,315	17,103	18,665	14,930	65,013
	400 kV	3,695	3,270	6,615	7,430	21,010
	230/220 kV	10,620	13,833	12,050	7,500	44,003
	Achievement	11,348	12,100	12,585	15,195	51,228
	400 kV	1,890	1,065	2,390	6,615	11,960
	230/220 kV	9,458	11,035	10,195	8,580	39,268
	<b>Shortfall</b>	<b>21%</b>	<b>29%</b>	<b>33%</b>	<b>-2%</b>	<b>21%</b>

Source: CEA, ICICIdirect.com Research; \*up to Dec 2010

Exhibit 18: Transmission sector investment increases 2.6x times in XI Plan (vis-à-vis X Plan spending)

(₹ crore)	X plan	FY08E	FY09E	FY10E	FY11E	FY12E	Total	% of incremental investment
<b>Northern Region</b>								
Chandigarh	18.0	12.3	4.0	4.0	6.0	7.0	33.3	0.0%
Delhi	325	375	595	541	378	117	2,006	4.2%
Himachal Pradesh	282	300	239	395	210	85	1,229	2.3%
Haryana	586	42.6	127	236	128	20	553	-0.1%
Jammu and Kashmir	73.8	205	200	104	400	435	1,343	3.1%
Punjab	718	185	241	310	378	421	1,534	2.0%
Rajasthan	1,704	448	640	843	710	630	3,271	3.9%
Uttar Pradesh	1,793	562	600	650	700	750	3,262	3.6%
Uttarakhand	405	100	150	200	250	250	950	1.4%
<b>Total</b>	<b>5,905</b>	<b>2,229</b>	<b>2,795</b>	<b>3,282</b>	<b>3,160</b>	<b>2,715</b>	<b>14,181</b>	<b>20.5%</b>
<b>Western Region</b>								
Chhattisgarh	543	553	1,185	1,392	774	177	4,080	8.8%
Gujarat	222	39.0	265	305	35.7	100	745	1.3%
Goa	75.3	35.0	42.0	45.0	45.0	50.0	217	0.4%
Madhya Pradesh	951	346	697	715	452	126	2,336	3.4%
Maharashtra	1,229	581	1,117	2,800	2,507	1,836	8,841	18.9%
Daman & Diu	35.3	2.0	2.5	30.5	15.0	2.4	52.4	0.0%
Dadra & Nagar Haveli	24.5	3.0	23.0	26.8	30.0	1.0	83.8	0.1%
<b>Total</b>	<b>3,081</b>	<b>1,560</b>	<b>3,331</b>	<b>5,313</b>	<b>3,858</b>	<b>2,293</b>	<b>16,355</b>	<b>32.9%</b>
<b>Southern Region</b>								
Andhra Pradesh	1,933	744	897	946	766	909	4,262	5.8%
Karnataka	3,489	1,189	1,298	447	218	375	3,526	0.1%
Kerala	933	250	300	350	400	450	1,750	2.0%
Tamil Nadu	1,845	1,702	1,666	268	478	1,217	5,331	8.6%
Puducherry	45.0	32.2	51.3	49.2	55.4	55.8	244	0.5%
<b>Total</b>	<b>8,245</b>	<b>3,917</b>	<b>4,213</b>	<b>2,060</b>	<b>1,917</b>	<b>3,006</b>	<b>15,113</b>	<b>17.0%</b>
<b>Eastern Region</b>								
Bihar	1,254	500	550	600	650	700	3,000	4.3%
Orissa	5,067	660	405	246	128	93	1,531	-8.8%
Jharkhand	194	155	319	220	193	145	1,032	2.1%
West Bengal	951	142	204	1,426	287	309	2,367	3.5%
Sikkim	-	638	2,588	2,919	1,300	650	8,096	20.1%
<b>Total</b>	<b>7,465</b>	<b>2,094</b>	<b>4,066</b>	<b>5,411</b>	<b>2,557</b>	<b>1,896</b>	<b>16,025</b>	<b>21.2%</b>
<b>N-E Region</b>								
Arunachal Pradesh	124	107	129	174	243	193	845	1.8%
Assam	224	112	294	443	478	341	1,667	3.6%
Manipur	11.6	30	35	40	45	57	207	0.5%
Meghalaya	140	129	147	106	72	57	512	0.9%
Mizoram	0.3	86	52	19	19	20	197	0.5%
Nagaland	79	93	114	14	-	-	222	0.4%
Tripura	10.5	26	55	60	65	67	273	0.7%
<b>Total</b>	<b>590</b>	<b>583</b>	<b>827</b>	<b>857</b>	<b>921</b>	<b>734</b>	<b>3,923</b>	<b>8.3%</b>
<b>State Sector</b>	<b>25,285</b>	<b>10,383</b>	<b>15,232</b>	<b>16,924</b>	<b>12,414</b>	<b>10,645</b>	<b>65,597</b>	<b>100.0%</b>

Source: PGCIL, ICICIdirect.com Research

Investment worth ₹ 20,000 crore anticipated from private players in XI Plan. Private sector contribution is expected to further increase in the XII Plan

## Private sector projects

### Higher private sector investment expected in XII Plan

Although the sector was open to private sector investment since 1998, there was only one operational PPP project prior to the XI Plan. In the XI Plan, an investment of ₹ 20,000 crore has been envisioned from the private sector directed towards expanding the inter-state transmission network. Several PPP projects have been awarded by state utilities including Haryana, Rajasthan, Maharashtra, etc.

We expect private sector contribution to increase, going forward, driven by expected bids from UMPPs in the XII Plan period and financial distress faced by several state utilities.

### Private sector participation in power generation projects expected to provide further opportunities

The high share of the private sector in generation capacity addition in the XII Plan could translate into private sector transmission utility orders. For example, Adani Power has recently awarded a 1,000 km dedicated HVDC power transmission line contract worth ~₹ 1,380 crore to Siemens for evacuating power from the Mundra power plant in Gujarat to Mohindergarh in Haryana. Similarly, Essar Power Transmission Co. received a captive order to construct and maintain the transmission line from the power plant at Mahan in Madhya Pradesh being installed by Essar Power.

**Exhibit 19: Traction in national level projects awarded to private sector**

Private player (s)	Investment route	Private player stake (%)	Project cost (₹ crore)	Estimated completion	Project detail
Torrent Power	JV with PowerGrid	74%	400	FY11	Evacuation of power from 1,100 MW capacity generation project in Gujarat
Jaiprakash Hydro Power	JV with PowerGrid	74%	1,000	FY11	Transmission system for 1,000 MW Karcham-Wangtoo project in Himachal Pradesh
Reliance Power Transmission Ltd	JV with PowerGrid	74%	1,070	FY13	Evacuation of power from Parbati-II & III (800 MW and 520 MW of NHPC) and Koldam HEP (800 MW of NTPC) in Himachal Pradesh
Teesta Urja	JV with PowerGrid	74%	708	FY12	Development of pooling station in Sikkim and transfer of power to a new pooling station in north West Bengal / Bihar
ONGC	JV with PowerGrid	26%	1,750	FY12	Transmission system connecting Palatana (generation project site) in Tripura to Bongaigaon in Assam
Reliance Power Transmission Ltd	Independent power transmission co.	100%	1,380	FY11	<i>Western Regional System Strengthening Scheme-II:</i> Construction, maintenance and operation of nine transmission lines for 25 years on the BOO basis
Reliance Power Transmission Ltd	Independent power transmission co.	100%	1,550	FY14	<i>North Karanpura line:</i> 1045 km long transmission network covering Madhya Pradesh, Chhattishgarh, Uttar Pradesh and Haryana
Reliance Power Transmission Ltd	Independent power transmission co.	100%	820	FY14	<i>Talcher II:</i> 592 km long transmission line covering Andhra Pradesh and Orissa
Sterlite Technologies	Independent power transmission co.	100%	800	FY14	<i>East North interconnection:</i> Two 400KV double circuit transmission lines connecting Assam with West Bengal and Bihar

Source: Companies, ICICIdirect.com Research

**Exhibit 20: Several PPP projects awarded to private players by state utilities**

Private player (s)	State	PPP route	Project cost (₹ crore)	Estimated completion	Project detail
Kalpataru Power Transmission Ltd and Techno Electric and Engineering Co. Ltd.	Haryana	DBFOT	382	FY13	Two 400 KV sub-stations at Kabulpur and Dipalpur in Haryana for Jhajjar power transmission project
GMR Infrastructure	Rajasthan	B00M		FY13	400 kV S/C Bikaner- Deedwana- Ajmer Line and 400 kV S/C Hindaun- Alwar line
JSW Energy	Maharashtra	JV	580	FY12	400 kV (Quad) double circuit power transmission lines from Jaigad for evacuating power from Jaigad power project
Adani Power	Maharashtra	JV	4,379	FY13	Two 765kV single circuit Tiroda-Koradi-Akola- Aurangabad lines and 765kV/ 400kV substations at Tiroda, Koradi, Akola and Aurangabad

Source: Companies, ICICIdirect.com Research

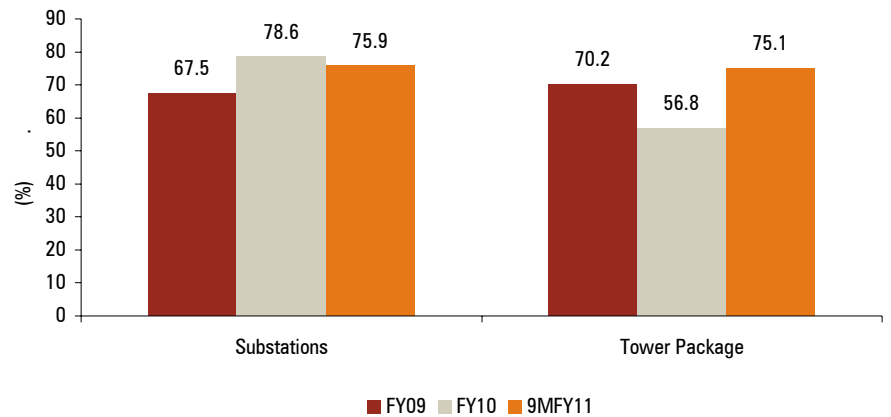
Although competition has increased in the recent past, we expect large players to be able to sustain their margins due to the large quantum of orders anticipated in the near future

**Intense competition...but have to live with it going ahead**

**Intense competition in recent years...**

Attracted by the massive government investment and onus of PGCIL to increase its vendor base so as to step up the growth rate of T&D infrastructure (relaxation in bidding norms), competitive intensity in the transmission sector has substantially increased in recent years. This has led to new players bidding aggressively for PGCIL projects (sometimes 15-20% lower than our coverage companies). Unabated continuance of this situation could result in margin contraction for our coverage companies.

**Exhibit 21: Share of Top 5 players in PGCIL ordering over FY09-9MFY11**



Source: Company, ICICIdirect.com Research

**...however situation could improve...**

We believe the margins could be sustained at current levels due to the large tendering activity expected by PGCIL and state utilities over the next two or three years. Additionally, with majority of smaller players already operating at near full capacity, we believe these players will find it difficult to bid for new projects in the near future. Thus, this is positive for overall industry margins. Lastly, the two step bidding procedure being followed by PGCIL (financial bids following results of the technical bids) will bring some sanity to the bids being placed by suppliers.

**...but focus on international markets is gaining prominence**

Over the past few years, markets like Africa, Middle East, US and Latin America have become key markets for the coverage companies. Both KEC and KPTL have been executing orders in more than 20 countries. The prominence of international orders in the backlog provides growth to the coverage companies and cushion against the competitive intensity in the domestic markets (specifically in the case of PGCIL orders), in our view. As of Q3FY11, the share of the international order book stood at 54%, 36% and 18% for KEC, KPTL and JSL, respectively. Apart from these, KEC and JSL are expanding their footprints in the US markets via acquisitions (SAE Tower acquired by KEC in Q2FY11) and setting up greenfield capacity (JSL likely to commission a 30,000 MT tower manufacturing capacity in the US by December 2011)

### Coverage companies command reasonable share in transmission line PGCIL orders along with competition...

Our coverage companies, along with Tata Projects and EMC, enjoy a significant share of the transmission towers market

Based on the market share for PGCIL orders, JSL, KPTL, KEC, EMC and Tata Projects are the major contenders for transmission tower orders. Also, an erstwhile marginal player i.e. SPIC has been gaining market share (37.7% in 9MFY11 vs. 6.5% in FY10) via consortium bidding (JV with BS Transcomm, SMO and Aster). As of Q3FY11, our coverage companies i.e. KEC, KPTL and JSL commanded a market share of 12.8%, 13.1% and 0% respectively in Q3FY11. Though JSL has not won any orders in 9MFY11 it commanded a market share of 14.9% and 11.1% in FY09 and FY10, respectively.

**Exhibit 22: JSL, KPTL and KEC enjoy high market share in transmission tower PGCIL orders**

Company	FY09	FY10	FY11 (Till Q3)
Associated Transrail Structures	19.3%	0.8%	0.0%
EMCO Ltd	9.0%	0.0%	0.0%
JSL	14.9%	11.1%	0.0%
KEC	16.6%	1.7%	12.8%
Tata Projects	9.6%	21.0%	15.4%
Electrical Manufacturing Co.*	7.8%	7.8%	0.0%
IVRCL Infra	0.0%	8.0%	0.0%
L&T	7.1%	8.9%	0.0%
Gammon	0.0%	2.4%	11.3%
KPTL	9.9%	4.7%	13.1%
SPIC*	1.3%	6.5%	37.9%

Source: PGCIL, ICICIdirect.com Research; \*includes orders obtained by JV companies

### ...but have limited capabilities to undertake high capacity substation projects

With PGCIL expected to award EPC orders for higher capacity substations (765 KV) in the future, we believe that companies with capabilities to undertake high capacity transmission and substation orders will enjoy a strong competitive advantage. Among the companies in our coverage universe, capacity to undertake substation projects stands at 500 KV (KEC), while it is 400 KV (each for JSL and KPTL).

**Exhibit 23: MNC players have high market share for substation package PGCIL orders**

Company	FY09	FY10	FY11 (Till Q3)
ABB	25.1%	7.2%	13.8%
L&T*	23.0%	0.0%	0.0%
Siemens*	21.8%	44.2%	27.8%
GET Power	5.3%	2.7%	19.2%
ECI Engineering & Construction	4.8%	0.0%	0.0%
Areva T&D	2.4%	19.2%	11.8%
Crompton Greaves	4.4%	8.2%	0.0%
Hyosung (South Korea)	0.0%	6.9%	0.0%
KEC	0.0%	0.0%	11.5%

Source: PGCIL, ICICIdirect.com Research; \*includes orders obtained by JV companies



For the substation and transformers and reactor segments, MNC players ABB, Areva T&D, Siemens, Hyosung (South Korean player) and Crompton Greaves enjoy a high market share for PGCIL orders.

<b>Exhibit 24: MNC players have high market share for transformers and reactors PGCIL orders</b>			
<b>Company</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11 (Till Q3)</b>
Areva T&D	7.0%	3.2%	10.8%
BHEL	12.2%	8.7%	7.3%
Crompton Greaves*	37.0%	34.5%	3.3%
Hyosung (South Korea)	39.3%	16.3%	32.2%
Siemens	4.5%	0.0%	34.5%
Baoding (China)	0.0%	10.2%	0.0%
TBEA Shenyang (China)	0.0%	21.8%	0.0%
Vijai Electricals	0.0%	0.6%	11.9%

Source: PGCIL, ICICIdirect.com Research; \*includes orders obtained by JV companies

## Operating Metrics

### Strong sales visibility for coverage companies; robust order intake expected in FY11E-12E

With a TTM book-to-bill ratio of 1.6-2.0x times, our coverage companies enjoy strong sales visibility

Our coverage universe companies enjoy strong sales visibility with a TTM book-to-bill ratio in the 1.6-2.0x range. With the subdued tendering activity by PGCIL and state utilities in 9MFY11, the order-book-to bill ratio of our coverage companies has marginally declined (e.g. KEC, which has secured some large overseas orders). However, we expect the domestic ordering activity to pick up strongly in Q4FY11E and FY12E-FY13E driving growth of order backlog growth (~16% CAGR in FY10-13E to ~₹ 22,252 crore at an aggregate level).

Additionally, a reasonable global macroeconomic outlook, stable commodity prices and higher funding allocation by donor countries and multilateral agencies for new projects are likely to drive overseas orders (mainly from Africa, Middle East and CIS countries). Overseas orders are an important component for two of our coverage companies (KEC and KPTL).

With the positive outlook for order intake and higher execution rate by companies (to meet contractual obligations), we project robust growth of revenues for our coverage companies in FY10-13E (16.8% CAGR at an aggregate level). In 9MFY11, project execution was adversely impacted by the severe monsoon season and slower order inflows.

**Exhibit 25: Strong sales visibility of our coverage companies; robust order inflows expected in FY11E-12E from domestic and overseas markets**

		FY06	FY07	FY08	FY09	FY10	FY11E	FY12E	FY13E	CAGR (FY06-10)	CAGR (FY10-13E)
JSL	Order book position										
	Order book size (₹ crore)	1,700	2,000	3,120	3,606	3,606	4,007	4,510	5,186	20.7%	12.9%
	Net sales (₹ crore)	698	971	1,370	1,717	2,013	2,301	2,596	2,824	30.3%	11.9%
	Book-to-bill ratio (x times)	2.4	2.1	2.3	2.1	1.8	1.7	1.7	1.8		
	New orders (₹ crore)		1,271	2,490	2,203	2,013	2,190	3,100	3,500		
KPTL	Order book size (₹ crore)	1,500	2,300	3,400	5,000	5,000	5,163	5,989	6,625	35.1%	9.8%
	Net sales (₹ crore)	840	1,524	1,738	1,882	2,596	2,863	3,329	3,902	32.6%	14.5%
	Book-to-bill ratio (x times)	1.8	1.5	2.0	2.7	1.9	1.8	1.8	1.7		
	New orders (₹ crore)		2,324	2,838	3,482	2,596	2,995	4,100	4,480		
KEC	Order book size (₹ crore)	2,506	3,086	4,200	5,163	5,707	8,687	10,080	10,711	22.8%	23.4%
	Net sales (₹ crore)	1,727	2,041	2,814	3,427	3,906	4,630	5,786	6,849	22.6%	20.6%
	Book-to-bill ratio (x times)	1.5	1.5	1.5	1.5	1.5	1.9	1.7	1.6		
	New orders (₹ crore)		2,621	3,928	4,390	4,450	6,701	7,180	7,480		
Aggregate	Order book size (₹ crore)	5,706	7,386	10,720	13,769	14,313	17,856	20,579	22,522	25.8%	16.3%
	Net sales (₹ crore)	3,265	4,536	5,922	7,027	8,516	9,794	11,712	13,575	27.1%	16.8%
	Book-to-bill ratio (x times)	1.7	1.6	1.8	2.0	1.7	1.8	1.8	1.7		
	New orders (₹ crore)		6,216	9,256	10,076	9,060	11,886	14,380	15,460		

Source: Companies, ICICIdirect.com Research

**Exhibit 26: Book-to-bill ratio marginally declines in H1FY11 on subdued domestic ordering activity by PGCIL, state utilities**

	Order book position	Q2FY10	Q3FY10	Q4FY10	Q1FY11	Q2FY11	Q3FY11
JSL	Order book size (₹ crore)	3,869	4,030	4,150	4,106	4,250	4,100
	Net sales (₹ crore)	472	509	546	564	542	551
	Book-to-bill ratio (x times)	2.1	2.1	2.1	2.0	2.0	1.9
	New orders (₹ crore)	382	670	666	520	686	401
KPTL	Order book size (₹ crore)	5,500	5,200	5,000	4,800	5,000	5,000
	Net sales (₹ crore)	550	716	837	536	630	790
	Book-to-bill ratio (x times)	2.7	2.3	1.9	1.8	1.8	1.8
	New orders (₹ crore)	1,250	416	637	336	830	790
KEC	Order book size (₹ crore)	5,543	6,051	5,707	5,650	7,000	8,000
	Net sales (₹ crore)	875	949	1,357	846	1,001	1,071
	Book-to-bill ratio (x times)	1.5	1.6	1.5	1.4	1.7	1.9
	New orders (₹ crore)	1,263	1,457	1,013	789	2,351	2,071
Aggregate	Order book size (₹ crore)	14,912	15,281	14,857	14,556	16,250	17,100
	Net sales (₹ crore)	1,897	2,173	2,739	1,946	2,173	2,412
	Book-to-bill ratio (x times)	2.0	1.9	1.7	1.7	1.8	1.8
	New orders (₹ crore)	2,895	2,542	2,315	1,645	3,867	3,262

Source: Companies, ICICIdirect.com Research

KPTL has a well diversified order book with its presence in civil engineering and international transmission sectors

### **KPTL most diversified in terms of business vertical; KEC geographically diversified**

On closer inspection of our coverage companies, KPTL enjoys highest order book diversification with 67% stake in its civil engineering subsidiary, JMC Projects, having an order book of ₹ 4,300 crore (Q3FY11) in addition to the ₹ 5,000 crore order book of the standalone entity. Additionally, oil & gas pipeline projects (high growth potential) account for approximately 3% of the consolidated order book, providing the company further diversification. Lastly, with domestic transmission orders constituting 33% of the consolidated order book, KPTL is substantially exposed to the attractive domestic opportunity.

On the other hand, KEC has maximum exposure to the overseas transmission sector (54% of order book). The company has recently increased its focus on the lucrative American market with acquisition of SAE Towers, expanding the scope of operations from the earlier focus areas of Africa, Middle East and CIS countries.

JSL is least diversified and primarily caters to the domestic T&D sector (82% of order book as of Q3FY11). Going ahead, we believe JSL will incrementally gain on the international business as it is commissioning a 30000 MT capacity in the US so as to capture the opportunity in the US and Canadian T&D market.

**Exhibit 27: KPTL enjoys maximum order book diversification as of Q3FY11**

(%)	JSL	KPTL	KEC
Transmission	80.0	48.4	72.0
International*	-	18.3	54.0
Domestic	-	30.1	18.0
Sub-stations	5.0	-	19.0
Distribution	15.0	1.3	
Other infrastructure segments**	-	50.3	9.0

Source: Companies, ICICIdirect.com Research; \*includes orders of SAE Towers; \*\* KPTL includes order book of its subsidiary, JMC, and infrastructure segment

### EBITDA margins of JSL least vulnerable to higher commodity prices

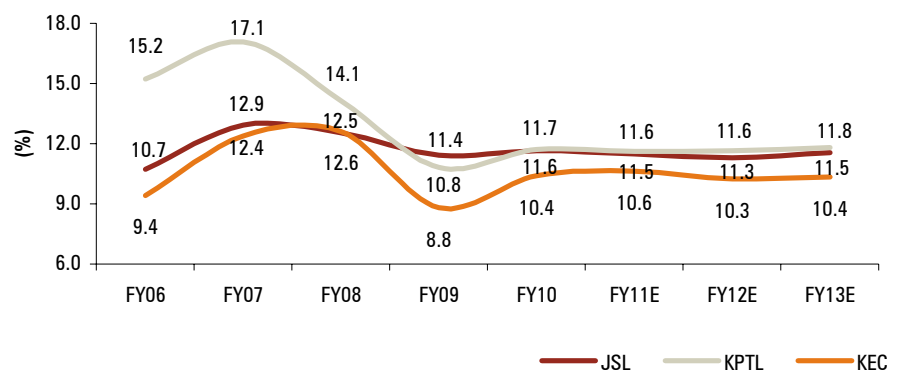
Among our coverage companies, the EBITDA margins of JSL are least vulnerable to higher commodity prices (high share of domestic projects – price variation clause)

JSL has been successful in generating stable EBITDA margins even in periods where commodity prices have been high. This is largely due to the dominance of domestic projects in the order book (mainly with a price variation clause). On the other hand, the EBITDA margins of KPTL and KEC contracted substantially in FY09 due to their high overseas exposure (fixed price contracts mainly) and the impact of the global economic slowdown.

As of Q3FY11, KPTL's 75-80% standalone order book is based on the price variation clause. We believe it will be able to maintain its EBITDA margins in the range of 11-11.5% over FY11E-FY13E. In terms of order book, international orders comprise 38% of the overall order book.

Nevertheless, we believe the margins of KEC are most vulnerable to higher commodity prices (high share of fixed price contracts in order book). However, an upside case also exists from higher margins from SAE Towers (14% EBITDA margins generated vs. ~10% for KEC). Hence, we expect KEC's EBITDA margins to hover around 10.4-10.6% levels over FY11E-FY13E.

We have modelled stable EBITDA margins for our coverage companies in FY11E-13E despite the high industry competition. The reasons for our margin assumptions are margin visibility on the current order book, likely reduction in bidding intensity (saturation of manufacturing capacity of marginal players and two-stage bidding process by PGCIL) and the companies' management focus on bidding for only those projects that fulfil certain minimum return criteria.

**Exhibit 28: Stable EBITDA margins forecasted in FY11E-13E**

Source: Companies, ICICIdirect.com Research

KPTL has high working capital requirements (155 days in FY10). With increasing prominence of BOOT projects, working capital requirements could increase further

### High working capital requirements

The working capital requirements of KPTL are highest among our coverage companies (155 days in FY10) while it is lowest for KEC (78 days). The number of debtor days remains high for all companies at 160-185 days due to retention money and back payments in domestic and international government contracts. With power transmission manufacturers actively scouting for BOOT projects, we expect working capital requirements to increase further in future. KPTL has recently achieved financial closure of BOOT power transmission projects from Haryana Vidyut Prasaran Nigam.

**Exhibit 29: KPTL has highest working capital requirements (in days)**

Company	FY07	FY08	FY09	FY10	FY11E	FY12E	FY13E
JSL	134	127	118	117	133	129	128
<b>KPTL</b>	<b>111</b>	<b>135</b>	<b>206</b>	<b>155</b>	<b>137</b>	<b>140</b>	<b>138</b>
KEC	42	76	54	78	79	79	80
Average	85	105	110	111	109	107	107

Source: Companies, ICICIdirect.com Research

### KEC has high leverage levels

Despite higher working capital requirements, JSL and KPTL have managed to keep leverage at comfortable levels (0.6-0.7x range in FY10). On the other hand, KEC's leverage was higher at 1.0x in FY10. It is expected to rise to 1.4x in FY11E (due to borrowings to fund the SAE Towers acquisition).

**Exhibit 30: JSL, KPTL enjoy relatively comfortable D/E ratios**

Company	FY07	FY08	FY09	FY10	FY11E	FY12E	FY13E
JSL	0.6	0.7	0.7	0.7	0.7	0.5	0.5
KPTL	0.5	0.4	0.8	0.6	0.5	0.5	0.4
<b>KEC</b>	<b>1.4</b>	<b>1.2</b>	<b>1.1</b>	<b>1.0</b>	<b>1.5</b>	<b>1.3</b>	<b>1.1</b>
Average	0.7	0.7	0.9	0.8	0.8	0.7	0.7

Source: Companies, ICICIdirect.com Research

### JSL generates highest RoCE among peers

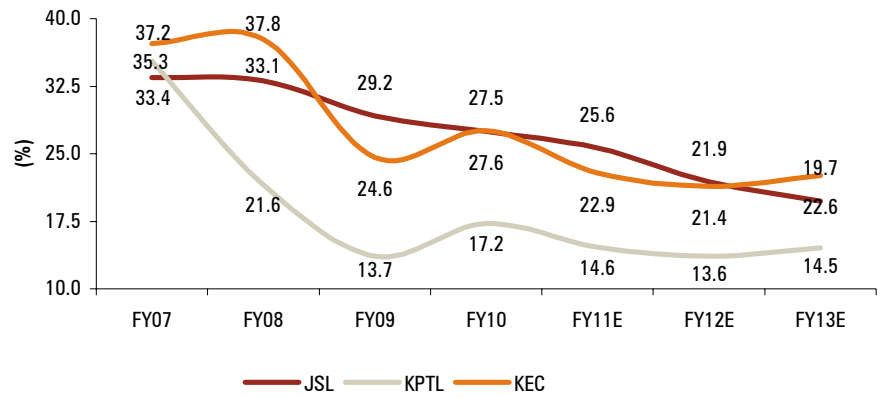
Historically, JSL has been able to maintain high and stable return ratios. KPTL suffers from poor sales/assets multiples

In FY06-10, JSL has generated strong RoCE in the 25-33% range driven by the robust topline growth (30% CAGR), stable operating margins and high asset utilisation. We expect the company to continue to generate robust return ratios in FY11E-13E.

On the other hand, KPTL has generated the lowest return ratios among peers in FY06-10. In our view, a major factor responsible for this is the low utilisation of asset base (KPTL had sales/assets ratio of 1.7x in FY10 vs. 2.5x for JSL and 2.8x for KEC). Both KEC and JSL have access to large third-party tower manufacturing capacity at 60,000 MT/annum (dedicated value-added partners) and 50,000 MT/annum (Gulf Jyoti JV plant), respectively. We expect KPTL's return ratios to deteriorate further in FY11E due to higher borrowings for working capital requirements (higher due to power transmission BOOT) and the equity dilution through QIP route in Q1FY11 (₹ 450 crore raised).

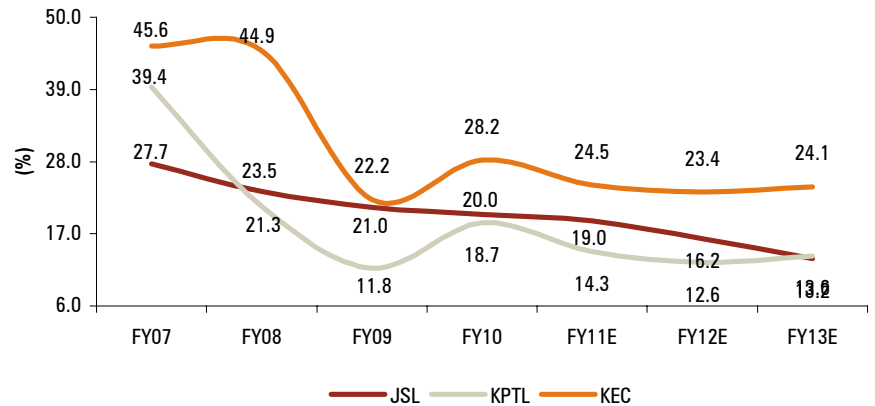
For KEC, the return ratios are expected to decrease in FY11E due to an increase in borrowings to fund the acquisition of SAE Towers.

**Exhibit 31: JSL generates higher RoCE than peers on stable margins, high asset utilisation rate**



Source: Companies, ICICIdirect.com Research

**Exhibit 32: KEC's RoNW leads peers on high leverage level**



Source: Companies, ICICIdirect.com Research

**Exposure and focus on BOOT projects to increase equity intensity**

The Government of India (GoI) is now laying greater emphasis on private participation in building T&D networks. It is expected that both central (PowerGrid) and state utilities (state transmission companies) would be placing transmission line and substation contracts only on a BOOT basis in the coming years. Going ahead, this may be equity dilutive in nature for funding the projects.

KPTL has recently bagged a BOOT project in the transmission and road segment (JMC Projects). The company had also raised ₹ 450 crore for funding the subsidiary and meeting the working capital needs. Also, JSL has recently come out with an NCD issue with warrants attached to it. On conversion of warrants (price of ₹ 120 per share) equity dilution will happen to the tune of 20% on a post conversion basis. We believe the increasing equity intensity of the EPC companies may add to investor scepticism and cap the valuation multiples of the coverage companies.

All the coverage companies are trading in the range of 7x-11x on FY12E earnings. This, we believe, is a substantial discount to their historical one year P/E averages of 13-16x for all three companies.

## Risks and concerns

### Lower order tendering due to economic slowdown

In case of an economic slowdown, order tendering by PGCIL, state utilities and private sector could be significantly lower. With the growing share of private sector investment, order inflows are especially vulnerable to an economic slowdown.

### Delays in power capacity addition

Since transmission orders depend on generation capacity addition, lower-than-expected generation capacity addition could result in lower order inflows for our coverage companies. Historically, India has been plagued by shortfalls in generation capacity addition vis-à-vis planned targets (53% in IX Plan and 49% in X Plan). The situation has somewhat improved in the XI Plan but the likely shortfall is still high at ~24%.

### Execution delays

Execution of several transmission projects could be delayed due to political unrests, terrorism, etc. With some HCPTC projects planned in politically sensitive states, including Andhra Pradesh, Jharkhand, Chhattisgarh, Orissa, etc, these projects could face execution delays. This could result in lower-than-expected revenues for our coverage companies.

Additionally, execution slippages could happen due to manpower shortages, delays in receipt of environmental and land approvals, natural calamities, etc.

### Geopolitical tensions

Since companies are geographically diversified beyond India, any geopolitical crisis may lead to slippages in execution and hamper order inflow growth for the coverage companies. For instance, the recent ongoing crisis in the MENA region may lead to minor slippages but may hamper the order inflow growth from this region in the medium-term.

### Higher commodity prices

Commodities (steel, zinc, etc) constitute a high proportion of raw material costs. With a positive outlook for the global economy, commodity prices are on an upward trend. Significantly higher commodity prices could result in lower margins for our coverage companies. KEC and KPTL are especially vulnerable due to the high share of fixed price contracts in the order book.

### Higher interest rates

Our coverage companies are significantly leveraged due to their high working capital requirements. The leverage levels could increase further due to BOOT projects that could be secured in the future. With the RBI struggling to contain domestic inflation, interest rates could be raised (resulting in lower profitability for our coverage companies).

### Margin contraction due to intense competition

Entry of new players (domestic and international) attracted by the high government investment has led to fierce bidding for PGCIL and state utility orders. Continued aggressive bidding could lead to margin pressures for our coverage companies.

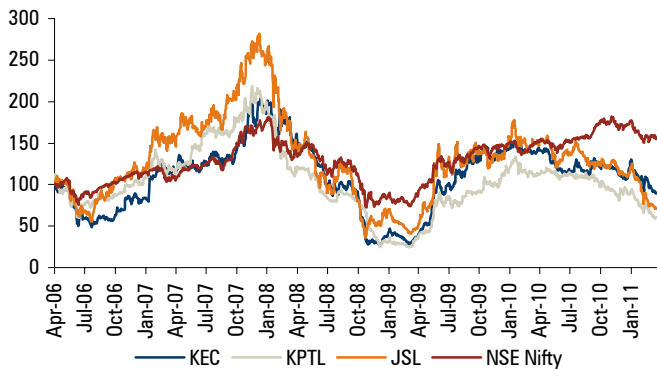
## Valuation

**Underperformance to Nifty in past year; sector due for re-rating driven by robust tendering activity expected in next two or three years**

All our coverage companies are currently trading at substantial discounts to their five year average one year forward P/Es. With strong order flows expected from PGCIL, state utilities and private sector, we believe that stocks of our coverage companies are due for a re-rating

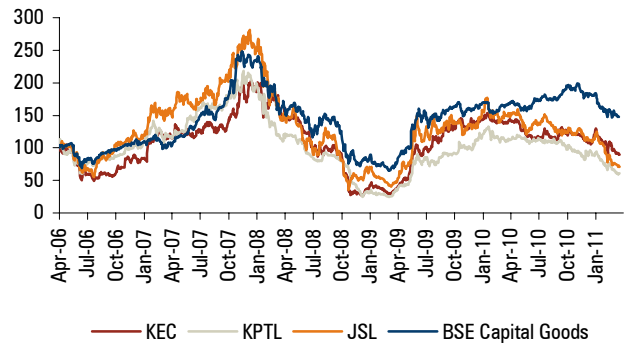
Power transmission sector stocks have underperformed the Nifty in the last year. We believe the primary reason for underperformance has been the subdued ordering activity by PGCIL and state utilities, rising competitive intensity as compared to 2005-08, slower execution and rising capital intensity of the business (exposure to BOOT projects).

**Exhibit 33: Coverage companies have underperformed Nifty...**



Source: Bloomberg, ICICIdirect.com Research  
Prices Rebased to 100

**Exhibit 34: ... as well as the BSE Capital Goods Index**



Source: Bloomberg, ICICIdirect.com Research,  
Prices Rebased to 100

Going ahead, the T&D companies may not get the multiples that they used to enjoy during 2005-08, in our view. During the last five years, our coverage companies use to trade in a one year forward P/E multiple of 14-16x vs. current range of 7-10x. Our three coverage companies currently trade at substantial P/E discount to their five year average one-year forward P/E (discount of 39% for JSL, 36% for KPTL and 35% for KEC).

**Exhibit 35: JSL, KPTL and KEC are currently trading at substantial discounts to their five year average one-year forward P/E multiples**

Company	Current P/E	5 year average P/E	Discount (%)
JSL	6.2	14.2	56.1
KPTL	9.8	16.4	40.3
KEC*	8.3	13.7	39.4

Source: Companies, ICICIdirect.com Research; \*average P/E includes prices since the stock's listing (Mar 2006)



### What would be an appropriate way to value T&D EPC companies?

Conventionally the companies should be valued on earnings multiples (P/E multiple) as the business model is not capital intensive and mainly dependent on the order inflows and timely execution of the same. The current macro headwinds that the companies are facing at this point in time are slow ordering activity of the CTUs and STUs, relatively higher competitive intensity, liquidity pressure to combat working capital management and exposure to BOOT projects in future. This will increase the capital raising intensity, which will make these companies look highly attractive in terms of forward P/E multiples when compared with historical averages. Whether these multiples do capture the future in terms of an anticipated pick-up in ordering, pick-up in generation capacity, rising market shares vs. competition, pick-up in execution rates and decline in commodity prices is tough to answer given the volatile local and global macroeconomic backdrop at this point in time.

Hence, in order to capture the various “ifs and buts” surrounding the sector, we have tried to capture the uncertainties by constructing three scenarios wherein we try to value the T&D companies using P/E multiples (assuming things improve and pick up from hereon) and also P/BV multiple (if the macro backdrop worsens we believe that companies in the sector will trace back to their book values and capture the negatives).

#### Exhibit 36: Weightages for multiples under three scenarios

	Bull Case	Base Case	Bear Case
P/E Multiple (FY12E EPS)	100%	80%	50%
P/B Multiple (FY12E BV)	0%	20%	50%

Source: Company, ICICIdirect.com Research

#### Exhibit 37: Valuation for KPTL

KPTL	Bull Case	Base Case	Bear Case
(₹ per share)			
FY12E EPS	13.8	13.8	13.8
FY12E BV	115.3	115.3	115.3
FY12E Target P/E Multiple (x)	12	10	8
FY12E Target P/BV Multiple (x)	1.1	1	0.8
Holdco discount for JMC	10	20	30
Per share value of JMC in KPTL	15	14	12
SOTP Target as per construct	181	147	113
Upside potential (%)	34.1	9.0	-16.1

Source: Company, ICICIdirect.com Research

**Exhibit 38: Valuation for JSL**

JSL	Bull Case	Base Case	Bear Case
(₹ per share)			
FY12E EPS	12.6	12.6	12.6
FY12E BV	93.8	93.8	93.8
FY12E Target P/E Multiple (x)	9	7	5
FY12E Target P/BV Multiple (x)	1.1	1	0.9
Targets as per construct	113	89	74
Upside potential (%)	38.3	8.9	-10.1

Source: Company, ICICIdirect.com Research

**Exhibit 39: Valuation for KEC**

KEC	Bull Case	Base Case	Bear Case
(₹ per share)			
FY12E EPS	9.7	9.7	9.7
FY12E BV	45.5	45.5	45.5
FY12E Target P/E Multiple (x)	13	11	9
FY12E Target P/BV Multiple (x)	1.5	1.3	1.1
Targets as per construct	126	97	69
Upside potential (%)	53.8	18.5	-16.3

Source: Company, ICICIdirect.com Research

KEC is our top pick in the sector with a target price of ₹ 86 per share

**Top pick KEC with CAGR of 22% for revenues, 19% for PAT over FY10-FY13E**

Our top pick is KEC due to its strong sales visibility, robust order flows, relatively better return ratios, stable margins and attractive valuations. KEC is currently trading at 7.5x and 6x its FY12E and FY13E earnings, respectively.

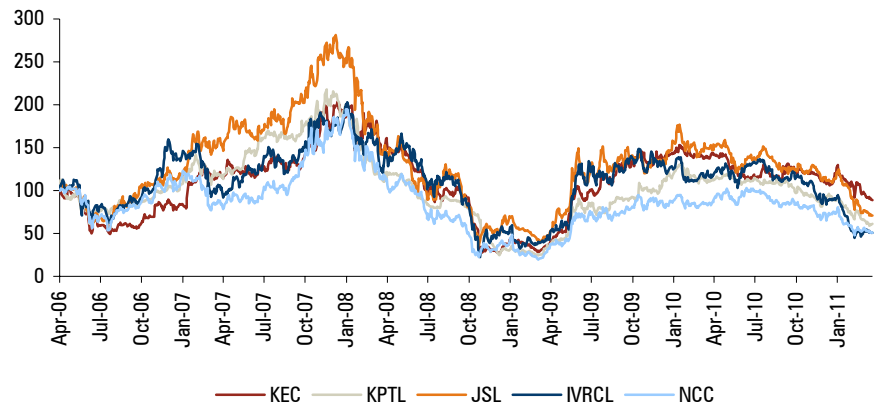
**Exhibit 40: Peer valuation**

	CMP (₹)	Market cap (₹ crore)	Revenue (₹ crore)		EBITDA Margin (%)		P/E (x)		EV/EBITDA (x)		P/BV (x)		Target price (₹)	Upside (%)	Rating
			FY11E	FY12E	FY11E	FY12E	FY11E	FY12E	FY11E	FY12E	FY11E	FY12E			
JSL	82	672	2,301	2,596	11.5	11.3	6.7	6.2	4.2	2.8	1.2	1.0	89	9	ADD
KPTL	135	2,041	2,863	3,329	11.6	11.6	11.3	9.8	7.0	6.9	1.2	1.1	147	9	ADD
KEC	82	2,108	4,630	5,786	10.6	10.3	9.5	7.5	6.3	5.2	2.1	1.7	97	18	BUY

Source: Company, ICICIdirect.com Research

## Is valuation of T&D EPC companies mirroring that of construction companies?

Exhibit 41: Price movement of T&D EPC companies and construction companies in sync



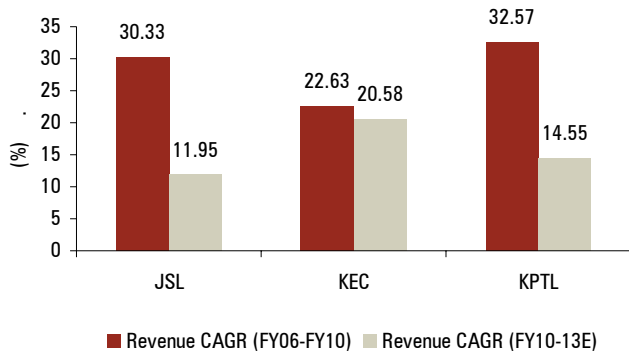
Source: Bloomberg, ICICIdirect.com Research

If one is a believer of the **efficient market hypothesis** then the above chart depicting the price trends of T&D EPC companies and construction stocks says it all. The recent brutal decline in stock prices has certainly discounted the following negatives pertaining to both sets of business models and the environment:

- **Tepid order flows** are affecting both T&D EPC companies (PGCIL and SEBs have delayed ordering in FY11) and construction stocks (lack of order inflows from the road and irrigation sector)
- **Execution has been disappointing:** For T&D companies, execution to a great extent depends on the progress of the related generation project, which is not as per schedule due to various regulatory hurdles and clearances not coming in time. Also, the extended monsoon was one of the key reasons for slippages. The same is almost similar to that of construction companies.
- **Tight liquidity and high working capital requirements:** A rising rate environment and tight liquidity conditions are negative for T&D EPC and construction companies. This makes working capital loans dearer and, hence, has a negative impact on profitability.
- **Rising competitive intensity:** Irrational bidding by smaller EPC companies in the T&D space have limited the order flows and put a cap on incremental margin expansion. Competition has become structural as PGCIL and SEBs want to diversify their vendor base in order to accelerate their T&D infrastructure. Similar is the case for construction companies where irrational competition exists in the road segment.
- **Rising capital intensity:** Taking exposure to BOOT and BOT projects has resulted in creation of separate SPVs and dilution of stake in the SPV in order to gather capital for execution. This, we believe, has not gone down well with investors and has resulted into P/E de-rating. Similar are the trends emerging in the T&D EPC space wherein many BOOT and BOT projects are in the offing.

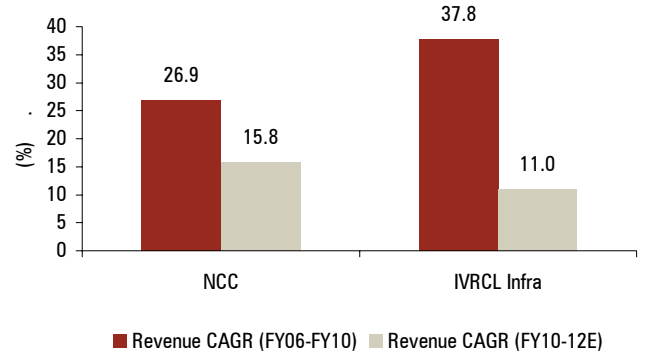
Few charts that justify our stance:

Exhibit 42: Revenue growth deceleration for T&D EPC cos...



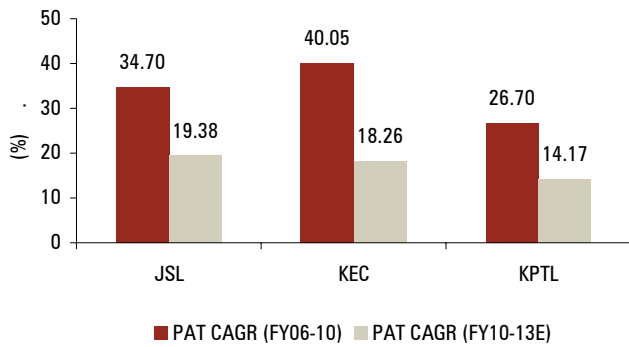
Source: Company, ICICIdirect.com Research

Exhibit 43: ...so is the case for construction companies



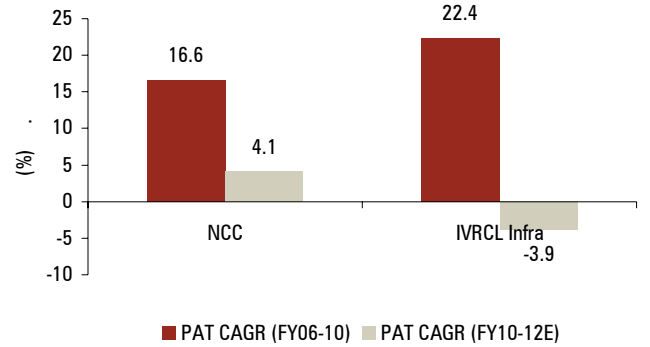
Source: Company, ICICIdirect.com Research

Exhibit 44: PAT deceleration visible but still reasonable...



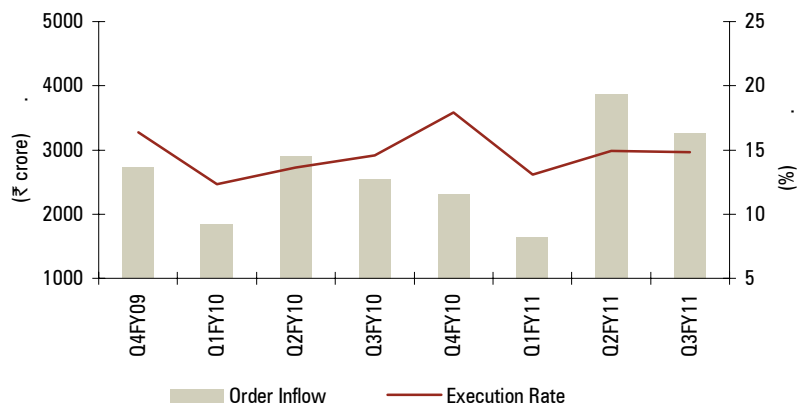
Source: Company, ICICIdirect.com Research

Exhibit 45: ...compared to construction companies

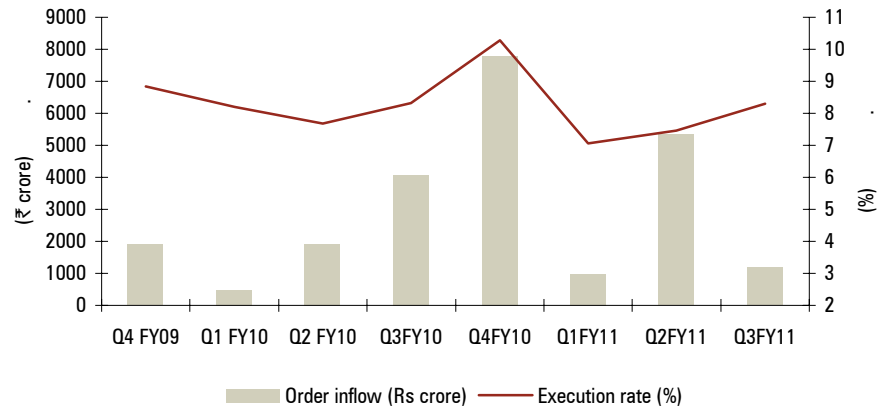


Source: Company, ICICIdirect.com Research

Exhibit 46: Trend in consolidated order inflow and execution rate for T&D EPC companies



Source: Company, ICICIdirect.com Research

**Exhibit 47: Trend in order inflow and execution rate for IVRCL Infra**


Source: Company, ICICIdirect.com Research

#### Silver lining for T&D EPC companies:

If one looks at the capex cycle from an ordering point of view, it is evident that the power sector has witnessed robust ordering activity wherein ordering activity for sectors such as roads, ports, irrigation and industrial sectors has been lacklustre. Given the huge power generation ordering that has happened, a pick-up in T&D projects is inevitable given that delays (regulatory, environmental and financial) do not aggravate the generation side of the segment.

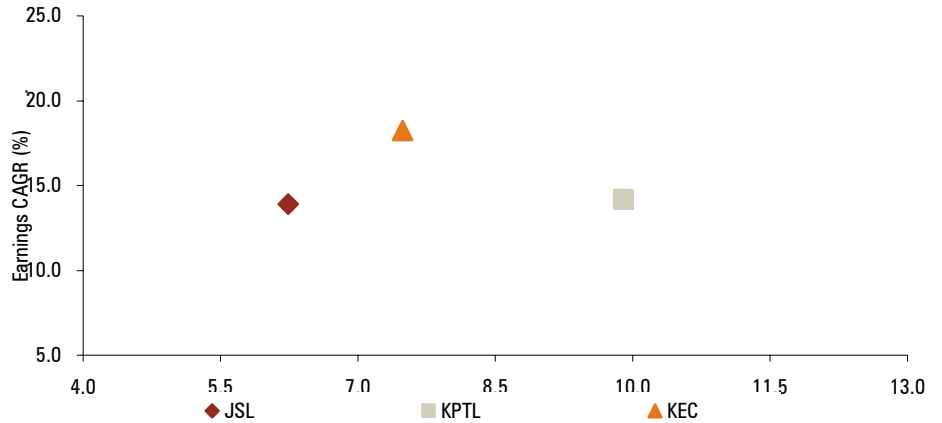
A pick-up in HCPTC ordering by PGCIL will be a huge kick for T&D equipment players and will lead to a huge re-rating of earnings multiples, in our view.

**Other valuation multiples analysed**

**P/E multiple and earning CAGR: KEC has the best profile**

We have analysed the attractiveness of the current valuations of our coverage companies by comparing their estimated earnings CAGR in FY10-12E with the current P/E valuations. Based on this analysis, KEC is well placed with its reasonable P/E valuations and relatively high earnings growth in FY12E-13E.

**Exhibit 48: Attractive P/E valuations and high earnings CAGR for KEC**

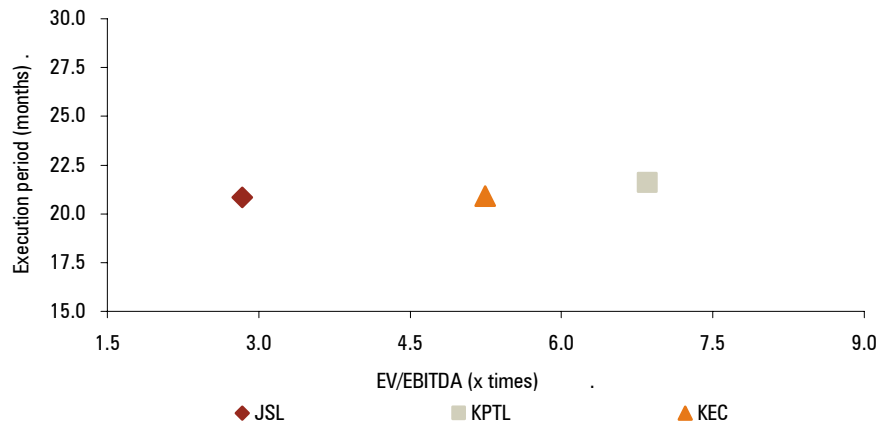


Source: Companies, ICICIdirect.com Research

**EV/EBITDA vs. order execution period**

The comparison of the companies' order execution period with their EV/EBITDA multiples identifies KEC as a better stock due to a faster order execution rate.

**Exhibit 49: KEC International well placed due to its shorter execution periods**

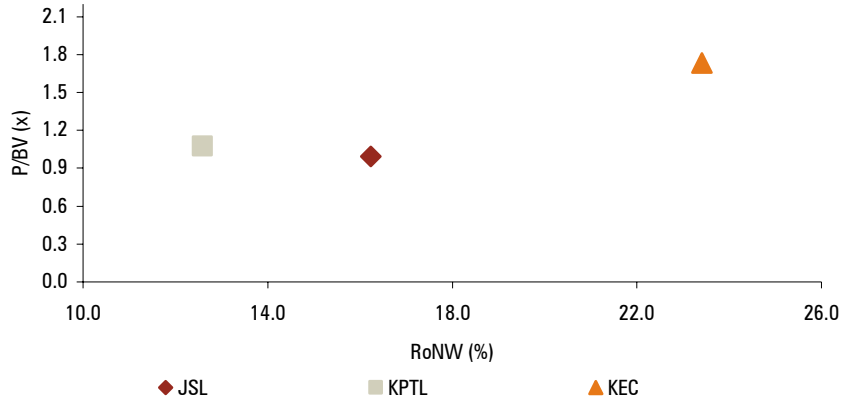


Source: Companies, ICICIdirect.com Research

**P/BV multiple vs. RoNW**

We have further compared the coverage companies' estimated RoNW (in FY12E) with their current P/BV valuations. This analysis also identifies KEC as a better pick among our coverage companies due to its attractive P/BV valuation (1.6x) and high and stable returns (RoNW of 23%).

**Exhibit 50: High and stable RoNW at reasonable P/BV multiples identify KEC as a good pick**



Source: Companies, ICICIdirect.com Research;

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**Pankaj Pandey**

**Head – Research**

**pankaj.pandey@icicisecurities.com**

**ICICIdirect.com Research Desk,  
 ICICI Securities Limited,  
 7<sup>th</sup> Floor, Akroti Centre Point,  
 MIDC Main Road, Marol Naka,  
 Andheri (East)  
 Mumbai – 400 093**

**research@icicidirect.com**

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