November 29, 2011

Stock Rating Underweight Industry View Cautious

Tata Power Co

Weak Earnings in F1H12

What's Changed

Price Target Rs90.00 to Rs80.00 F2012 Consolidated EPS Down 15% F2013 Consolidated EPS **Down 18%**

Tata Power's consolidated earnings have been weak in F1H12 and have missed estimates by about 40%. De-growth in earnings between F2011-13, stretched balance sheet and lower visibility on future generation projects keep us UW on the stock.

Tata Power's F1H12 consolidated earnings of Rs7 bn account for 33% of our revised earning estimate for F2012 and hence, there could be further risk to our estimates going forward. Interestingly, while operating results have been strong due to strong coal realizations; profitability has been impacted due to high interest and tax expense. The stock is trading at 13x P/E on our F2013 consolidated estimates which is expensive relative to peers which are trading in a range of 8-10x

Management is cognizant of issues at Mundra UMPP: In Q2, Tata Power wrote down Rs8.2 bn in the asset value of Mundra UMPP given its revised projections on future coal prices. No resolution has still been made with respect to tariff revision.

We are about 20% lower than consensus for F2013 earnings estimate: We expect consensus to revise earnings downward primarily to build in losses at Mundra UMPP. Also, consensus has a positive rating on the stock as it perceives it as a defensive utility stock. However, in our view, de-growth in earnings, low visibility on future generation projects, massive dependence on coal earnings and small growth in dividend do not really classify as defensive.

Key triggers: Any improvement in the coal outlook could help earnings from coal assets. Possibility of tariff revision for Mundra UMPP and steps taken by the company to monetize group company investments could drive stock performance.

MORGAN STANLEY RESEARCH ASIA/PACIFIC

Morgan Stanley India Company Private Limited+

Parag Gupta

Parag.Gupta@morganstanley.com +91 22 6118 2230

Satyam Thakur

Satyam.A.Thakur@morganstanley.com +91 22 6118 2231

Key Ratios and Statistics

Reuters: TTPW.BO Bloomberg: TPWR IN India Utilities

| Price target | Rs80.00 |
|---------------------------------------|----------------|
| Up/downside to price target (%) | (13) |
| Shr price, close (Nov 25, 2011) | Rs92.20 |
| 52-Week Range | Rs141.30-90.50 |
| Shrs out, basic, per-end (03/11) (mn) | 2,373 |
| Mkt cap, curr (mn) | US\$4,372 |
| Avg daily trading value (mn) | US\$7 |

| Fiscal Year ending | 03/11 | 03/12e | 03/13e | 03/14e |
|-----------------------------|--------|--------|--------|--------|
| ModelWare EPS (Rs) | 4.08 | 4.40 | 3.51 | 3.49 |
| Prior ModelWare EPS (Rs) | - | 3.84 | 3.56 | 3.54 |
| EPS (Rs)** | 6.22 | 8.03 | 7.08 | 5.75 |
| Prior EPS (Rs)** | - | 9.44 | 8.63 | 7.68 |
| Revenue, net (Rs mn) | 68,971 | 70,741 | 73,728 | 76,334 |
| EBITDA (Rs mn) | 15,696 | 16,249 | 16,749 | 16,938 |
| ModelWare net inc (Rs mn) | 10,097 | 10,888 | 8,667 | 8,631 |
| P/E | 32.6 | 20.9 | 26.3 | 26.4 |
| P/BV | 2.9 | 1.9 | 1.8 | 1.7 |
| EV/EBITDA | 24.6 | 18.2 | 18.1 | 17.7 |
| Div yld (%) | 0.9 | 1.4 | 1.4 | 1.5 |

s otherwise noted, all metrics are based on Morgan Stanley ModelWare framework (please see explanation later in this note).

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⁼ Based on consensus methodology

e = Morgan Stanley Research estimates

Financial Summary

Income Statement

| Rs Mn(Year-end March) | F2011 | F2012E | F2013E | F2014E |
|-------------------------------|--------|--------|--------|--------|
| Total Revenues | 68,971 | 70,741 | 73,728 | 76,334 |
| Power purchase cost | 7,842 | 7,975 | 8,305 | 8,818 |
| Fuel cost | 34,856 | 35,260 | 36,781 | 38,127 |
| Employee cost | 3,411 | 3,537 | 3,686 | 3,817 |
| Transmission EPC expenses | 0 | 0 | 0 | 0 |
| Repairs & Other op. exp. | 7,165 | 7,719 | 8,206 | 8,635 |
| Total Operating Expenses | 53,274 | 54,492 | 56,978 | 59,396 |
| EBITDA | 15,696 | 16,249 | 16,749 | 16,938 |
| Depreciation | 5,101 | 5,690 | 6,403 | 6,683 |
| EBIT | 10,595 | 10,560 | 10,346 | 10,255 |
| Other income | 4,371 | 8,616 | 5,834 | 6,140 |
| Interest and finance charges | 4,620 | 5,067 | 5,522 | 5,802 |
| PBT | 10,346 | 14,108 | 10,658 | 10,592 |
| Taxation | 1,886 | 4,656 | 3,517 | 3,495 |
| Tax rate (%) | 18.2% | 33.0% | 33.0% | 33.0% |
| PAT (Standalone) | 8,460 | 9,452 | 7,141 | 7,097 |
| Share in profit of Associates | 1,638 | 1,436 | 1,526 | 1,534 |
| Total Profits | 10,097 | 10,888 | 8,667 | 8,631 |
| Extraordinary items | 955 | 0 | 0 | 0 |
| PAT after extraordinary items | 11,053 | 10,888 | 8,667 | 8,631 |
| EPS (Rs) | 4.08 | 4.40 | 3.51 | 3.49 |
| EPS Consolidated | 6.22 | 8.03 | 7.08 | 5.75 |
| DPS (Rs) | 1.25 | 1.30 | 1.33 | 1.35 |
| | | | | |

 $^{^{\}star}$ Refer to exhibit 2 for further consolidated statement with the Indonesian coal assets

Balance Sheet

| Rs Mn(Year-end March) | F2011 | F2012E | F2013E | F2014E |
|----------------------------------|---------|---------|---------|---------|
| Liabilities | | | | |
| Share Capital | 2,373 | 2,373 | 2,373 | 2,373 |
| Share Warrants | 0 | 0 | 0 | 0 |
| Reserves and surplus | 104,046 | 110,028 | 113,631 | 117,124 |
| Share in Profits of Associates | 8,078 | 9,515 | 11,040 | 12,575 |
| Shareholders funds | 114,498 | 121,916 | 127,045 | 132,072 |
| Secured loans | 47,539 | 47,539 | 47,539 | 47,539 |
| Unsecured loans | 22,354 | 27,354 | 35,354 | 35,354 |
| Other Liabilities | 8,131 | 8,131 | 8,131 | 8,131 |
| Total Liabilities | 192,522 | 204,939 | 218,068 | 223,095 |
| Assets | | | | |
| Gross Block | 105,189 | 131,890 | 134,890 | 137,890 |
| Accumulated Depreciation | 47,360 | 53,050 | 59,452 | 66,136 |
| Net Block | 57,829 | 78,840 | 75,438 | 71,754 |
| CWIP | 14,695 | 0 | 0 | 0 |
| Investments | 83,637 | 95,593 | 111,708 | 115,253 |
| Deferred tax asset | 0 | 0 | 0 | 0 |
| Inventories | 6,296 | 6,369 | 6,643 | 6,886 |
| Sundry debtors | 19,743 | 20,350 | 20,199 | 20,913 |
| Cash and Cash Equivalents | 12,214 | 6,251 | 7,087 | 11,824 |
| Deposits | 0 | 0 | 0 | 0 |
| Other current assets | 25,715 | 25,715 | 25,715 | 25,715 |
| Sundry creditors | 10,190 | 10,423 | 10,899 | 11,361 |
| Other liabilities and Provisions | 17,417 | 17,756 | 17,823 | 17,890 |
| Net current assets | 36,360 | 30,506 | 30,923 | 36,088 |
| Total Assets | 192,522 | 204,939 | 218,068 | 223,095 |

Cash Flow

| Rs Mn(Year-end March) | F2011 | F2012E | F2013E | F2014E |
|--------------------------------------|---------|---------|---------|--------|
| PAT(Standalone) | 9,415 | 9,452 | 7,141 | 7,097 |
| Depreciation | 5,101 | 5,690 | 6,403 | 6,683 |
| Interest | 4,620 | 5,067 | 5,522 | 5,802 |
| Share in Profits of Associates | 1,638 | 1,436 | 1,526 | 1,534 |
| Changes in Working Capital | 884 | -447 | 352 | -495 |
| Cash flow from operations | 21,659 | 21,199 | 20,944 | 20,622 |
| (Purchase)/sale of fixed assets, net | -15,336 | -12,006 | -3,000 | -3,000 |
| (Purchase)/sale of investment, net | -17,769 | -11,956 | -16,115 | -3,545 |
| Cash flow from investing activities | -33,105 | -23,962 | -19,115 | -6,545 |
| Proceeds from equity issuance | -12 | 0 | 0 | 0 |
| Proceeds/(repayment) of loan | 11,173 | 5,000 | 8,000 | 0 |
| Dividend | -3,080 | -3,132 | -3,471 | -3,537 |
| Interest expense | -4,620 | -5,067 | -5,522 | -5,802 |
| Other items | -36 | 0 | 0 | 0 |
| Cash flow from financing activities | 3,425 | -3,199 | -993 | -9,340 |
| Change in cash and cash equiv | -8,022 | -5,963 | 836 | 4,737 |
| Opening cash and cash equiv | 20,235 | 12,214 | 6,251 | 7,087 |
| Closing cash and cash equiv | 12,214 | 6,251 | 7,087 | 11,824 |

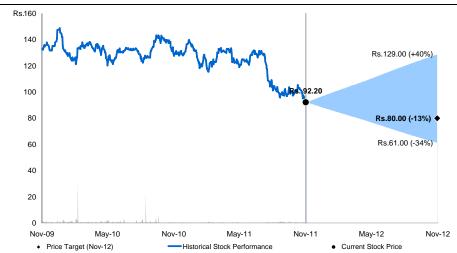
Ratio Analysis

| (Year-end March) | F2011 | F2012E | F2013E | F2014E |
|--------------------------|-------|--------|--------|--------|
| Growth (%) | | | | |
| Revenues | -3% | 3% | 4% | 4% |
| EBITDA | -16% | 4% | 3% | 1% |
| EBIT | -24% | 0% | -2% | -1% |
| Net Profit | -2% | 8% | -20% | 0% |
| EPS - standalone | -7% | 8% | -20% | 0% |
| EPS - consolidated | 10% | 29% | -12% | -19% |
| Margins (%) | | | | |
| EBITDA | 22.8% | 23.0% | 22.7% | 22.2% |
| EBIT | 15.4% | 14.9% | 14.0% | 13.4% |
| EBT | 15.0% | 19.9% | 14.5% | 13.9% |
| Net Profit | 14.6% | 15.4% | 11.8% | 11.3% |
| Return (%) | | | | |
| ROE | 9.1% | 9.2% | 7.0% | 6.7% |
| ROCE | 5.8% | 5.3% | 4.9% | 4.6% |
| ROA | 4.9% | 4.8% | 3.6% | 3.5% |
| Gearing | | | | |
| Debt/Equity | 0.61 | 0.61 | 0.65 | 0.63 |
| Net Debt/Equity | 0.50 | 0.56 | 0.60 | 0.54 |
| Valuations | | | | |
| EV/EBITDA (Standalone) | 17.6 | 17.7 | 17.6 | 17.1 |
| EV/EBITDA (Consolidated) | 10.7 | 8.5 | 7.2 | 6.3 |
| P/E (Standalone) | 22.6 | 20.9 | 26.3 | 26.4 |
| P/E (Consolidated) | 14.8 | 11.5 | 13.0 | 16.0 |
| P/BV (Standalone) | 1.9 | 1.8 | 1.7 | 1.7 |
| P/BV (Consolidated) | 1.7 | 1.5 | 1.4 | 1.3 |
| Dividend Yield (%) | 1.4% | 1.4% | 1.4% | 1.5% |
| Turnover (days) | | | | |
| Inventory | 66 | 66 | 66 | 66 |
| Debtors | 104 | 105 | 100 | 100 |
| Creditors | 70 | 70 | 70 | 70 |

Source: Company data, Morgan Stanley Research E= Morgan Stanley Research Estimates

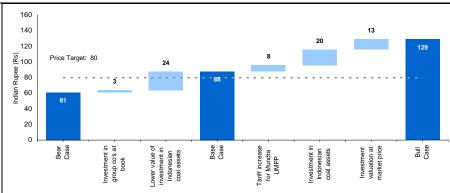
Risk-Reward Snapshot: Tata Power (TPWR, Rs92, UW, PT Rs80)

Risk-Reward View: Coal Prices Could Pose Downside Risk



| Price Targ | get Rs80 | Probability weights: 70% for Base Case and 30% for Bear Case (rounded) |
|-----------------------|---------------------------------|--|
| Bull Case Rs129 | 18.2x Base Case F2013 P/E | Pass-through for Mundra UMPP and higher value for investments: We assume pass-through of incremental coal cost for Mundra UMPP, value the investment in Indonesian coal assets at bull case fair value and investments in group companies at market price. |
| Base | 12.4x Base | Existing utility business at regulated returns and upside from |
| _ | | |
| Case | Case F2013 | Investment in Indonesian coal assets and in group |
| Case Rs88 | Case F2013 P/E | companies: We use a SOTP methodology to arrive at our base case value. |
| | | companies: We use a SOTP methodology to arrive at our base |
| Rs88 | P/E | companies: We use a SOTP methodology to arrive at our base case value. |

Bear to Bull



Source: Morgan Stanley, FactSet

Investment Thesis

- We believe the Indonesian re-pricing directives, that became effective in September 2011, will have a negative impact on earnings.
- Valuation at 13x F2013e P/E (consolidated) is expensive relative to peers that are trading at 8-10x.
- Our price target assigns a 30% probability to the Bear Case as any weakness in coal prices due to a possible global economic slowdown (as envisaged by our economists) could lower the value of the holding in Indonesian coal assets.
- Our earnings estimate for F2013 is about 20% lower than consensus.
 We expect consensus to take down earnings estimates given weakness in 1H and impact of Indonesian regulations on Mundra UMPP profitability.

Key Value Drivers

- Regulatory regime improving in India and Indonesia.
- Higher production and better realizations for Indonesian coal assets.

Potential Catalysts

- Increase in Mundra power tariff to pass-through incremental coal costs.
- · Liquidation of group investments

Key Risks

- Continued ambiguity on monetization of group investments.
- Equity dilution.
- · Delays in execution.
- Downside to Indonesian coal earnings.
- · Increasing interest cost burden.

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Tata Power: Scenario Analysis: Sum-of-Parts

| BULL CASE | | |
|---|----------------|--|
| BOLL GAGE | Rs/Per share | Basis |
| Generation (incl. Mumbai) | 32 | Same as Base Case |
| Delhi Distribution Business | 3 | Same as Base Case |
| Powerlinks Transmission | 1 | Same as Base Case |
| Maithon Project | 4 | Same as Base Case |
| Mundra UMPP | 0 | Assuming incremental coal cost is passed through into tariff |
| Investment in IEL | 1 | Same as Base Case |
| Investment in Indonesian Coal Assets | 64 | We take Bull Case fair value (from our regional team) |
| Investment in Group Cos. | 24 | At full marketable value and linking valuation of Tata Teleservices to that ascribed by the NTT DoCoMo open offer |
| Bull Case: Fair value | 129 | |
| BASE CASE | | |
| | Rs/Per share | |
| Generation (incl. Mumbai) | 32 | DCF: We use cost of equity of 14.9% and terminal growth rate of 3% |
| Delhi Distribution Business | 3 | Residual Income: This comprises of NDPL in which Tata Power holds 51% stake and earns an assured ROE of 16% |
| Powerlinks Transmission | 1 | Residual Income: We use a discount rate of 15.4% and an ROE of 21%. Tata Power holds 51% |
| Maithon Project | 4 | Residual Income: We use a discount rate of 14.9% and an assumed ROE of 16%. Tata Power holds 74% |
| Mundra UMPP | -8 | FCFe model: We use a discount rate of 15.9% |
| Investment in IEL | 1 | Residual Income: We use a discount rate of 14.9% and an assumed ROE of 16%. Tata Power holds 74% |
| Investment in Indonesian Coal Assets | 44 | We apply Base Case fair value of Bumi (from our regional team) to determine the value of the 30% stake in the coal assets. We adjust this for net debt |
| Investment in Group Cos. | 11 | We accord a 30% discount to the estimated value to arrive at a net realizable value |
| Base Case: Fair Value | 88 | |
| BEAR CASE | | |
| | Rs/Per share | |
| Generation (incl. Mumbai) | 32 | Same as Base Case |
| Delhi Distribution Business | 3 | Same as Base Case |
| Powerlinks Transmission | 1 | Same as Base Case |
| Maithon Project | 4 | Same as Base Case |
| Mundra UMPP | -8 | Same as Base Case |
| Investment in IEL | 1 | Same as Base Case |
| Investment in Indonesian Coal Assets | 20 | We take Bear Case fair value (from our regional team) |
| Investment in Group Cos. Bear Case: Fair value | 8 61 | We value it at book |
| Dear Gase. Fall value | 01 | |

Source: Morgan Stanley Research Estimates

Investment Case

We retain our Underweight rating on Tata Power with a revised price target of Rs80. Some of the key issues are:

- F1H12 consolidated earnings have been much weaker than expected: Tata Power has reported F1H12 consolidated earnings of Rs7 bn which is about 40% lower than both MS and consensus estimate. While operating results have been strong, thanks to strong coal realizations, profitability has been impacted due to high interest and tax expense. While we have revised our revenue estimates upwards due to a weaker Rupee (against the US\$), our profit estimates have been revised down due to high interest and tax expenses and elimination of inter-company dividend income (exhibit 1).
- Consolidated earnings for F2013e and F2014e are expected to de-grow 12% and 19%, respectively, due to losses incurred in the Mundra UMPP project. This is primarily due to the change in Indonesian regulations wherein all coal supply contracts have been reset to reflect benchmark prices.
- While the company has several projects in the pipeline, we are unsure on the schedule of their development activities and hence don't expect any significant increase in capacities beyond what is already under construction, at least in the next 3-4 years.
- We are about 20% lower than consensus for F2013 earnings estimate and we expect consensus to be revised downward. Also, consensus rating on the stock is positive with 20 brokers rating it a 'buy', 12 with a 'hold' and 4 with a 'sell', or equivalent ratings. We believe this optimism on the stock primarily stems from the belief that Tata Power is construed as a defensive utility stock which also provides upside from rising global coal prices. In our view, de-growth in earnings, low visibility on future generation projects, dependence on coal earnings and small growth in dividend do not really classify as defensive.

 Expensive valuations: The stock is trading at 13x P/E on our F2013 consolidated estimates which is expensive relative to peers which are trading in a range of 8-10x.

Exhibit 1

Changes in Consolidated Estimates

| New (Rs mn) | F2012e | F2013e | F2014e |
|-------------------------------|---------|---------|---------|
| Revenue | 215,471 | 266,004 | 310,115 |
| EBITDA | 57,799 | 69,085 | 74,963 |
| EBIT | 45,018 | 50,689 | 51,909 |
| Net Interest income/(expense) | -6,349 | -14,966 | -20,521 |
| PBT | 38,669 | 35,723 | 31,389 |
| Tax expense | 17,113 | 16,435 | 15,373 |
| Effective tax rate (%) | 44% | 46% | 49% |
| PAT | 19,856 | 17,502 | 14,221 |
| EPS (Rs/sh) | 8.0 | 7.1 | 5.8 |

| Old (Rs mn) | F2012e | F2013e | F2014e |
|-------------------------------|---------|---------|---------|
| Revenue | 210,783 | 260,495 | 304,001 |
| EBITDA | 56,472 | 67,821 | 73,968 |
| EBIT | 43,879 | 49,631 | 51,144 |
| Net Interest income/(expense) | -5,277 | -12,917 | -17,831 |
| PBT | 38,603 | 36,713 | 33,313 |
| Tax expense | 13,556 | 13,595 | 12,530 |
| Effective tax rate (%) | 35% | 37% | 38% |
| PAT | 23,346 | 21,333 | 18,988 |
| EPS (Rs/sh) | 9.4 | 8.6 | 7.7 |

| Change | F2012e | F2013e | F2014e |
|-------------------------------|---------|---------|----------|
| Revenue | 2% | 2% | 2% |
| EBITDA | 2% | 2% | 1% |
| EBIT | 3% | 2% | 1% |
| Net Interest income/(expense) | 20% | 16% | 15% |
| PBT | 0% | -3% | -6% |
| Tax expense | 26% | 21% | 23% |
| Effective tax rate | 914 bps | 898 bps | 1136 bps |
| PAT | -15% | -18% | -25% |
| EPS (Rs/sh) | -15% | -18% | -25% |

Source: Morgan Stanley Research (e) estimates

Exhibit 2 **Tata Power: Consolidated Performance**

| Key Profit and Loss Statement (Rs mn) | F2010 | F2011 | F2012e | F2013e | F2014e |
|---|---------|---------|---------|---------|---------|
| Revenue- TPWR | 70,983 | 68,971 | 70,741 | 73,728 | 76,334 |
| Revenue-Share in Indonesian coal assets | 49,256 | 64,005 | 88,956 | 102,378 | 111,425 |
| Revenue-NDPL | 34,374 | 41,160 | 40,664 | 40,927 | 40,951 |
| Revenue-Powerlinks Transmission | 3,010 | 2,884 | 2,884 | 2,884 | 2,884 |
| Revenue-Maithon Power Plant | | 0 | 6,465 | 10,890 | 10,802 |
| Revenue-Mundra UMPP | | 0 | 1,562 | 30,800 | 63,306 |
| Revenue-IEL | | 1,254 | 4,199 | 4,397 | 4,412 |
| Total Revenue | 157,623 | 178,274 | 215,471 | 266,004 | 310,115 |
| EBITDA-TPWR | 18,786 | 15,696 | 16,249 | 16,749 | 16,938 |
| EBITDA-Share in Indonesian coal assets | 13,468 | 15,889 | 25,630 | 32,261 | 35,916 |
| EBITDA-NDPL | 4,395 | 6,169 | 5,672 | 5,936 | 5,960 |
| EBITDA-Powerlinks Transmission | 2,881 | 2,736 | 2,736 | 2,736 | 2,736 |
| EBITDA-Maithon Power Plant | | | 4,482 | 6,158 | 5,928 |
| EBITDA-Mundra UMPP | | | 142 | 2,387 | 4,658 |
| EBITDA-IEL | | 1,001 | 2,888 | 2,859 | 2,828 |
| Total EBITDA | 39,531 | 41,492 | 57,799 | 69,085 | 74,963 |
| EBIT- TPWR | 14,007 | 10,595 | 10,560 | 10,346 | 10,255 |
| EBIT-Share in Indonesian coal assets | 11,187 | 13,103 | 22,055 | 28,341 | 31,547 |
| EBIT-NDPL | 3,285 | 4,860 | 4,363 | 4,626 | 4,650 |
| EBIT-Powerlinks Transmission | 2,073 | 1,902 | 1,902 | 1,902 | 1,902 |
| EBIT-Maithon Power Plant | | | 3,822 | 4,585 | 4,355 |
| EBIT-Mundra Power Plant | | | -57 | -1,457 | -3,113 |
| EBIT-IEL | | 621 | 2,373 | 2,344 | 2,313 |
| Total EBIT | 30,552 | 31,081 | 45,018 | 50,689 | 51,909 |
| PBT- TPWR | 12,073 | 10,346 | 10,108 | 8,658 | 8,592 |
| PBT- Share in Indonesian coal assets | 8,260 | 11,711 | 20,601 | 26,977 | 30,309 |
| PBT-NDPL | 2,602 | 3,200 | 2,634 | 2,898 | 2,922 |
| PBT-Powerlinks Transmission | 1,302 | 1,320 | 1,320 | 1,320 | 1,320 |
| PBT- Share in Maithon Power Plant | | | 2,793 | 2,015 | 2,015 |
| PBT- Share in Mundra UMPP | | | -326 | -7,682 | -15,308 |
| PBT- Share in IEL | | 279 | 1,539 | 1,539 | 1,539 |
| Total PBT | 24,237 | 26,856 | 38,669 | 35,723 | 31,389 |
| PAT- TPWR standalone business | 8,913 | 8,460 | 5,452 | 5,141 | 5,097 |
| PAT-Share in Indonesian coal assets | 2,974 | 5,090 | 10,034 | 13,381 | 15,170 |
| PAT-NDPL (51% share) | 851 | 1,099 | 897 | 987 | 995 |
| PAT-Powerlinks Transmission (51% share) | 551 | 539 | 539 | 539 | 539 |
| PAT-Share in Maithon Power Plant | | | 2,236 | 1,613 | 1,613 |
| PAT-Share in Mundra UMPP | | | -215 | -5,071 | -10,105 |
| PAT-Share in IEL (74% share) | | 184 | 912 | 912 | 912 |
| Total PAT | 13,290 | 15,371 | 19,856 | 17,502 | 14,221 |
| EPS-TPWR+NDPL+Powerlinks | 4.4 | 4.1 | 2.8 | 2.7 | 2.7 |
| EPS Consolidated | 5.6 | 6.2 | 8.0 | 7.1 | 5.8 |

Source: Company data, Morgan Stanley Research; e=Morgan Stanley Research estimates
Note: Share in Indonesian coal assets refers to the 30% stake that Tata Power holds in KPC and Arutmin coal mines. Bumi holds the balance 70% stake. We believe the coal assets are debt-free.

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Exhibit 3

KPC/Arutmin: Key Assumptions

| | C2011e | C2012e | C2013e |
|---|--------|--------|--------|
| Coal price | | | |
| Regional Thermal coal price (US\$/t) | 130.0 | 125.0 | 130.0 |
| Bumi Resources achieved coal price (US\$/t) | 80.6 | 85.0 | 87.1 |
| Discount to regional prices | -38.0% | -32.0% | -33.0% |
| Coal sales volume (mt) | 74.5 | 81.9 | 90.1 |
| Coal production (mt) | 76.4 | 84.0 | 92.4 |
| Cash cost (US\$/ tonne) | 45.9 | 48.7 | 48.8 |

Source: Morgan Stanley Research
Note: These are our Bumi analyst's estimates from his last note published on January 18,

Exhibit 4

Tata Power: Key Valuation Metrics

| Valuations | F2012e | F2013e | F2014e |
|-------------------------|--------|--------|--------|
| P/E - Standalone | 33.1 | 34.2 | 34.4 |
| P/E - Consolidated | 11.5 | 13.0 | 16.0 |
| | | | |
| EV/EBITDA- Standalone | 18.2 | 18.1 | 17.7 |
| EV/EBITDA- Consolidated | 8.5 | 7.2 | 6.3 |
| | | | |
| P/B- Standalone | 1.8 | 1.7 | 1.7 |
| P/B- Consolidated | 1.5 | 1.4 | 1.3 |

Source: Morgan Stanley Research (e) estimates

F1H12 Consolidated Performance Has Been Weak

Tata Power reported F1H12 adjusted standalone revenue of Rs38.7 bn (up 11% YoY), EBITDA of Rs8.5 bn (up 13% YoY) and adjusted profit of Rs6.6bn (up 66% YoY). While EBITDA has been marginally lower than our estimate, profits have positively surprised only due to large other income of Rs6.5 bn of which Rs4 bn was dividend received from the coal SPVs.

On a consolidated basis, revenue was Rs121 bn (up 24% YoY), EBITDA was Rs27.9 bn (up 42% YoY) and adjusted profit was Rs7 bn (up 25% YoY). The company has however reported a loss of Rs7.6 bn in 1H due to forex loss and provision for impairment in Mundra UMPP. The coal business has delivered strong operating performance due to high coal realizations. During the period January to September 2011, KPC and Arutmin have produced 46 mn tons of coal, sold 45 mn tons, realized US\$92/t and incurred a cash cost of US\$41/t (excluding deferred stripping cost). High interest and tax expense have however, impacted profitability.

Some of the other key developments during 1H are as follows:

- The company recognized forex losses of Rs7.4 bn Rs6.4 bn in CGPL, Rs900 mn in Tata Power (standalone) and Rs330 mn in coal SPVs.
- 2. The impairment of Rs8.2 bn created in 2Q was on the physical asset of CGPL. The company has assumed coal prices of more than US\$110/t for the next 3 years and long term coal pricing of US\$83/t with an annual inflation of 2% to determine this impairment. No impairment has been created in the standalone books of TPWR for its investment in CGPL given the proposed restructuring wherein at least 75% of the holding in coal SPVs maybe transferred to CGPL. This restructuring is subject to necessary regulatory and other approvals.
- of Mundra UMPP. If they have reason to believe that cash flows may not be adequate then lenders may reduce their exposure to the project from the initially approved 75% to 63%. In such a scenario, TPWR may have to fund the shortfall (Rs20 bn) also through equity. To put it differently, the funding may change from 75:25 (debt:equity) to 63:37. However, TPWR believes that with the proposed restructuring (as explained in point 2 above), lenders maybe ready to fund 75% of the capex. We have assumed that the funding pattern remains 75:25 for the project.
- The regulated equity in the Mumbai License Area is Rs15.5 bn in generation, Rs5.6 bn in transmission and Rs2.2 bn in distribution assets.
- 5. Regulated equity in NDPL was Rs8.95 bn and in Powerlinks transmission Rs4.68 bn.
- Capex for F2012 is likely to be Rs11.7 bn in Mumbai License Area. NDPL is likely to incur annual capex of Rs2 bn. Capex for KPC and Arutmin (to increase production capacity) is likely to be met through their own internal accruals and/or leasing arrangements.

Exhibit 5

Tata Power: F1H12 Standalone and Consolidated Results

| | | Consolidated | | | Standalone | |
|---|--------|--------------|----------|--------|------------|---------|
| Rs mn | F1H11 | F1H12 | YoY | F1H11 | F1H12 | YoY |
| Total Revenue | 97,734 | 121,068 | 24% | 34,790 | 38,693 | 11% |
| Revenue | 92,014 | 107,996 | 17% | 34,790 | 38,693 | 11% |
| Add income to be recovered/ (utilized) in future tariff | 5,420 | 12,536 | 131% | | | |
| Other operating income | 299 | 536 | 79% | | | |
| Expenses | 78,127 | 93,132 | 19% | 27,311 | 30,224 | 11% |
| Cost of Electrical Energy/Power Purchased | 27,816 | 31,245 | 12% | 4,059 | 3,611 | -11% |
| Cost of Fuel | 21,992 | 28,002 | 27% | 18,049 | 20,262 | 12% |
| Employee Cost(Staff Cost) | 3,985 | 5,457 | 37% | 1,904 | 2,554 | 34% |
| Raw material consumed | 1,897 | 1,816 | -4% | | | |
| Coal Processing Charges | 7,715 | 11,066 | 43% | | | |
| Purchase of goods/spares for resale | 121 | 271 | 125% | | | |
| Cost of Components and Materials | 331 | 453 | 37% | 331 | 453 | 37% |
| Decrease/(Increase) in stock in trade and WIP | 494 | -1,399 | -383% | | | |
| Royalty towards coal mining | 3,580 | 5,067 | 42% | | | |
| Other Expenditure | 10,197 | 11,153 | 9% | 2,967 | 3,344 | 13% |
| EBITDA | 19,606 | 27,936 | 42% | 7,479 | 8,469 | 13% |
| Margin (%) | 20% | 23% | 301 bps | 21% | 22% | 39 bps |
| Depreciation | 4,820 | 5,785 | 20% | 2,594 | 2,684 | 3% |
| EBIT | 14,786 | 22,151 | 50% | 4,885 | 5,785 | 18% |
| Other Income | 791 | 1,420 | 80% | 2,596 | 6,451 | 148% |
| Interest and Finance Charges | 4,049 | 5,942 | 47% | 2,130 | 2,289 | 7% |
| Profit Before Tax | 11,528 | 17,628 | 53% | 5,351 | 9,947 | 86% |
| Tax | 5,012 | 9,624 | 92% | 1,367 | 3,349 | 145% |
| Tax Rate | 43% | 55% | 1112 bps | 26% | 34% | 813 bps |
| PAT | 6,516 | 8,004 | 23% | 3,984 | 6,598 | 66% |
| Net Profit Margin (%) | 7% | 7% | -6 bps | 11% | 17% | 560 bps |
| Share of associates | 136 | 205 | 50% | | | |
| Minority Interest | 1,076 | 1,223 | 14% | | | |
| Consolidated Net Profit | 5,576 | 6,985 | 25% | 3,984 | 6,598 | 66% |
| Extraordinary items | 4,356 | -14,554 | -434% | 1,223 | -652 | -153% |
| Reported profit | 9,932 | -7,569 | -176% | 5,207 | 5,946 | 14% |

Source: Company data, Morgan Stanley Research

Exhibit 6

| Projects under | Capacity | Cost (Rs | | | | | | Off | |
|----------------|----------|-------------|---|-----------|------|-----------|--------------|------|---|
| Implementation | (MW) | bn) | Completion | Ownership | Fuel | Equipment | Construction | take | Remarks |
| Maithon | 1050 | 45.4 | Unit I commissioned; unit 2 steam blowing underway | 74% | ✓ | ✓ | √ | ✓ | Unit I is generating now (at about 70% PLF) with the balance finishing works expected to be completed by Nov 2011. For unit 2 boiler light-up has been completed. 100% coal linkage sanctioned. FSA in place with BCCL for 1.659 mtpa and with Tata Steel for upto 1 mtpa. LoA from CCL for 1.975 mtpa. Railway siding is an issue due to land availability and hence currently using road transportation. Railway siding likely to be available 10 months from now |
| Mundra UMPP | 4000 | 170.0 | Unit I by Feb 2012 and each unit 4 months thereafter | 100% | ✓ | ✓ | ✓ | ✓ | 85% of the work is completed. Unit I was ready for synchronization since June 2011 and was awaiting evacuation system, which is ready now. Unit 1 to be commercialized in 4 to 5 months. |
| Dagachhu | 114 | 9.0 | Unit I by March 2013 | 26% | ✓ | ✓ | √ | ✓ | Major ordering for the project has been completed. Clearances like land, water and environment have been received and PPA for the entire quantum of power has been signed with Tata Power Trading. Infrastructure activities like approach road, bridges, construction power etc have been completed. |
| Mithapur | 25 | | Dec-11 | | | | | | 25 year PPA signed with GUVNL. |
| Lodhivali (DG | | | F2012 | | | | | | • |
| set) | 40 | | | | | | | | Commissioned |
| Wind | 65 | | By Dec 2011 | | | | | | Coming up in Maharashtra and TN |
| Total | 5294 | | | | | | | | |

Source: Company data, Morgan Stanley Research

Exhibit 7

Tata Power: Status of Projects in Pipeline

| Projects in the pipeline | Capacity (MW) | Status |
|--------------------------|---------------|---|
| Coastal Maharashtra | 1600 | The project will use imported coal as fuel. Land acquisition in progress and over 50% of the land required has been acquired. MoEF clearance available for 1,600 MW. Agreement signed for R&R package for farmers. Economic options for coal sourcing and logistics are under evaluation. |
| Naraj Marthapur IPP | 660 | Coal will be supplied from the Mandakini coal block for which the mine plan is approved. TPWR (33% stake) has been awarded the captive coal block jointly with Monnet Ispat and Jindal Photo. Mandakini has estimated reserves of 291 mt and TPWR's share of 2.5 mtpa can support a 660 MW plant. 50% land acquired. Mining plan approved. EC granted subject to clearance from National Board of Wild Life |
| Tiruldin IPP/CPP | 1980 | Will use captive coal from Tubed coal block (adequate for 660 MW) + coal from Tata Steel and linkage. In-principal clearance from railways received for transportation of coal from Tubed block. Land acquisition has started. It is 6 to 8 months behind Naraj. |
| Dugar HEP | 236 | Won the project in consortium with S N Power. The project is in planning stage |
| Sorik Marapi | 240 | Geothermal project in Indonesia won in consortium with Origin Energy and PT Supraco. Exploration has commenced. Expected COD in June 2015 |
| Kalinganagar | 1103 | Executed in IEL. 225 MW will be based on production gas and will take 28 months to complete. 450-600 MW will be captively used by Tata Steel. Tata Steel has commenced work on its 3 mtpa steel plant. |
| Total | 5819 | |

Source. Company data, Morgan Stanley Research

Valuation

Our change in price target to Rs80 is primarily due to the following:

- Our cost of equity for Tata Power has increased from 14.4% to 14.9% due to an increase in the risk-free rate.
- The value for holding in Indonesian coal assets has reduced due to higher net debt.

We have increased our F2012e standalone EPS estimate by 15% due to higher other income and lowered F2013e by 1% due to higher tax expense.

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Our consolidated EPS estimates for F2012e and F2013e have been cut by 15% and 18%, respectively, due to elimination of inter-company transactions (dividend received from coal SPV in the standalone accounts) and higher tax expense.

The components of our base case are as shown in Exhibit 8.

Exhibit 8

Tata Power: Base Case Sum-of-Parts Valuation (Rs/share)

| BASE CASE | |
|--------------------------------------|-----|
| | |
| Existing Generation Business | 32 |
| Delhi Distribution Business | 3 |
| Powerlinks Transmission | 1 |
| Maithon Project | 4 |
| Mundra UMPP | (8) |
| IEL (240 MW) | 1 |
| Investment in Indonesian coal assets | 44 |
| Investment in Group Companies | 11 |
| Base Case | 88 |

Source: Morgan Stanley Research

Current generation business (including Mumbai License Area): We use a discounted cash flow (DCF) model to value the current generation business, which consists largely of the Mumbai License Area. We expect the business in this area to continue to grow because of expansion in the consumer base and the increase in consumption. The company earns regulated returns on its generation, transmission and

distribution businesses, which we expect will continue. The merchant capacity is limited to 200 MW from Trombay Unit 8 and Haldia. We have also built in additional distribution revenue emanating from the Mumbai License Area as the company commences retail distribution operations from April 2010 onwards.

Our assumptions for weighted average cost of capital (WACC) and the DCF model are provided in Exhibits 9 & 10.

| Exhibit 9 | | | | | | | |
|-----------------------------|--------|--------|--|--|--|--|--|
| Tata Power: Key Assumptions | | | | | | | |
| | Old | New | | | | | |
| Equity portion | 60% | 60% | | | | | |
| Debt portion | 40% | 40% | | | | | |
| Beta | 0.92 | 0.92 | | | | | |
| Risk free rate | 8.40% | 8.90% | | | | | |
| Market premium | 6.50% | 6.50% | | | | | |
| Cost of equity | 14.38% | 14.88% | | | | | |
| Debt | 7.00% | 7.00% | | | | | |
| Tax rate | 18.23% | 18.23% | | | | | |
| Cost of debt | 5.72% | 5.72% | | | | | |
| WACC | 10.92% | 11.22% | | | | | |
| Terminal Growth Rate | 3.00% | 3.00% | | | | | |

Source: Bloomberg, Morgan Stanley Research

| (Rs Mn) | F2008 | F2009 | F2010 | F2011E | F2012E | F2013E | F2014E | F2015E |
|---------------------------|----------|----------|---------|----------|----------|---------|---------|---------|
| Revenue | 59,159 | 72,362 | 70,983 | 68,971 | 70,741 | 73,728 | 76,334 | 79,060 |
| YoY growth | 26% | 22% | -2% | -3% | 3% | 4% | 4% | 4% |
| EBIT | 6,461 | 8,121 | 14,007 | 10,595 | 10,560 | 10,346 | 10,255 | 10,214 |
| Margin (%) | 10.9% | 11.2% | 19.7% | 15.4% | 14.9% | 14.0% | 13.4% | 12.9% |
| Effective tax rate | 14.3% | 20.3% | 26.2% | 18.2% | 22.0% | 22.0% | 22.0% | 22.0% |
| EBIT (1-Tax) | 5,536 | 6,471 | 10,341 | 8,663 | 8,236 | 8,070 | 7,999 | 7,967 |
| Depreciation | 2,905 | 3,289 | 4,779 | 5,101 | 5,690 | 6,403 | 6,683 | 6,944 |
| Capex | (11,664) | (15,933) | (7,552) | (15,336) | (12,006) | (3,000) | (3,000) | (2,000) |
| Change in Working Capital | (11,279) | (5,864) | 199 | 884 | (447) | 352 | (495) | (522) |
| Net investment in Capital | (20,037) | (18,509) | (2,574) | (9,350) | (6,763) | 3,755 | 3,188 | 4,423 |
| Free cash flow | (14,501) | (12,037) | 7,767 | (687) | 1,474 | 11,825 | 11,187 | 12,390 |
| Compounding period | | | | | | 0 | 1 | 2 |
| Discounting factor | | | | | | 1.00 | 0.90 | 0.81 |
| PV of cash flows | | | | | | 11825 | 10059 | 10016 |

| Forecast horizon | 31,900 |
|----------------------|---------|
| PV of Terminal Value | 121,890 |
| Firm value | 153,790 |
| Debt | 82,893 |
| Cash | 7,087 |
| Equity Value | 77,984 |
| # shares outstanding | 2471.8 |
| Equity value/share | 32 |

Source: Company data, Morgan Stanley Research; E = Morgan Stanley Research estimates

The **Delhi distribution business** includes NDPL (North Delhi Power Limited), in which Tata Power holds 51%. NDPL earns a 16% ROE on the regulatory capital base and also an incentive if it reduces AT&C losses below the Delhi government's stipulated level.

We use an RI model to value the stake in NDPL at Rs3/share. We use a cost of equity of 15.4% (risk free rate of 8.9% and expected risk premium of 6.5%) and a terminal growth rate of 4%. We value NDPL at Rs5/share and Tata Power's 51% stake in NDPL accordingly is Rs3/share, based on our residual income (RI) model.

| Exhibit 11 NDPL: RI Model | | | | | |
|----------------------------|--------|--------|--------|--------|--------|
| (Rs mn) | F2011 | F2012E | F2013E | F2014E | F2015E |
| NDPL Capital Base | 8,330 | 9,163 | 10,079 | 11,087 | 12,196 |
| Net income | 1,906 | 1,466 | 1,613 | 1,774 | 1,951 |
| ROE | 24% | 18% | 18% | 18% | 18% |
| RI | 734 | 227 | 249 | 274 | 302 |
| Discounting Factor | | | 1.00 | 0.87 | 0.75 |
| | | | 249 | 238 | 226 |
| Beginning capital base | 10,079 | | | | |
| Forecast horizon | 464 | | | | |
| Terminal Value | 2,066 | | | | |
| Equity Value | 12,609 | | | | |
| Value per share | 5 | | | | |
| Value for TPWR | 3 | | | | |

Source: DERC, Morgan Stanley Research (E) estimates

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Powerlinks Transmission: Tata Power, together with PGCIL, has set up the 1,200 km Tala transmission line for extracting power from Bhutan and supplying it to the northern parts of India. The company is to earn a post-tax ROE of 16% + incentives (post the new CERC regulations effective from April 2009 to March 2014) on the Powerlinks Transmission project, and its total investment is Rs2.5bn. We value the investment in Powerlinks Transmission at Rs1/share based on our RI model.

Exhibit 12

Powerlinks Transmission: RI Model

| Rs Mn | |
|---------------------------------------|-------|
| TPWR's Investment in Powerlinks | 2,514 |
| TPWR's holding | 51% |
| Total equity component of the project | 4,930 |
| ROE | 21.0% |
| COE | 15.4% |
| Terminal growth rate | 2% |
| Intrinsic value | 6990 |
| Implied P/B | 1.4 |
| Value for TPWR | 1 |

Source: Company data, Morgan Stanley Research

Maithon Thermal Power Project: This 1,050 MW thermal plant is being implemented through a 74:26 joint venture between Tata Power and Damodar Valley Corporation. We use an RI model to value the project at Rs4/share.

| Exhibit | 13 |
|---------|----|

| Maithon Thermal Power Project: RI Model | Maithon Thermal Power Project: RI Model | | | | | | |
|---|---|--|--|--|--|--|--|
| Size (MW) | 1,050 | | | | | | |
| Cost/MW (Rs mn) | 43 | | | | | | |
| Cost of project (Rs mn) | 45,415 | | | | | | |
| Equity value of project (Rs mn) | 13,625 | | | | | | |
| Assumed ROE | 16.0% | | | | | | |
| COE | 14.9% | | | | | | |
| Terminal growth rate | 2% | | | | | | |
| Intrinsic value | 14,833 | | | | | | |
| Implied P/B | 1.1 | | | | | | |
| Value per share (Rs/share) | 6 | | | | | | |
| Years to commissioning (1 year forward) | 0 | | | | | | |
| Present value per share (Rs/share) | 6 | | | | | | |
| TPWR stake | 74% | | | | | | |
| Value for TPWR (Rs/share) | 4 | | | | | | |

Source: Company data, Morgan Stanley Research

Mundra UMPP: Tata Power was the lowest bidder for the Mundra UMPP with a 25-year levelized tariff of Rs2.26/kWh.

The company expects the first unit to be commercial in February 2012 and each unit four months thereafter. We value the project at Rs(8)/share using a FCFe model. We use a cost of equity of 15.9% which is 100 bps in excess of cost of equity for the company.

India Energy Limited: Tata Power has set up two plants of 120 MW each in a joint venture with Tata Steel (26% equity owner). We believe these plants will earn an ROE of 16% and hence on a Residual Income model we value these plants at Rs1/share. Our assumption for cost of equity is similar to that of Tata Power.

Investment in Indonesian Coal Assets: We value the investments in coal assets using our regional team's base case fair value of Bumi Resources (the 70% equity owner of the coal assets) as a proxy. Since Bumi's value represents its 70% stake in the KPC and Arutmin coal assets, we have grossed it up to achieve the implied market capitalization of the coal assets as US\$9.3 bn. The implied value for TPWR's 30% stake in the coal assets after backing out the net debt of US\$468 mn aggregates to US\$2.3 bn or Rs44/share.

Exhibit 14

Value of Investment in Indonesian Coal Assets

| Particulars | |
|--|-------|
| Bumi Target Market Cap (US\$mn) | 6,480 |
| Target Market Cap of Indonesian Coal Assets (US\$mn) | 9,257 |
| Tata Power's Stake in Bumi | 30% |
| Value for Tata Power (US\$mn) | 2,777 |
| Net Debt Raised by Tata Power (US\$mn) | 468 |
| Unrealized gain for Tata Power (US\$mn) | 2,309 |
| Value for TPWR (Rs/share) | 44 |
| Less: Hedge through lower coal pricing for Mundra UMPP | 0% |
| Holding company discount (%) | 0% |
| Fair value for TPWR (Rs/share) | 44 |

Source: Factset, Morgan Stanley Research

Investments in companies: Tata Power has investments primarily in group companies such as VSNL, Tata Teleservices and Tata Sons. These investments carried a face value of about Rs20 billion on the balance sheet as at March 31, 2011. In Exhibit 15 we present a list of these investments and their estimated fair values. We have assumed a 30% discount to determine the net realizable value.

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Exhibit 15

| Tata Power: | ۷a | luation | of | Investments |
|-------------|----|---------|----|-------------|
|-------------|----|---------|----|-------------|

| | Shares Held | Listed/ | Stock Price/Est Value | Discount | Fair Value | Value for TTPW | |
|--------------------------------------|----------------|----------|-----------------------------|----------|------------|----------------|--|
| | (mn) | Unlisted | (Rs/share) | Factor | (Rs/share) | (Rs/share) | Basis for estimated value |
| | | | | | | | |
| Holding in Tata group companies | | | | | | | |
| Telecom Investments | | | | | | | |
| - Tata Teleservices Ltd | 328 | Unlisted | 52 | 30% | 36 | 5 | Applied valuation of additional stake acquired by TPWR |
| - Tata Teleservices Maharashtra Ltd | 216 | Listed | 14 | 30% | 10 | 1 | Current market price |
| - Tata Communications Ltd/ VSNL | 14 | Listed | 181 | 30% | 127 | 1 | Current market price |
| - Panatone Inv Ltd (holding in VSNL) | 500 | Unlisted | 15 | 30% | 11 | 2 | Holding in VSNL through Panatone Inv |
| Sub total | | | | | | 9 | |
| | | | | | | | |
| Non Telecom Investments | | | | | | | |
| - Tata Sons | 0.0 | Unlisted | 1,052,600 | 30% | 736,820 | 2 | Stake purchase by TPWR |
| Sub total | | | | | | 2 | |
| | | | | | | | |
| Grand total | | | | | | 11 | |

Note: Market prices for listed companies are as on November 23, 2011 Source: Factset, Morgan Stanley Research

Risks to Our Target Price

We use a sum-of-parts methodology to determine the target price of Tata Power. The key upside risks to our target price are:

- Increase in generation capacity
- Additional projects in the transmission or distribution segment
- Upside to investment in Indonesian coal assets and other investments in group companies
- Upside to returns from the generation projects
- Monetization of investments for investment in the core business

The key downside risks to our target price are:

- Significant changes in regulations that could impair the business in Mumbai and Delhi
- Continued ambiguity about the company's intentions concerning the monetization of investments in group companies
- Significant increase in capex

- Significant downside to earnings for the Indonesian coal assets due to production delays or decline in coal pricing
- Political intervention in India and Indonesia.

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Exhibit 16

Indian Utility Valuation Comparables

| Company Name Market Price | | Adjusted Price | Implied Mkt Cap (US\$ mn) | EV/MW - US\$ mn | | | Mkt Cap/MW - US\$ mn | | | EV/EBITDA (x) | | |
|---|------------|-------------------|---------------------------|-----------------|--------|--------|----------------------|--------|--------|---------------|--------|--------|
| | (Rs/Share) | (Rs/Share) | | F2011e | F2012e | F2013e | F2011e | F2012e | F2013e | F2011e | F2012e | F2013e |
| Reliance Power | 85 | 85 | 4,578 | 12.2 | 7.2 | 4.2 | 7.6 | 3.8 | 1.9 | 111.7 | 50.8 | 16.5 |
| NTPC | 157 | 157 | 24,775 | 1.0 | 0.9 | 0.8 | 0.8 | 0.7 | 0.6 | 11.7 | 11.4 | 9.9 |
| Lanco Infratech | 12 | 12 | 549 | 2.4 | 1.4 | 1.6 | 0.3 | 0.1 | 0.1 | 11.5 | 8.3 | 6.8 |
| Tata Power | 92 | 92 | 4,363 | 2.8 | 1.9 | 1.3 | 1.5 | 0.9 | 0.6 | 10.7 | 8.5 | 7.2 |
| Reliance Infrastructure | 396 | 396 | 2,022 | 3.3 | 3.9 | 3.0 | 2.6 | 2.6 | 2.6 | 13.4 | 10.8 | 7.0 |
| Adani Power | 72 | 72 | 2,992 | 3.8 | 2.2 | 1.4 | 1.5 | 0.8 | 0.5 | 31.9 | 19.2 | 9.4 |
| Indiabulls Power | 10 | 10 | 434 | NA | NA | 1.8 | NA | NA | 0.3 | NM | NM | 36.2 |
| Jindal Steel and Power - @ MS Power Business FV | 341 | 341 | 6,101 | 5.4 | 3.3 | 2.9 | 4.8 | 2.7 | 2.1 | 12.3 | 10.2 | 8.7 |
| Jindal Steel and Power - implied | 488 | 125 | 2,232 | 2.3 | 1.6 | 1.5 | 1.8 | 1.0 | 0.8 | 5.3 | 5.0 | 4.7 |
| JSW Energy | 40 | 40 | 1,262 | 1.7 | 1.0 | 1.1 | 0.7 | 0.4 | 0.4 | 9.6 | 9.1 | 6.7 |

| Company Name | Market Price | Adjusted Price | Implied Mkt Cap (US\$ mn) | | P/B (x) | | | ROE (%) | | | P/E (x) | |
|---|--------------|-------------------|------------------------------|--------|---------|--------|--------|---------|--------|--------|---------|--------|
| | (Rs/Share) | (Rs/Share) | | F2011e | F2012e | F2013e | F2011e | F2012e | F2013e | F2011e | F2012e | F2013e |
| Reliance Power | 85 | 85 | 4,578 | 1.3 | 1.3 | 1.2 | 4.0% | 3.7% | 7.9% | 33.1 | 36.2 | 15.3 |
| NTPC | 157 | 157 | 24,775 | 1.9 | 1.8 | 1.7 | 13.5% | 13.1% | 13.8% | 14.1 | 13.6 | 12.1 |
| Lanco Infratech | 12 | 12 | 549 | 0.5 | 0.5 | 0.4 | 15.0% | 19.9% | 21.9% | 3.5 | 2.5 | 1.8 |
| Tata Power | 92 | 92 | 4,363 | 1.8 | 1.6 | 1.5 | 12.2% | 13.9% | 11.2% | 14.8 | 11.5 | 13.0 |
| Reliance Infrastructure | 396 | 396 | 2,022 | 0.4 | 0.4 | 0.4 | 6.0% | 4.4% | 5.9% | 6.8 | 8.9 | 6.2 |
| Adani Power | 72 | 72 | 2,992 | 2.5 | 2.2 | 1.9 | 8.2% | 13.1% | 13.9% | 30.4 | 16.5 | 13.4 |
| Indiabulls Power | 10 | 10 | 434 | 0.5 | 0.6 | 0.5 | 0.1% | 1.3% | 2.7% | 414.5 | 46.1 | 17.7 |
| Jindal Steel and Power - @ MS Power Business FV | 341 | 341 | 6,101 | 4.8 | 3.4 | 2.5 | 28.4% | 28.9% | 27.0% | 17.0 | 11.9 | 9.3 |
| Jindal Steel and Power - implied | 488 | 125 | 2,232 | 1.8 | 1.3 | 0.9 | 28.4% | 28.9% | 27.0% | 6.2 | 4.3 | 3.4 |
| JSW Energy | 40 | 40 | 1,262 | 1.2 | 1.1 | 1.0 | 13.8% | 7.6% | 10.1% | 8.4 | 14.1 | 9.6 |

Notes:
Stock Prices are as of 11/25/11
Jindal Steel and Power @ MS FV is Morgan Stanley Research estimates for the company's power business @ Rs 341/share (power business + JSPL's 1350 MW plant)
Jindal Steel and Power implied is adjusted for steel business at Rs 363/share
Reliance Power is based on Bloomberg estimates
Exchange Rate of INR/USD = 52.24
NA = Not Available; NM = Not Meaningful
Source: Factset, Morgan Stanley Research

Global Utility Valuations

| Company Name | Country | MS Rating | PT | Stock | Currency | Mkt Cap | | P/E | | | EV/EBITDA | | Earnings CAGR * |
|---------------------------------------|----------|-----------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|
| | | | | Price | | (US\$mn) | F11e/C10e | F12e/C11e | F13e/C12e | F11e/C10e | F12e/C11e | F13e/C12e | F2011-14e/C2010-13 |
| Pure Generation Cos | | | | | | | | | | | | | |
| Adani Power | India | UW | 60.0 | 71. | 7 INR | 2998 | 30.4 | 16.5 | 13.4 | 31.9 | 19.2 | 9.4 | 78% |
| Indiabulls Power Limited | India | UW | 9.0 | 10.3 | 3 INR | 483 | 906.7 | 46.1 | 17.7 | NM | NM | 38.3 | 178% |
| JSW Energy Limited | India | UW | 52.0 | 40.2 | 2 INR | 1265 | 15.0 | 14.1 | 9.6 | 12.8 | 18.3 | 6.6 | -5% |
| NTPC | India | OW | 196.0 | 157.0 |) INR | 24825 | 17.3 | 13.6 | 12.1 | 13.8 | 11.4 | 10.0 | 11% |
| China Resources Power | China | OW | 18.6 | 14.9 | 9 HKD | 9232 | 17.4 | 12.8 | 11.0 | 11.7 | 9.6 | 9.0 | 24% |
| Huadian Power Int'I | China | EW | 1.4 | 1.5 | 5 HKD | 1285 | 51.4 | 91.8 | 34.2 | 15.5 | 11.1 | 10.8 | 54% |
| Huaneng Power | China | EW | 3.6 | 4.3 | 2 HKD | 7572 | 14.6 | 28.5 | 28.1 | 9.1 | 9.4 | 9.2 | -20% |
| Yangtze Power | China | OW | 10.5 | 6.5 | 5 CNY | 16913 | 15.5 | 12.9 | 11.7 | 10.9 | 9.7 | 9.3 | 6% |
| Drax | UK | UW | 410.0 | 551. | 5 GBp | 3108 | 5.4 | 10.3 | 12.3 | 3.0 | 5.7 | 6.7 | -58% |
| | | | | | | | 119.3 x | 27.4 x | 16.7 x | 13.6 x | 11.8 x | 12.1 x | 30% |
| Integrated Power Cos | | | | | | | | | | | | | |
| Tata Power Co | India | UW | 80.0 | 92. | 2 INR | 4372 | 14.8 | 11.5 | 13.0 | 10.7 | 8.5 | 7.2 | -3% |
| CLP Holdings | China | EW | 64.2 | 69.2 | 2 HKD | 21359 | 16.6 | 16.4 | 14.8 | 9.7 | 9.5 | 9.0 | 8% |
| Power Assets Holdings Ltd | China | EW | 58.0 | 59. | 1 HKD | 16180 | 14.5 | 13.7 | 13.4 | 13.3 | 12.5 | 12.1 | 10% |
| Korea Electric Power | Korea | EW | 30,100.0 | 24800.0 |) KRW | 13693 | NM | 37.9 | 43.3 | 9.6 | 9.6 | 9.0 | -331% |
| Tenaga Nasional Bhd | Malaysia | OW | 6.7 | 5.3 | 3 MYR | 9072 | 11.1 | 8.2 | 9.2 | 7.2 | 5.6 | 5.2 | 0% |
| EDF | France | OW | 24.0 | 18.2 | 2 EUR | 44444 | 11.4 | 8.6 | 7.5 | 6.2 | 5.9 | 5.6 | -3% |
| ENEL | Italy | OW | 3.9 | 2.9 | 9 EUR | 35464 | 8.0 | 6.1 | 6.7 | 5.4 | 4.9 | 4.9 | -2% |
| Tokyo Electric Power | Japan | NA | NA | 282.0 |) JPY | 5814 | NM | NM | 3.9 | 15.1 | 12.2 | 8.9 | -187% |
| Scottish & Southern | UK | EW | 1,330.0 | 1254.0 |) GBp | 18073 | 12.3 | 11.0 | 9.8 | 8.0 | 8.1 | 7.5 | 8% |
| | | | | | | | 12.7 x | 14.2 x | 13.5 x | 9.5 x | 8.5 x | 7.7 x | -55% |
| Diversified Cos | | | | | | | | | | | | | |
| Jindal Steel & Power | India | OW | 650.0 | 487. | B INR | 8734 | 17.3 | 10.6 | 8.5 | 12.4 | 8.2 | 7.0 | 21% |
| LANCO Infratech Ltd | India | EW | 32.0 | 11.9 | 9 INR | 550 | 11.7 | 2.5 | 1.8 | 14.4 | 8.3 | 6.8 | 41% |
| Reliance Infrastructure Limited | India | EW | 450.0 | 396.0 |) INR | 2026 | 19.1 | 11.1 | 10.1 | 16.9 | 10.9 | 8.1 | 7% |
| Cheung Kong Infra. | China | EW | 46.1 | 44.0 |) HKD | 12723 | 16.4 | 13.1 | 12.6 | 15.3 | 11.0 | 10.3 | 21% |
| Essar Energy Plc | UK | UW | 230.0 | 214.0 |) GBp | 4309 | 20.1 | 8.1 | 6.3 | 13.5 | 8.6 | 6.8 | 46% |
| | | | | | | | 16.9 x | 9.1 x | 7.8 x | 14.5 x | 9.4 x | 7.8 x | 27% |
| Pure Transmission Cos | | | | | | | | | | | | | |
| Red Electrica | Spain | EW | 43.0 | 30.8 | B EUR | 5505 | 11.6 | 8.7 | 8.3 | 9.3 | 7.4 | 7.0 | 9% |
| REN - Redes Energeticas Nacionais | Portugal | EW | 2.8 | 1.9 | 9 EUR | 1356 | 12.4 | 8.0 | 7.1 | 8.0 | 6.9 | 6.5 | 9% |
| National Grid plc | UK | EW | 585.0 | 631. | 5 GBp | 33800 | 10.2 | 11.9 | 12.4 | 9.2 | 9.0 | 9.2 | -2% |
| Terna Rete Elettrica Nazionale S.p.A. | Italy | NC | NC | 2.5 | 5 EUR | 6534 | 8.0 | 12.8 | 13.0 | 8.6 | 8.6 | 8.8 | -14% |
| CTEEP | Brazil | NC | NC | 49.8 | B BRL | 4018 | 9.3 | 7.9 | 8.1 | 5.1 | 4.1 | 4.4 | 8% |
| ITC Holdings Corp. | USA | NC | NC | 71. | 1 USD | 3647 | 25.0 | 21.4 | 17.7 | 13.6 | 12.4 | 11.5 | 19% |
| · . | | | | | | | 13.5 x | 12.5 x | 11.6 x | 9.3 x | 8.6 x | 8.2 x | 6% |

For valuation methodology and risks associated with any price targets above, please email morganstanley.cesearch@morganstanley.com with a request for valuation methodology and risks on a particular stock.

e = Factset, Morgan Stanley Research estimates; Source: Factset, Morgan Stanley Research

NA = Not Available; NM = Not Meaningful; UW = Underweight, EW = Equalweight, OW = Overweight, NC = Not Covered (Factset consensus)

Prices are as of Nov 28, 2011 for Asian companies and Nov 25, 2011 for the others

Note: Data for Indian companies is for Fiscal Year End March 31; * F2011-F2013 for Lanco Infratech

Global Utility Valuations (cont'd)

| ompany Name | Country | MS Rating | PT | Stock | Currency | Mkt Cap | | P/B | | | ROE | | Book Value Growth |
|---------------------------------------|----------|-----------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|
| | | | | Price | | (US\$mn) | F11e/C10e | F12e/C11e | F13e/C12e | F11e/C10e | F12e/C11e | F13e/C12e | F2011-14e/C2010-13 |
| Pure Generation Cos | | | | | | | | | | | | | |
| Adani Power | India | UW | 60.0 | 71.7 | 7 INR | 2998 | 2.5 | 2.2 | 1.9 | 9% | 14% | 15% | 22% |
| Indiabulls Power Limited | India | UW | 9.0 | 10.3 | 3 INR | 483 | 1.2 | 0.6 | 0.5 | NA | 0% | 1% | 5% |
| JSW Energy Limited | India | UW | 52.0 | 40.2 | 2 INR | 1265 | 2.1 | 1.1 | 1.0 | 23% | 15% | 8% | 13% |
| NTPC | India | OW | 196.0 | 157.0 |) INR | 24825 | 2.3 | 1.8 | 1.7 | 14% | 14% | 14% | 7% |
| China Resources Power | China | OW | 18.6 | 14.9 |) HKD | 9232 | 1.6 | 1.5 | 1.4 | 9% | 12% | 13% | 10% |
| Huadian Power Int'l | China | EW | 1.4 | 1.5 | 5 HKD | 1285 | 0.5 | 0.5 | 0.5 | 1% | 1% | 1% | 3% |
| Huaneng Power | China | EW | 3.6 | 4.2 | 2 HKD | 7572 | 0.9 | 0.9 | 0.9 | 7% | 3% | 3% | 0% |
| Yangtze Power | China | OW | 10.5 | 6.5 | CNY | 16913 | 1.9 | 1.5 | 1.4 | 13% | 12% | 12% | 8% |
| Drax | UK | UW | 410.0 | 551.5 | GBp | 3108 | 1.4 | 1.9 | 1.8 | 25% | 20% | 15% | 4% |
| | | | | | | | 1.6 x | 1.3 x | 1.2 x | 13% | 10% | 9% | 8% |
| Integrated Power Cos | | | | | | | | | | | | | |
| Tata Power Co | India | UW | 80.0 | 92.2 | 2 INR | 4372 | 1.7 | 1.5 | 1.4 | 12% | 13% | 11% | 10% |
| CLP Holdings | China | EW | 64.2 | 69.2 | 2 HKD | 21359 | 1.9 | 2.0 | 1.9 | 12% | 12% | 13% | 6% |
| Power Assets Holdings Ltd | China | EW | 58.0 | 59.1 | 1 HKD | 16180 | 1.9 | 2.1 | 1.9 | 13% | 16% | 15% | 7% |
| Korea Electric Power | Korea | EW | 30,100.0 | 24800.0 | KRW | 13693 | 0.5 | 0.4 | 0.4 | 0% | 1% | 1% | 1% |
| Tenaga Nasional Bhd | Malaysia | OW | 6.7 | 5.3 | 3 MYR | 9072 | 1.4 | 0.9 | 0.9 | 13% | 12% | 10% | 8% |
| EDF | France | OW | 24.0 | 18.2 | 2 EUR | 44444 | 1.7 | 0.9 | 0.9 | 16% | 11% | 12% | 6% |
| ENEL | Italy | OW | 3.9 | 2.9 | EUR | 35464 | 0.9 | 0.7 | 0.7 | 12% | 11% | 10% | 4% |
| Tokyo Electric Power | Japan | NA | NA | 282.0 |) JPY | 5814 | 0.5 | 0.6 | 0.6 | -8% | -22% | -14% | -21% |
| Scottish & Southern | UK | EW | 1,330.0 | 1254.0 |) GBp | 18073 | 2.2 | 2.1 | 2.0 | NA | 22% | 19% | 20% |
| | | | | | | | 1.4 x | 1.2 x | 1.2 x | 9% | 9% | 9% | 5% |
| Diversified Cos | | | | | | | | | | | | | |
| Jindal Steel & Power | India | OW | 650.0 | 487.8 | 3 INR | 8734 | 4.6 | 2.5 | 1.9 | 41% | 31% | 27% | 31% |
| LANCO Infratech Ltd | India | EW | 32.0 | 11.9 |) INR | 550 | 1.8 | 0.5 | 0.4 | 22% | 18% | 20% | 25% |
| Reliance Infrastructure Limited | India | EW | 450.0 | 396.0 |) INR | 2026 | 1.0 | 0.6 | 0.6 | 5% | 6% | 5% | 2% |
| Cheung Kong Infra. | China | EW | 46.1 | 44.0 |) HKD | 12723 | 1.5 | 1.7 | 1.5 | 10% | 14% | 13% | 10% |
| Essar Energy Plc | UK | UW | 230.0 | 214.0 |) GBp | 4309 | 1.0 | 0.9 | 0.8 | 7% | 5% | 11% | 9% |
| | | | | | | | 2.0 x | 1.2 x | 1.0 x | 17% | 15% | 15% | 16% |
| Pure Transmission Cos | | | | | | | | | | | | | |
| Red Electrica | Spain | EW | 43.0 | 30.8 | B EUR | 5505 | 2.9 | 2.3 | 2.1 | 28% | 29% | 28% | 10% |
| REN - Redes Energeticas Nacionais | Portugal | EW | 2.8 | 1.9 | 9 EUR | 1356 | 1.3 | 1.0 | 0.9 | 11% | 13% | 14% | 5% |
| National Grid plc | UK | EW | 585.0 | 631.5 | 5 GBp | 33800 | 3.4 | 2.6 | 2.6 | NA | 40% | 22% | 15% |
| Terna Rete Elettrica Nazionale S.p.A. | Italy | NC | NC | 2.5 | EUR | 6534 | 1.9 | 1.9 | 1.9 | 18% | 15% | 14% | 2% |
| CTEEP | Brazil | NC | NC | 49.8 | BRL | 4018 | 1.8 | 1.8 | 1.7 | 19% | 22% | 21% | 1% |
| ITC Holdings Corp. | USA | NC | NC | 71.1 | I USD | 3647 | 3.4 | 3.0 | 2.7 | 13% | 14% | 15% | 12% |
| · , | | | | | | | 2.4 x | 2.1 x | 2.0 x | 17% | 21% | 18% | 8% |

For valuation methodology and risks associated with any price targets above, please email morganstanley.research@morganstanley.com with a request for valuation methodology and risks on a particular stock.

Prices are as of Nov 28, 2011 for Asian companies and Nov 25, 2011 for the others

Note: Data for Indian companies is for Fiscal Year End March 31; * F2011-F2013 for Lanco Infratech

e = Factset, Morgan Stanley Research estimates; Source: Factset, Morgan Stanley Research

NA = Not Available; NM = Not Meaningful; UW = Underweight, EW = Equalweight, OW = Overweight, NC = Not Covered (Factset consensus)



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(as of October 31, 2011)

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| | Coverage Universe | | Investment | Banking Clie | Clients (IBC) | |
|-----------------------|-------------------|-------|------------|--------------|---------------|--|
| _ | | % of | | % of 9 | % of Rating | |
| Stock Rating Category | Count | Total | Count | Total IBC | Category | |
| Overweight/Buy | 1126 | 40% | 449 | 44% | 40% | |
| Equal-weight/Hold | 1176 | 42% | 431 | 42% | 37% | |
| Not-Rated/Hold | 108 | 4% | 23 | 2% | 21% | |
| Underweight/Sell | 418 | 15% | 115 | 11% | 28% | |
| Total | 2,828 | | 1018 | | | |

Data include common stock and ADRs currently assigned ratings. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months.

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Underweight (U or Under) - The stock's total return is expected to be below the total return of the relevant country MSCI Index, on a risk-adjusted basis, over the next 12-18 months.

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Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark as indicated below.

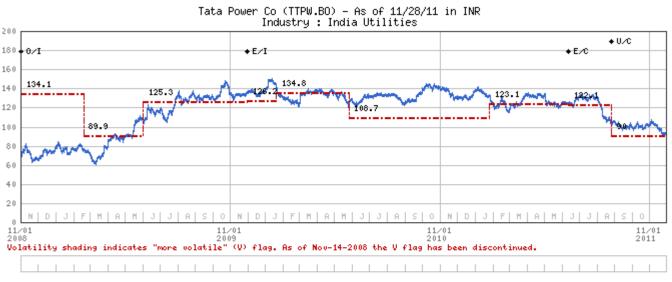
broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index.

Stock Price, Price Target and Rating History (See Rating Definitions)



Stock Rating History: 11/1/08 : 0/I; 11/30/09 : E/I; 6/13/11 : E/C; 8/26/11 : U/C
Price Target History: 9/10/08 : 134.1; 2/18/09 : 89.9; 6/2/09 : 125.3; 11/30/09 : 126.2; 1/20/10 : 134.8; 5/26/10 : 108.7; 1/26/11 : 123.1; 6/13/11 : 122.1; 8/26/11 : 90

Source: Morgan Stanley Research Date Format: MM/DD/YY Price Target → No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) → Stock Price (Covered by Current Analyst) →
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) More Volatile (V) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

MORGAN STANLEY RESEARCH

November 29, 2011 Tata Power Co

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November 29, 2011 Tata Power Co

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|---------------|------------------------------|--------------------------|--------------------|
| 1585 Broadway | 20 Bank Street, Canary Wharf | 4-20-3 Ebisu, Shibuya-ku | 1 Austin Road West |

Industry Coverage:India Utilities

| Company (Ticker) | Rating (as of) Price* (11/28/2011) | | | | | |
|---|------------------------------------|----------|--|--|--|--|
| Parag Gupta | | | | | | |
| Adani Power (ADAN.BO) | U (06/13/2011) | Rs72.85 | | | | |
| Indiabulls Power Limited (INDP.BO) | U (06/13/2011) | Rs11.09 | | | | |
| JSW Energy Limited (JSWE.BO) | U (08/27/2010) | Rs42.05 | | | | |
| LANCO Infratech Ltd (LAIN.BO) | E (06/13/2011) | Rs12.6 | | | | |
| NTPC (NTPC.BO) | O (06/13/2011) | Rs159.55 | | | | |
| Reliance Infrastructure Limited (RLIN.BO) | E (06/13/2011) | Rs407.6 | | | | |
| Tata Power Co (TTPW.BO) | U (08/26/2011) | Rs94.05 | | | | |

Stock Ratings are subject to change. Please see latest research for each company. * Historical prices are not split adjusted.