

May 25, 2010

INITIATING COVERAGE

Sector view: **Attractive**

Price (Rs): **117**

Target price (Rs): **130**

BSE-30: **16,470**

Adani Power—powerfully positioned. Adani Power Ltd (APL) is the power-generating arm of the Adani group, currently having a portfolio of 6.6 GW, and aspirations to develop power projects of 13.2 GW by end-FY2015E. APL's project portfolio has a fine balance of merchant sale and firm off-take arrangements, and is largely dependent on imported coal procured from Indonesia. APL has entered into lucrative sale arrangements which ensure stability and sustainability of earnings.

Initiating coverage with an ADD rating and target price of Rs130/share

We initiate coverage on APL with an ADD rating and target price of Rs130/share. At our target price, APL will trade at 4X FY2011E net worth and 27X FY2011E earnings. Our target price includes value for 6,600 MW of power projects under implementation, and implies a ratio of 7X on sustainable earnings beyond FY2014E. Increased visibility on the execution of projects currently in the development stage may provide upside to our target price.

6,600 MW of capacities by FY2012E;13,200 MW beyond that

APL has a portfolio of 6.6 GW already under construction that will likely be commissioned by end-FY2012E. APL has a development portfolio of 6.6 GW that the company proposes to implement in stages by end-FY2015E. Projects under construction comprise 4.6 GW at Mundra, Gujarat and 1.9 GW at Tiroda, Maharashtra. Of the 6.6 GW under construction, APL has entered into lucrative sale arrangements for 4,744 MW of power under competitive bids, while the balance 1,856 MW is available for merchant sale.

Earnings growth to see a steep improvement till FY2013E

APL's earnings will likely see a steep improvement up to FY2013E as new capacities continue to come on stream taking APL's capacity to 6,600 MW by end-FY2012E from 660 MW in FY2010. Net sales during the same period will grow to Rs107 bn from Rs4.3 bn, yielding a net income of Rs1.7 bn and Rs35.7 bn, respectively. APL will incur a capex of Rs303 bn to fund this growth, of which Rs117.5 bn has already been incurred up to Dec 2009.

Availability and pricing of fuels remains an area of concern

APL is to source 31% of its fuel requirements from Indonesia through promoter company Adani Enterprises (AEL) at an average cost of US\$36/ton. AEL's inability to supply the required quantity of coal at the said price remains a key risk for APL's earnings and valuations. Other risks for APL arise from lower merchant tariffs and overall execution risks associated with project development of such a large magnitude.

Company data and valuation summary

Company data	Stock data	High	Low	Price performance	1M	3M	12M
ADD	52-week range (Rs)	128.8	90.2	Absolute (%)	(1.6)	11.3	—
	Yield (%)	—	—	Rel. to BSE-30 (%)	5.7	9.8	—
Current price (Rs)	Priced at close of:	Month dd, Year		Forecasts/valuation	2010	2011E	2012E
117	Capitalization			EPS (Rs)	0.8	5.0	16.4
	Market cap (Rs bn)	254.1		P/E (X)	—	23.9	7.1
	Net debt/(cash) (Rs bn)	45		ROE (%)	4.4	17.8	43.0
	Free float (%)	26.5		EV/EBITDA (X)	131.6	16.2	6.0
	Shares outstanding (mn)	2180					

Source: Company data, Kotak Institutional Equities estimates.

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Kotak Institutional Equities
Research

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The prices in this report are based on the market close of May 24, 2010.

OVERVIEW: POWERFULLY POSITIONED

Exhibit 1: Earnings from extant portfolio to stabilize in FY2014E
Forecast and valuations, March fiscal year-ends, FY2009-15E (Rs mn)

	Revenues		EBITDA		Net profit	BVPS	ROCE	ROE
	(Rs mn)	Gth (%)	(Rs mn)	Gth (%)	(Rs mn)	(Rs)	(%)	(%)
2009	—		(28)		(26)	12	—	—
2010	4,349		2,446		1,708	25	1.5	4.4
2011E	37,788	769	23,625	866	10,659	32	5.5	17.7
2012E	106,571	182	68,502	190	35,741	51	13.5	42.8
2013E	150,117	41	91,485	34	43,586	74	13.5	35.4
2014E	145,525	(3)	84,442	(8)	42,884	97	11.3	25.8
2015E	145,758	—	82,943	(2)	49,265	121	11.9	23.2

Source: Company, Kotak Institutional Equities estimates

Exhibit 2: APL has already incurred a capex of Rs117.5 bn (as of Dec 2009) towards commissioning of 6.6 GW of power projects
Profit model, balance sheet, cash model of APL, March fiscal year-ends, 2009-15E (Rs mn)

	2009	2010E	2011E	2012E	2013E	2014E	2015E
Profit model							
Net revenues	—	4,349	37,788	106,571	150,117	145,525	145,758
EBITDA	(28)	2,446	23,625	68,502	91,485	84,442	82,943
Other income	—	319	140	1,449	5,458	11,046	16,683
Interest (expense)/income	—	(377)	(5,473)	(17,561)	(26,428)	(27,638)	(25,869)
Depreciation	—	(354)	(4,361)	(8,293)	(12,148)	(12,148)	(12,148)
Pretax profits	(28)	2,035	13,932	44,097	58,367	55,703	61,609
Tax	—	—	—	(1,446)	(3,894)	(3,610)	(3,965)
Deferred taxation	—	(327)	(3,272)	(5,662)	(7,507)	(5,994)	(4,678)
Minority interest	2	—	—	(1,249)	(3,380)	(3,215)	(3,701)
Net income	(26)	1,708	10,659	35,741	43,586	42,884	49,265
Extraordinary items	—	—	—	—	—	—	—
Reported profit	(26)	1,708	10,659	35,741	43,586	42,884	49,265
Earnings per share (Rs)	(0.0)	0.8	4.9	16.4	20.0	19.7	22.6
Balance sheet							
Paid-up common stock	18,420	21,800	21,800	21,800	21,800	21,800	21,800
Total shareholders' equity	22,743	55,011	65,670	101,411	144,997	187,881	237,147
Deferred taxation liability	—	360	3,632	9,294	16,801	22,796	27,474
Minority interest	703	2,039	2,417	4,847	9,444	12,659	16,359
Total borrowings	49,897	96,805	161,900	218,401	246,382	238,161	216,436
Total liabilities and equity	73,343	154,214	233,620	333,952	417,624	461,496	497,416
Net fixed assets	3,368	13,890	107,667	197,688	281,903	269,756	257,608
Capital work-in progress	65,845	112,797	89,588	57,244	—	—	—
Investments	—	—	—	—	—	—	—
Goodwill	—	—	—	—	—	—	—
Cash	5,585	28,205	32,331	65,189	115,532	172,003	219,981
Net current assets (excl. cash)	(1,456)	(678)	4,033	13,831	20,189	19,737	19,827
Net current assets (incl. cash)	4,129	27,527	36,364	79,020	135,720	191,740	239,807
Total assets	73,343	154,214	233,620	333,952	417,624	461,496	497,416
Free cash flow							
Operating cash flow, excl. working capital	(30)	2,389	18,292	50,945	66,621	64,241	69,792
Working capital changes	(1,142)	(778)	(4,711)	(9,798)	(6,357)	452	(90)
Capital expenditure	(44,709)	(57,827)	(74,929)	(65,970)	(39,119)	—	—
Free cash flow	(45,881)	(56,217)	(61,348)	(24,823)	21,144	64,693	69,702
Ratios							
Net debt/equity (%)	189.0	120.2	190.3	144.2	84.7	33.0	(1.4)
Return on equity (%)	(0.1)	4.4	17.7	42.8	35.4	25.8	23.2
Book value per share (Rs)	12.3	25.4	31.8	50.8	74.2	96.6	121.4
ROCE (%)	(0.1)	1.5	5.5	13.5	13.5	11.3	11.9

Source: Company, Kotak Institutional Equities estimates

VALUATIONS: INITIATE WITH ADD RATING AND TARGET PRICE OF RS130/SHARE

We initiate coverage on Adani Power Ltd (APL) with an ADD rating and target price of Rs130/share. At our target price, APL will trade at a P/B multiple of 4X FY2011E net worth and P/E of 27X FY2011E EPS offering limited upside to the CMP of Rs117/share. We note that the superior trading multiple for APL takes cognizance of better profitability and access to low-cost fuel. Visibility on projects currently at the development stage will likely result in value accretion for APL, and remains the key upside risk to our target price.

September 2011-based SOTP target price of Rs130/share

Our target price of Rs130/share comprises the aggregated DCF-to-equity value (average of March 2011 and March 2012) of the four power projects currently under construction. At our target price, APL will trade at 4X FY2011E net worth and 27X FY2011E EPS. We do not ascribe any value to the 2.6 GW of planned power projects at Kawai and Tiroda III as the projects are still to tie-up some key inputs. We note that the inclusion of the development portfolio (after factoring a higher discount rate) could add ~Rs15/share to our target price. Exhibit 3 gives the details of valuation and implied P/B for the various projects under construction.

Exhibit 3: Our SOTP-based valuation yields a target price of Rs130
SOTP-based valuation of APL

Project	Type	Capacity (MW)	Cost		Equity			Ownership (%)	Value (Rs bn)	CoE (%)
			(Rs bn)	(Rs mn / MW)	(%)	Invested	To be invested			
Mundra 1&2	Thermal	1,320	44	33	16	5	2.4	100	69	12
Mundra 3	Thermal	1,320	58	44	24	6	7.6	100	53	12
Mundra 4	Thermal	1,980	110	55	20	12	10.2	100	67	12
Tiroda 1	Thermal	1,320	66	50	20	2	10.8	74	41	12
Tiroda 2	Thermal	660	27	41	20	1	4.9	74	24	12
Total		6,600	304	223	15	25.4	35.9		253	
Equity raised									30	
Post money value									283	
No. of Shares									2	
Value per share									130	

Source: Kotak Institutional Equities estimates

At our target price, APL will trade at 7X FY2014E EPS, which is the first year of full operations for all the power projects under construction.

Exhibit 4: At CMP, APL is trading at 3.6X FY2011E P/B and 24X FY2011E P/E
Valuation summary of APL, March fiscal year ends, 2010-15E

	2010	2011E	2012E	2013E	2014E	2015E
Valuations (at CMP)				533096-IN		CMP
No. of shares	2,180	2,180	2,180	2,180	2,180	2,180
Book value (Rs)	26	32	51	75	98	123
Net worth	55,933	70,099	112,196	164,146	213,845	268,693
Market cap	255,060	255,060	255,060	255,060	255,060	255,060
P/B (X)	4.6	3.6	2.3	1.6	1.2	0.9
EPS	0.8	4.9	16.4	20.0	19.7	22.6
P/E (X)	144	24	7	6	6	5
RoE (%)	4	18	43	35	26	23
RoCE (%)	2	6	14	14	11	12
Net debt	68,960	129,929	153,572	131,210	66,517	(3,185)
EV	324,020	384,989	408,632	386,270	321,577	251,875
EV/EBITDA (X)	132.5	16.3	6.0	4.2	3.8	3.0

Source: Kotak Institutional Equities estimates

We factor sustainable merchant tariffs of Rs3.5/kwh from FY2014E, as we believe (1) large-scale commissioning of power capacities over the next few years will partially address the current demand-supply mismatch, and (2) competition from new merchant-based power plants will drive down profitability to reasonable levels in the short-term market. We note that even at Rs3.5/kwh, APL will have an ROIC of 33.3% for imported coal-based plants (Mundra I, II & III) and 57.3% domestic coal-based plant (Tiroda). Exhibit 5 gives the sensitivity of our sustainable merchant tariff assumption to the valuation of APL.

Exhibit 5: A stable merchant tariff assumption of Rs3.5/kwh yields a TP of Rs130/share
SOTP sensitivity to sustainable merchant tariff assumption

Merchant tariff (Rs/kwh)	Coal price (US\$/ton, CIF)				
	36	45	50	60	70
2.5	114	108	105	99	92
3.0	122	116	113	107	101
3.5	130	124	121	115	109
4.0	138	132	129	123	117
4.5	146	140	137	131	125

Source: Kotak Institutional Equities estimates

Our earnings model currently factors in zero-tax incidence for the power projects at Mundra as APL is acting as a co-developer for the Mundra Port and SEZ. We also assume that the incidence of 16% excise on power sold under the PPAs will be reimbursed by the procurer of power and hence will not have a bearing on the earning of APL. Higher tax incidence in the form of MAT being made applicable to the Mundra projects could erode Rs14/share from our target price and impact near-term earnings by Rs1.3/share for FY2011E and Rs3.6/share for FY2012E.

Exhibit 6: A merchant tariff of Rs3.5/kwh results in healthy margins as well as ROIC for both coal and gas-based generations
Production costs for different types of fuel in thermal generation

Unit	Gas (a)	Coal (b)	Coal (c)	Coal (d)	APL	
					Domestic coal	Imported coal
Price (Rs/unit)	m3	Kg	Kg	Kg	Kg	Kg
Calorific value (Kcal/unit)	9,000	3,500	3,500	6,500	3,800	5,200
Thermal requirement (kcal/kwh)	1,850	2,324	2,324	2,324	2,150	2,150
Cost of generation (Rs/Kwh)	2.03	0.43	1.00	1.47	0.72	0.94
Other operating costs (Rs/Kwh)	0.08	0.20	0.20	0.20	0.18	0.18
Plant load factor (%)	85	85	85	85	90	90
Fixed capital investment (Rs mn/MW)	30	45	45	45	33	50
Depreciation charge (%)	5.5	4.8	4.8	4.8	4.0	4.0
Depreciation charge (Rs/Kwh)	0.22	0.29	0.29	0.29	0.17	0.25
Fixed capital charge (%)	15.5	15.5	15.5	15.5	15.5	15.5
Fixed capital charge (Rs/Kwh)	0.62	0.94	0.94	0.94	0.65	0.98
Total cost (Rs/Kwh)	2.96	1.86	2.42	2.90	1.72	2.35
Premium over regulated tariff @Rs3.5/kwh (%)	18.4	88.3	44.5	20.7	103.9	49.1
ROIC @ Rs3.5/kwh (%)	28.6	42.1	32.9	25.1	57.3	33.3

Note:

- (a) Gas price at US\$5.5/mn BTU (delivered).
- (b) Domestic coal at pithead.
- (c) Domestic coal 1,000 kms from pithead.
- (d) Imported coal at coastal plant;

Source: Platt's, Indian Railway Budget, Kotak Institutional Equities estimates

As units for different projects start commissioning, APL will be able sell the entire commissioned capacity on a merchant basis till the PPAs kick in. This will allow APL to benefit from high short-term tariffs in the near term. This pre-PPA sale of power on merchant basis contributes ~Rs20/share to our target price. Exhibit 7 highlights the time window available for the merchant sale for various projects.

Exhibit 7: Pre-PPA sale of power on merchant basis contributes Rs20/share to our target price
Project-wise detail of pre-PPA merchant sale of power

Project	Capacity (MW)	Expected COD of 1st unit	PPA start date	Value addition from pre
				PPA merchant sale (Rs/share)
Mundra I&II	1,320	Oct-09	Feb-10/June-10	—
Mundra III	1,320	Jan-11	Feb-12	13
Mundra IV	1,980	Aug-11	Feb-13	5
Tiroda I	1,320	Jul-11	Sep-12	2
Trioda II	660	Apr-12	Sep-12	—
Total				20

Source: Kotak Institutional Equities estimates

We use an SOTP-based approach to value private utility companies, aggregating the DCF-to-equity value of the various power projects in the company's portfolio. This approach does not capture the incremental value attributable to future projects based on the re-investment of consolidated cash flows; however, we prefer to be conservative given the large execution risks in the development stage of a power project.

DCF-to-equity to value power projects

We prefer the DCF-to-equity valuation methodology to value power projects. DCF-to-equity is able to capture the broad matrix of multiple sale arrangements, varied sources of fuel supplies and elongated implementation schedules. Long-term PPAs ensure stable and predictable returns and cash flows, enabling a reasonably close forecast for the financials of a power project over the life of the PPA (or power project). In the case of merchant power plants, DCF-equity is able to capture the likely normalization of merchant returns over a period of time.

The P/B implied by value arrived from the DCF-to-equity analysis can be cross-checked with the trading multiples of the other utility stocks. The regulated businesses earning 14-16% RoE and additional incentives trade at a much lower P/B multiples as compared to merchant power assets with high RoEs. However, EV/EBITDA of a merchant power plant will be lower as these power plants are earning extraordinary high margins in the prevailing deficit environment, which should normalize in the long term.

Our DCF-equity implies a P/B of ~2X for thermal power plants (owned by Tata Power, Reliance Infrastructure etc.) earning regulated returns (~20-22% RoE including incentives). Our DCF-equity of the 1,000 MW merchant power plant being run by Jindal Steel and Power (and generating RoE of more than 200%) implies a P/B of 16X on invested equity and 6X EV/EBITDA on FY2011E basis.

In our view, the following variables are critical in determining valuations of power projects and can dramatically alter the returns profile and valuation.

- ▶ **Returns and incentives assured in the PPA or merchant sale of power.** CERC regulations stipulate 15.5% post-tax RoE, while merchant power projects (without any PPA) with low generation costs can earn much higher returns. We estimate APL will likely sell about 22% power on a merchant basis and the remaining 78% through long-term PPAs with tariffs determined through competitive bidding.
- ▶ **Time taken for project implementation.** A short implementation schedule can reduce the interest during construction (IDC) component of project costs and also improve the equity IRR of the project. The merchant sale of power by APL will likely provide much higher returns if implemented under strict time and cost controls.
- ▶ **Structuring of project finances and interest costs.** In the case of competitively-bid tariffs or merchant sale where tariffs are not contingent on the invested equity, higher leverage can increase the equity IRR of the project. Most of APL's projects are structured with a debt:equity ratio of 80:20.

Too early for multiple-based valuation

APL has limited operational history, as the first unit of Mundra I & II was declared commercial in October 2009, making it difficult to value APL using the comparable valuation approach. However, Exhibit 8 gives a comparative valuation of power utilities under our coverage. We note that NTPC, APL and Reliance Power are the only companies whose valuations are driven primarily by generation assets. All the other companies, viz. Reliance Infrastructure, Tata Power, CESC and Lanco Infratech, have diversified portfolios and we have valued them using the sum-of-parts method.

Exhibit 8: Trading multiples across utilities are not comparable due to differing stages of project implementation

Summary valuation of utility companies

	Category	Rating	Mkt Cap. (US\$ bn)	Price 24-May	Target price	EV/EBITDA (X)					P/E (X)				
						2008	2009	2010E	2011E	2012E	2008	2009	2010E	2011E	2012E
Adani Power	Gen	ADD	5.7	117	130	—	—	132.5	13.7	4.7	—	—	143.5	23.9	7.1
CESC	Int	ADD	1.0	366	455	7.3	7.5	6.9	5.3	4.5	13.2	11.5	11.1	8.5	7.9
Lanco Infratech	Div	BUY	2.9	57	60	33.8	32.7	26.7	11.8	9.2	38.4	39.1	34.2	17.0	14.3
NTPC	Gen	REDUCE	34.8	198	200	14.8	16.7	13.6	12.3	10.3	21.2	20.2	17.8	16.0	13.5
Reliance Infrastructure	Int	ADD	5.5	1,048	1,100	29.7	22.3	15.1	13.8	9.2	27.9	16.7	15.2	14.1	10.2
Reliance Power	Gen	SELL	7.6	150	128	(831)	(360)	916.5	91.3	30.2	393.5	146.7	60.7	48.8	26.2
Tata Power	Int	BUY	6.5	1,244	1,485	10.8	13.1	12.0	10.2	7.5	23.8	21.6	18.6	14.4	11.5

	P/BV (X)					Div Yield (%)	ROCE (%)					ROE (%)				
	2008	2009	2010E	2011E	2012E		2010E	2008	2009	2010E	2011E	2012E	2008	2009	2010E	2011E
Adani Power	—	—	4.6	3.6	1.6	—	—	—	1.5	5.5	13.6	—	—	4.4	17.8	43.0
CESC	1.8	1.6	1.4	1.2	1.1	1.1	11.3	10.8	9.5	11.1	11.1	16.8	14.9	13.3	15.3	14.5
Lanco Infratech	6.9	6.0	4.0	3.2	2.6	—	15.1	12.0	7.9	12.0	11.6	19.7	16.4	14.5	20.9	20.0
NTPC	3.0	2.8	2.6	2.3	2.1	2.1	10.9	10.6	10.2	10.5	11.3	14.9	14.3	14.9	15.2	16.6
NTPC - adj.	5.2	4.0	3.3	2.8	2.4	—	—	—	—	—	—	—	—	—	—	—
Reliance Infrastructure	1.5	1.4	1.3	1.2	1.1	0.8	6.0	6.9	5.9	6.1	7.5	4.3	4.9	7.8	7.6	10.4
Reliance Power	2.5	2.6	2.5	2.4	2.2	—	—	—	2.3	2.1	3.4	1.3	1.8	4.2	5.0	8.7
Tata Power	3.0	2.4	2.2	1.9	1.7	1.1	7.7	7.5	6.7	6.2	6.9	10.0	13.3	13.3	12.9	14.9

Note: NTPC - adj.: P/BV - adjusted for the treasury portfolio and income.

Source: Bloomberg, Kotak Institutional Equities estimates

BUSINESS MODEL: ATTRACTIVE AND SUSTAINABLE EARNINGS

Adani Power has entered into Case-I type competitive bids for the sale of 4,744 MW of power out of the 6,600 MW currently under implementation. Case-I type competitive bids are invitations by the procurer for purchase of power without being project-specific (unlike Case-II type bids like UMPPs). As Case-I type competitive bids are not project-specific, they allow APL to capitalize on its presence in the power-deficit West India, and lock in long-term tariffs ensuring superior and sustainable profitability. The off-take arrangement also allows APL to profiteer from access to low-cost fuel, without taking a risk on sales volumes, as would have been the case in merchant sale arrangements.

Assured sale hedges off-take and pricing risk

APL has committed to selling 4,744 MW out of 6,600 MW currently under implementation through Case-I type competitive bids, which, in our view, insulates the company from off-take- or merchant-tariff risk, without significantly compromising its profitability as would be the case under cost-plus regulated tariffs.

We note that APL has entered into lucrative sale arrangements with various State Electricity Boards (SEBs), at long-term levelized tariffs ranging from Rs2.35/kwh to Rs3.42/kwh. Exhibit 9 lists the various sale arrangements entered into by the company for the power projects under implementation.

Exhibit 9: APL has long-term PPAs for ~70% of their targeted capacity

Sale arrangements for APL power plants

Project	Type	Capacity (MW)	Power sale mix (%)		PPA arrangement
			PPA	Merchant	
Mundra 1&2	Thermal	1,320	82	18	Long term PPA for 1,000 MW entered with GUVNL at tariffs ranging from Rs2.81/unit to Rs3.42/unit.
Mundra 3	Thermal	1,320	82	18	Long term PPA for 1,000 MW entered with GUVNL at a fixed tariff of Rs2.35/unit.
Mundra 4	Thermal	1,980	76	24	Long term PPA for 1,424 MW entered with UHBVNL and DHBVNL at tariffs ranging from Rs2.35/unit to Rs3.26/unit.
Tiroda 1&2	Thermal	1,980	74	26	Long term PPA for 1,320 MW entered with MSEDCL (combined for Tiroda I and II) at tariffs ranging from Rs2.55/unit to Rs3.47/unit.
		6,600			

Source: Company, Kotak Institutional Equities

More recently APL has submitted a request to withdraw from the PPA for selling power from Mundra III at Rs2.35/kwh to Gujarat Urja Vikas Nigam Ltd (GUVNL). APL has contended that as Gujarat Mineral Development Corporation (GMDC) is unable to supply coal from the Morga coal block, which was a condition precedent as per the PPA, APL is within its right to withdraw from the sale arrangement. The petition to withdraw from the PPA is currently sub-judice—if allowed, it will enable APL to sell the power from Mundra III in the short-term market (or enter into more lucrative bids), albeit at a penal cost of Rs1 bn. We estimate the arrangement to add ~Rs19/share to APL's target price and improve sustainable earnings by Rs3.7/share.

Benefit of low-cost fuel retained under competitive bid

Case-I bids allow APL to capitalize on low-cost fuel, as the benefit of low-cost fuel is not transferred to the end-consumer as is the case under the cost-plus tariff regime. APL has entered into coal-supply arrangements for the supply of imported coal at an average price of US\$36/ton (CIF Mundra), which translates into fuel cost of Rs0.96/kwh compared to an average fuel cost of Rs1.19/kwh based on domestic coal-based power at Mundra IV.

Exhibit 10: APL has an average fuel cost of Rs0.96/unit for plants using imported coal
 Fuel cost computation for plants using imported and domestic coal

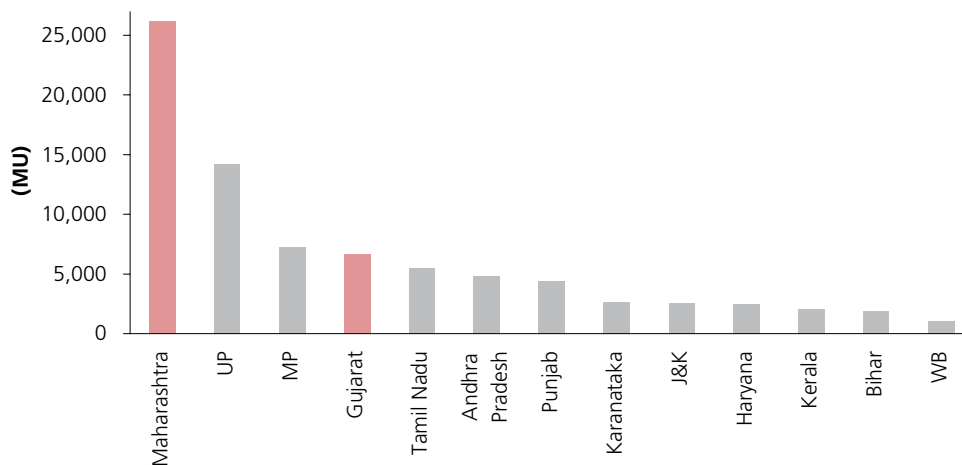
	Imported (Mundra I&II)	Domestic (Mundra IV)
SHR (kcal/kwh)	2,400	2,150
GCV (kcal/kg)	5,200	3,800
Coal consumption (kg/kwh)	0.5	0.6
Coal cost (Rs/ton)	2,087	2,100
Per unit coal cost (Rs/kwh)	0.96	1.19

Source: Kotak Institutional Equities estimates

Plant location gives competitive edge, APL favorably positioned

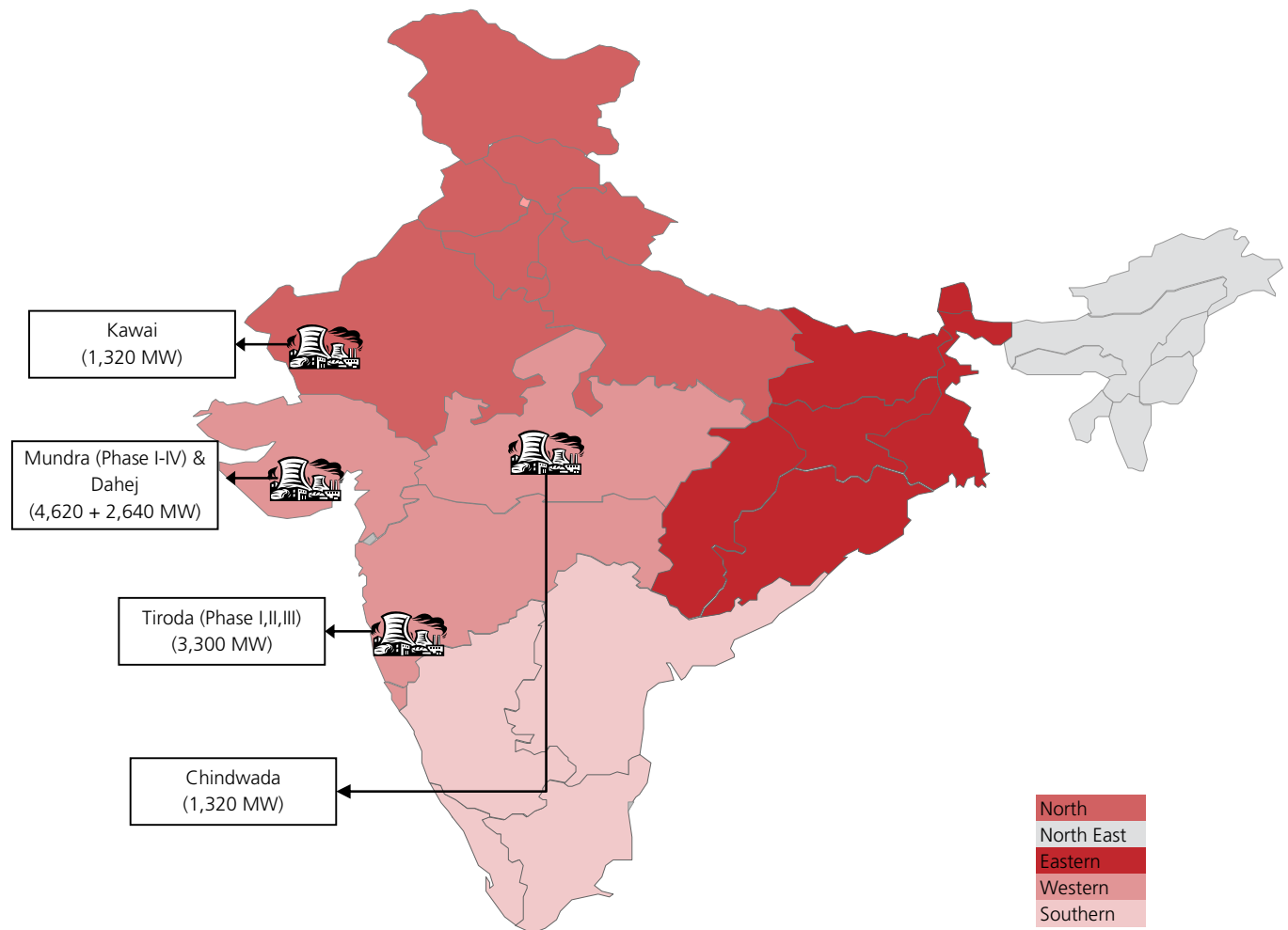
APL obtains a competitive advantage over other generators when participating in Case-I bids as the entire 6,600 MW of power projects currently under implementation is located in the power-deficit region of West India. Under Case-I bids, the generator has to usually supply power at the transmission point of the purchasing State. Hence, transmission charges and therefore location play a role in determining end-purchase price for the procuring State. We note that Maharashtra and Gujarat (See Exhibit 11) have among the highest energy deficits in the country along with Uttar Pradesh and Madhya Pradesh.

Exhibit 11: Maharashtra has one of the highest energy deficits in the country
 State-wise energy deficits (MU), FY2009



Source: Ministry of Power, Kotak Institutional Equities

Exhibit 12: APL has a higher concentration of capacities located in Maharashtra and Gujarat-- States with a higher power deficit
Location map of APL's power plants



Source: Company, Kotak Institutional Equities

Transmitting power versus transporting coal

Location advantage for a power plant could arise from (1) proximity to coal mines or (2) proximity to load center. The former saves on transportation cost of coal while the latter results in lower transmission cost. APL is investing Rs27.5 bn to set up a dedicated transmission line from its Mundra project site in Gujarat to Haryana, in order to minimize transmission costs to be incurred in the committed supply of power to UHBNL and DHBNL.

Cost of transmitting power from Gujarat to Haryana would be ~35-40p/kwh through a dedicated transmission line compared to ~75p/kwh if APL uses the transmission infrastructure of PGCIL and other intermediate regional grids. Benefits of a dedicated transmission line also accrue from lower AT&C losses and dedicated availability of transmission infrastructure. A low cost of transmission partially offsets the competitive edge enjoyed by pit-head based power stations.

Differentiating between the alternative off-take arrangements

- ▶ **Cost-plus:** Cost-plus tariff arrangements are the most secure form of power sale, where the generation company is reimbursed all costs incurred and earn profits as an assured RoE on invested equity. Incremental earnings (and valuations) are a function of superior operational efficiency. NTPC, amongst the listed utilities, sells most of its power under cost-plus tariff arrangements.
- ▶ **Competitive bids:** Competitive bids involve a tender process by which procuring States invite bids for purchase of power from generating companies. The generating companies quote financial bids for sale of power under capacity and energy charges, both of which contain an escalable as well as non-escalable component. As highlighted previously, competitive bids allow generating companies to capitalize on lower generation cost as well as leverage the benefits of locational advantages.
- ▶ **Merchant:** Under the merchant sale of power, generating companies sell their output through short-term open market contracts, and benefit from the premium on merchant tariffs. In our view, a large proportion of merchant sale exposes the generating company to pricing and off-take risk in the long term.

Exhibit 13: Majority of APL sale of power will be through long-term PPA (competitive bid)

Details of various off-take arrangements

Arrangement	Returns	Upside	Value drivers	Key Risk
Cost-plus	Normative RoE	Savings on norms. PLF incentive	Operational efficiency	Execution risk
Competitive-bid Case-I	Bid driven	PLF incentives	Control on capital and fuel costs	Cost escalation
Competitive-bid Case-II	Bid driven	PLF incentives	Control on capital and fuel costs	Cost escalation
Merchant	Market driven	No cap on returns	Trading capabilities	Merchant tariff and offtake

Source: Kotak Institutional Equities

COMPANY PROFILE: CAPITALIZING ON SYNERGIES

Adani Power Ltd (APL), part of the Adani group promoted by Mr. Gautam Adani, is a developer of power-generation projects and has a portfolio of 6,600 MW currently under implementation, with another 6,600 MW in various stages of planning. APL aspires to develop power projects aggregating 13.2 GW by end-FY2015E benefiting from its parentage, which facilitates access to coal resources at a competitive cost as well as allows claims for fiscal benefits as a co-developer of the SEZ project.

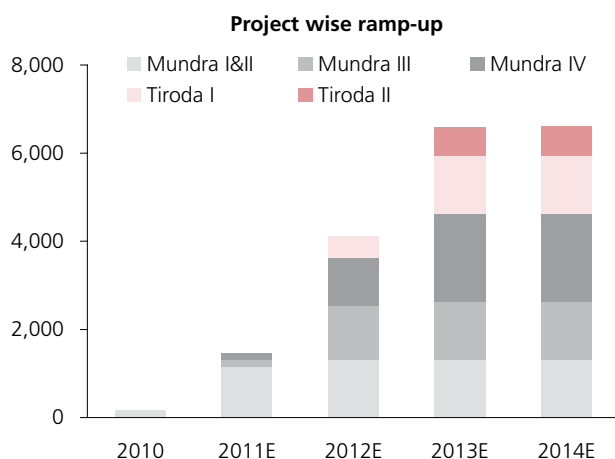
6,600 MW of capacities under construction; 13,200 MW by end-FY2015E

APL currently has a portfolio of 6,600 MW under implementation, comprising 4,620 MW at Mundra in Gujarat and 1,980 MW at Tiroda in Maharashtra. APL is targeting to commission the current portfolio of projects by FY2012E and aspires to be a 13,200 MW project developer by end-FY2015E. APL has recently bid to build a 1,000 MW power plant in Kosovo and is amongst three short-listed bidders to build a lignite-based power project.

APL's power portfolio comprises a mix of imported as well as domestic coal projects, with 2,640 MW of the 6,600 MW dependent primarily on imported coal, the balance being sourced through domestic mines and linkages. In terms of the sales arrangements, of the current portfolio of projects under construction, 4,744MW are based on long-term sale arrangements through competitive bids while the balance 1,856 MW will be available for merchant sale.

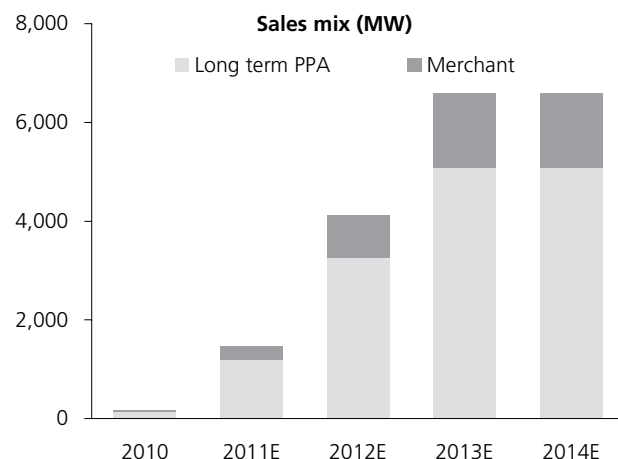
Exhibit 14 gives a ramp-up of capacities for APL, while Exhibit 15 gives a break-up in terms of off-take arrangements.

Exhibit 14: 6,600 MW of capacity to be commissioned by FY2013
Project-wise capacity ramp-up schedule of APL, March fiscal year ends, 2010-14E (MW)



Source: Kotak Institutional Equities estimates

Exhibit 15: Approx. 27% of total capacity will be merchant sale
Sale mix-wise capacity ramp-up schedule of APL, March fiscal year ends, 2010-14E (MW)



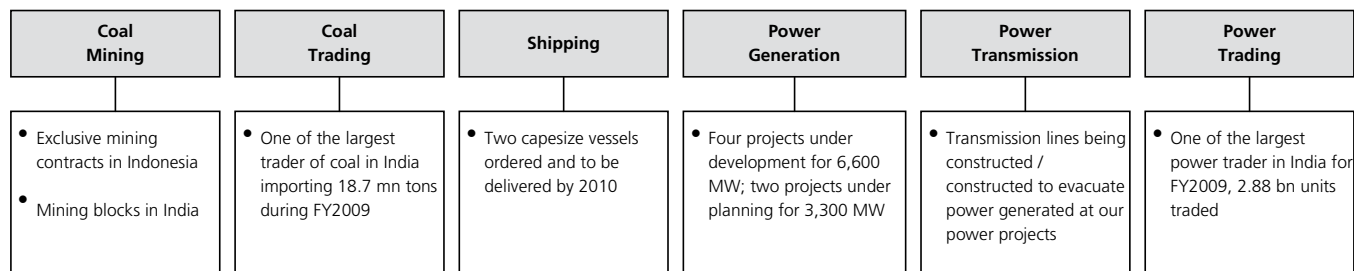
Source: Kotak Institutional Equities estimates

Apart from the existing 6,600 MW of capacity under implementation, APL has another 6,600 MW of capacity in various stages of planning. These projects include 1,320 MW at Kawai, Rajasthan, 1,320 MW at Tiroda III, 2,640 MW at Dahej and 1,320 MW at Chindwada. We note that Kawai and Tiroda III have achieved significant milestones whereas Dahej and Chindwada are in early stages of planning.

Adani Enterprise: Largest importer of coal in India

APL is promoted by Adani Enterprise Ltd (AEL), which directly owns 70.25% of APL, and has business interest encompassing coal trading, food processing, contract mining, city gas distribution, etc. Being a part of the Adani group gives APL the advantage of a credible track record in execution as demonstrated by the group in the development of Mundra Port and SEZ (MPSEZ).

Exhibit 16: Adani group has its presence across the power value chain
Business interests of Adani Enterprise



Source: Company, Kotak Institutional Equities

AEL has also entered into an agreement for supplying imported coal for a period of 15 years, at CIF (ex-Mundra) cost of US\$36/ton. AEL has ~20 years of experience in the import business, and is amongst the largest importers of coal in India. AEL will source the required quantity of coal from Bunyu Islands in Indonesia, where group company PT Adani Global owns coal mines with reserves in excess of 150 mn tons. AEL will also utilize the services of PT Adani Shipping to facilitate transportation of coal from Indonesia, to be received at Mundra Port in Gujarat.

Co-developer to Mundra Port & SEZ allows for tax concessions

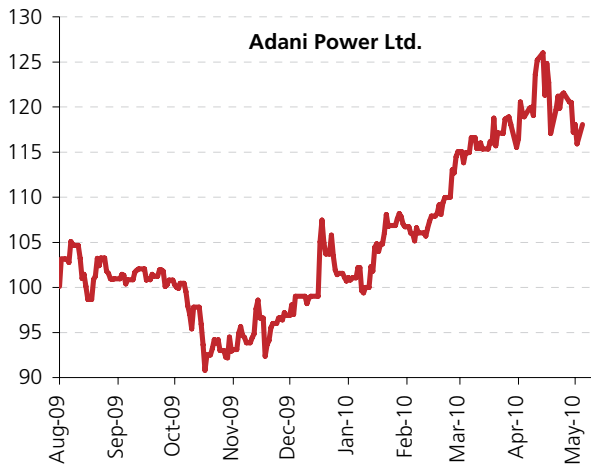
APL is also a co-developer to the Mundra Port and SEZ project, owned by the promoter company. As co-developer to the SEZ, APL is entitled to tax concessions in the form of zero-tax incidence, unlike other power developers who have to bear the Minimum Alternate Tax (MAT) in the early years of the project life. The tax concessions add Rs14/share of value to APL, and add earnings of Rs1.3/share in FY2011E and Rs3.6/share in FY2012E.

We note that the government has recently introduced an excise duty of 16%, on sale of power from SEZ-based units to non-SEZ areas. However, we expect the higher tax incidence to be reimbursed for competitive bids it already entered into, as those PPAs have a 'Change of Law' clause allowing for compensation of higher costs incidence due to amendments in government regulations.

Pre-issue allotment of shares and details of stakeholders

APL has a net worth of Rs55 bn (Rs25/share) of which AEL has contributed Rs8.5 bn for 70.25% ownership (implied issue price of Rs5.5/share). Other large investors in APL include 3i Power Investments and Ventura Power who invested Rs14.7 bn at an implied price of Rs63.5/share. Exhibit 17 traces the stock price of APL since listing, while Exhibit 18 traces the evolution of the company over the years. APL raised Rs30.2 bn through the IPO-route at an issue price of Rs100/share.

Exhibit 17: APL stock has increased ~16% since listing
Stock price history of APL



Source: Company, Kotak Institutional Equities

Exhibit 18: Key timeline for APL since incorporation in FY1996
Share capital history of APL (Rs mn)

Date	Details
Aug-96	Incorporation of the company
Sep-06	Financial closure for Mundra I
Feb-07	PPA with GUVNL
Jul-07	Financial closure for Mundra II
Mar-08	Financial closure for Mundra III
Aug-07	PPA with UHBVNL and DHBVNL
Nov-08	Investment agreement with Ventura Power
Jan-09	Co-development agreement with MPSEZL
Jan-09	Financial closure of Tiroda I
Jun-09	Financial closure for Mundra IV
Jul-09	Financial closure of Tiroda II
Aug-09	IPO of APL

Source: Company, Kotak Institutional Equities

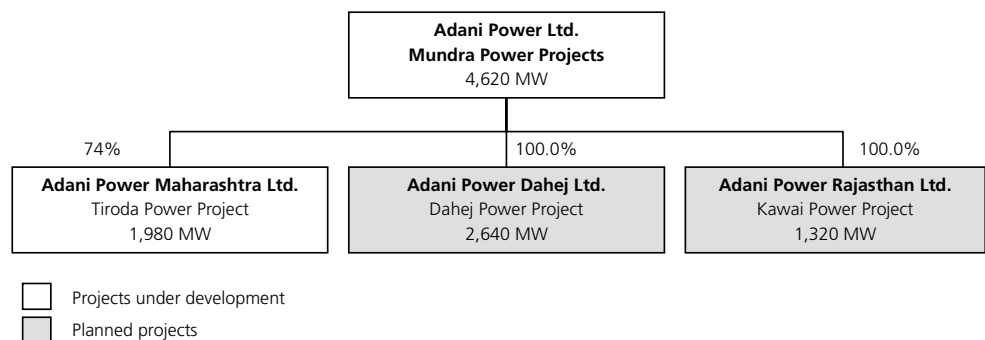
We note that since listing, there have been few key events for the APL:

- ▶ Announcement of expansion at Tiroda in November 2009—APL announced that it would extend the current project at Tiroda and set up another 1,320 MW as Tiroda III.
- ▶ Winning the RRPVNL bid of 1,200 MW—APL won the RRPVNL bid for supply of 1,200 MW of power at a levelised tariff of Rs3.24/kwh in December 2009. APL proposes to supply power to RRPVNL from its Kawai power plant.
- ▶ Union budget for FY2011—it introduced excise duty of 16% on the sale of power from SEZ-based units to non-SEZ areas which affects APL’s sale from Mundra power plants.

Exhibit 19 gives the ownership structure of the various SPVs held by APL. We note that APL owns 74% in Adani Power Maharashtra Ltd (APML), while the balance 26% is held by Millennium Developers and Somerset Fund.

Exhibit 19: APL owns 74% in Adani Power Maharashtra Ltd (APML) and 100% in Dahej and Kawai projects

SPV structure of Tiroda, Dahej and Kawai projects



Source: Company, Kotak Institutional Equities

KEY RISKS: AVAILABILITY AND PRICING OF FUELS

APL is to source 31% of its fuel requirements from AEL which will be importing the coal from Indonesia, through PT Adani Global at an average cost of US\$36/ton, compared to the current market price of US\$100-105/ton. AEL's inability to source the required quantum of coal at the agreed price due to potential unfavorable changes to mining laws in Indonesia remain a key risk to APL's earnings and valuations. Other risks for APL could arise from lower merchant tariffs and overall execution challenges associated with project development of such a magnitude.

Availability and pricing of imported coal

APL proposes to import 7.5 mn tpa of coal, for which it has entered into a coal-supply agreement with AEL. As per this contract, AEL will supply coal at price of US\$36/ton for a period of 15 years. APL remains exposed to the risk of renewing coal supply arrangements on favorable terms and conditions for the remaining useful life of the power projects after 15 years. Exhibit 20 highlights the requirement of coal for APL, including the break up between domestic and imported coal.

Exhibit 20: APL plans to import ~31% of its total coal requirement
Fuel mix of APL power plants

Project	Fuel	Annual requirement	Nature	Cost
		(mn tons)		(Rs/ton)
Mundra I&II	Coal	5.30	Imported+Domestic	2,087
Mundra III	Coal	4.75	Imported+Domestic	2,087
Mundra IV	Coal	8.07	Imported+Domestic	2,081
Tiroda I	Coal	5.86	Domestic	1,200
Tiroda 2	Coal	2.93	Domestic	1,200
Total		26.91		

Source: Company, Kotak Institutional Equities estimates

We note that the inability of AEL to supply coal at the contracted rates (57% discount to prevalent prices) remains the biggest risk to APL's profitability. A US\$10/ton increase in delivered price of coal could erode ~Rs7/share from APL's valuations and impact FY2012E earning by 18-19%.

Exhibit 21: Valuation falls to by almost 6% for increase in coal price from US\$36/ton to US\$50/ton
Sensitivity of APL's valuation to Indonesian coal price and exchange rate (Rs/share)

Exchange rate (USD/INR)	Coal price (US\$/ton)				
	36	45	50	60	70
40	137	132	129	123	118
42	134	129	126	120	114
45	130	125	122	115	109
47	128	122	119	112	106
49	125	119	116	109	102

Source: Kotak Institutional Equities estimates

We note that AEL's ability to supply coal at the contracted rate stems from the fact that the coal reserves in Bunyu Island have a very low strip ratio of 2X compared to nearly 10X for coal mines of Bumi Resources. We note that production costs are largely a function of the strip ratio and geological surprises on development of the coal mines by AEL could impair its ability to supply the coal at the contracted rate. Exhibit 22 and 23 compute the landed cost of imported coal for APL and production cost of coal for various Indonesian coal companies.

Exhibit 22: Total cost of coal works out to be ~\$45/ton
Landed cost assumptions of APL (US\$/ton)

Delivered price from AEL (US\$/ton)	36.0
Customs (US\$/ton)	1.8
Port and Cargo handling (Rs/ton)	300.0
Total (US\$/ton)	45.0

Source: Company, Kotak Institutional Equities

Exhibit 23: Average cash cost of companies with strip ratio 4-5 is \$25/ton

Average cash cost of Indonesian coal mining companies (US\$/ton)

Company	Strip ratio (X)	Average cash cost (US\$/ton)	Cash cost adjusted for strip ratio (US\$/ton)
Adaro	5	25.1	12.6
Bumi	12	27.5	6.3
ITMG	12	32.0	7.4
PTBA	4	24.9	15.0

Source: Company, Kotak Institutional Equities

Potential unfavorable changes to mining laws in Indonesia

APL will likely source its entire requirement of imported coal from Indonesia, exposing it to regulatory risks emanating from potential unfavorable changes to mining policies in Indonesia. Indonesia is one of the largest exporters of coal in the world, with annual exports aggregating 160 mn tpa. However, dwindling reserves and a low reserve-to-production ratio (19X) have prompted the local government to review its export policies. We do not foresee a blanket ban on exports of coal as (1) export of mineral form a substantial portion of GDP for the country, and (2) domestic consumption is currently at 79 mn tpa against annual production of 234 mn tpa. However, we do not rule out unfavorable regulatory changes in the form of (1) higher royalty payments, (2) increased domestic market obligations, and (3) stringent transfer pricing norms as the current mining policy of the government is under review.

Environmental concerns derail development of captive mines

Environmental concerns have derailed the development of the Lohara West and Lohara Extension captive mines that were to supply 6.2 mn tpa of coal to the Tiroda power plant. The coal mines had reserves of 170 mn tons, though a part of the coal block is under forest cover. Environmentalists raised concerns over the destruction of a tiger habitat because of development of the coal mines.

We note that APL has obtained coal linkages from CIL, as a fall-back measure due to a likely delay in the development of the said coal mine. Our earnings assumptions do not assume any benefit of low-cost coal from the captive mines, and have factored coal cost of Rs1,200/ton (based on linkage coal) for the Tiroda power project.

Competitive bids expose profitability to higher input costs

As highlighted previously, APL will sell 4,744 MW out of 6,600 MW currently under construction on competitive-bid basis. We note that while competitive bids allow APL to capitalize on its low cost of generation, any adverse movement in the cost of generation on account of higher fuel cost and/or interest rates will not be compensated through a corresponding increase in tariffs, as is the case under the cost-plus tariff regime under which a large quantum of power is sold by extant players.

Execution of large project portfolio—visa constraints may further delay project implementation by Chinese vendors

APL currently has a portfolio of 6,600 MW currently under implementation, and a development portfolio of 6,600 MW. We note that key project inputs such as land, environmental clearance and financial closure have already been achieved for the entire 6,600 MW under implementation, which circumvent key execution risk experienced in the development of large portfolio of projects.

However, APL is exposed to the constraint of procuring visas for expat workers, as APL has awarded its entire portfolio of projects to Chinese EPC contractors. We note that as per a GoI's notification issued in November 2009, project developers have to restrict the number of skilled manpower to 1% of the total workforce. Further, all such skilled workers have to hold an employment visa, and cannot assist in project commission activities on regular business visas. The diktat specifically disallows the use of non-local unskilled labor. In a risk mitigating measure, the Chinese contractors of APL have sub-contracted Indian vendors to facilitate timely execution of the projects.

Merchant power—offtake risk, sustainable realizations

Fuel and interest costs are not a pass-through for merchant and competitively-bid power projects. Projects set up under the regulated tariff mechanism will get assured post-tax return on equity along with normative cost reimbursements. Out of the targeted 6,600 MW capacity, APL will have only about 22% of power sales through merchant tariffs post FY2014E.

Merchant power plants have to bear the risk of increase in input costs (including fuel costs, interest rate) as well as exposure to offtake risks. Lower short-term deficits due to the large-scale capacity addition envisaged by the Ministry of Power (200 GW by 2017) poses the risk of running the merchant power plants at a lower PLF due to the lack of demand for merchant power. Merchant power plants may also be constrained due to the lack of transmission capacity to connect to demand centers.

Legal and regulatory risks—applicability of fiscal benefits

Our estimates are susceptible to unfavorable regulatory changes. Any non-approval of the projected fiscal benefits by the concerned authorities could also result in lower-than-estimated earnings and valuations.

- ▶ We have assumed that APL will be extended the benefit of zero tax incidence on projects implemented at Mundra, as co-developer of the Mundra Port and SEZ. We note that APL does not have any ownership stake in MPSEZ and is acting as co-developer of the project as it will provide the utilities infrastructure for the SEZ. Disallowance of status as co-developer of SEZ will dent FY2012E earnings by ~Rs3.6/share and impact our valuation by Rs14/share.
- ▶ We have assumed an extension (currently available only for projects up to FY2011E) of the tax exemption available for infrastructure projects under Sec 80IA of the Income Tax Act, 1960.
- ▶ The exclusion of merchant and captive power plants from tax exemptions under Section 80IA or Mega Power project status could increase the tax outgo. We have currently assumed the benefit of tax exemptions for the project. The absence of tax benefits will escalate project costs by ~8-10%.

Competition for resources

Opening up of the merchant route for sale of power and allocation of coal mining blocks and hydropower sites to private players has attracted several new companies (without past experience) and intensified the competition for resources—(1) personnel with experience, and (2) hydropower project sites-higher upfront amounts and free power to State governments, and (3) scramble to control coal blocks .

FINANCIALS: COMMISSIONING OF CAPACITIES TO DRIVE EARNINGS

APL's earnings will see a steep improvement over the next few years, growing at a CAGR of 124% between FY2010 and FY2014E, by when the full 6,600 MW of power capacities will have stabilized and merchant tariffs converged to Rs3.5/kwh from upwards of Rs5/kwh currently. APL has invested Rs117.5 bn up to Dec 2009 out of the Rs303 bn capex outlay for the 6,600 MW of capacity additions. We estimate that the recent capital raising coupled with internal accruals will suffice for the equity funding of Rs58.9 bn required for commissioning of the current portfolio of projects.

Income statement—turbines of growth

APL will continually benefit from strong earnings growth as it captures the dual benefit of (1) ramp-up of capacities from 660 MW currently to 6,600 MW by end-FY2012E, and (2) healthy merchant tariffs upwards of Rs5/kwh in the near term, which in our view will normalize at Rs3.5/kwh beyond FY2014E. We estimate APL's revenues to grow from Rs4.3 bn in FY2010 to Rs145.5 bn in FY2014E, yielding net income of Rs1.7 bn and Rs42.9 bn, respectively.

Exhibit 24: Revenues from current under construction projects to flow in fully from FY2014E
Profit model for APL, March fiscal year-ends, 2008-14E (Rs mn)

	2008	2009	2010	2011E	2012E	2013E	2014E
Sale of power	—	—	4,349	37,788	106,571	150,117	145,525
Net revenues	—	—	4,349	37,788	106,571	150,117	145,525
Fuel costs	—	—	(1,667)	(12,505)	(33,244)	(50,609)	(52,731)
O & M	(72)	(28)	(236)	(1,658)	(4,825)	(8,023)	(8,351)
EBITDA	(72)	(28)	2,446	23,625	68,502	91,485	84,442
Depreciation & amortization	—	—	(354)	(4,361)	(8,293)	(12,148)	(12,148)
EBIT	(72)	(28)	2,093	19,264	60,209	79,337	72,294
Interest (expense)	—	—	(377)	(5,473)	(17,561)	(26,428)	(27,638)
Interest/treasury income	—	—	319	140	1,449	5,458	11,046
Pre-tax profit	(72)	(28)	2,035	13,932	44,097	58,367	55,703
Income tax	—	—	—	—	(1,446)	(3,894)	(3,610)
Deferred tax	—	—	(327)	(3,272)	(5,662)	(7,507)	(5,994)
Fringe benefit tax	—	—	—	—	—	—	—
Minority interest / share of profits of associates	—	2	—	—	(1,249)	(3,380)	(3,215)
Net profit	(72)	(26)	1,708	10,659	35,741	43,586	42,884
Extraordinary items	—	—	—	—	—	—	—
Profit attributable to shareholders	(72)	(26)	1,708	10,659	35,741	43,586	42,884
Common dividend	—	—	—	—	—	—	—
Dividend tax	—	—	—	—	—	—	—
Add to retained earnings	(72)	(26)	1,708	10,659	35,741	43,586	42,884
EPS (Rs)	0.0	(0.0)	0.8	4.9	16.4	20.0	19.7
CEPS (Rs)	0.0	(0.0)	1.0	6.9	20.2	25.6	25.2
Dividend per share (Rs)	—	—	—	—	—	—	—
Weighted avg. shares (mn)	372	1,293	2,096	2,180	2,180	2,180	2,180
Shares outstanding (mn)	743	1,842	2,180	2,180	2,180	2,180	2,180
Ratios (%)							
Revenue growth				769.0	182.0	40.9	(3.1)
EBITDA margin				62.5	64.3	60.9	58.0
EBITDA growth				865.9	190.0	33.5	(7.7)
Income tax rate				23.5	16.1	19.5	17.2
EPS growth				499.9	235.3	22.0	(1.6)

Source: Company, Kotak Institutional Equities estimates

Key operational and financial assumptions

- ▶ **Capacity:** We have assumed a total operational capacity of 6,600 MW to come on stream by FY2014E which would result in a gross generation of ~52 BU (implying a PLF of 90%) and net generation of ~48 BU.
- ▶ **Tariffs:** APL will sell the entire capacity on merchant basis until the individual PPAs become operational. APL will sell ~22% of power on merchant basis post FY2014. We note that merchant sale in FY2012E is 70% of the total sales as Mundra IV commissions a year before sale commitments under the PPA.
- ▶ **Fuel:** We note that APL's per unit fuel cost dips in FY2012E owing to start of commercial operation of Tiroda project operating on cheaper domestic coal.
- ▶ **O&M:** APL's O&M expenses will be Rs1.12 mn/MW in FY2011E and Rs1.17 mn/MW in FY2012E while O&M expense per unit would be stable at ~16-18p/kwh from FY2011-14E.
- ▶ **Tax:** We note that for the Mundra project, APL is entitled to a MAT waiver as it is the co-developer of Mundra SEZ. However, the Union Budget FY2010 proposed levying an excise duty of 16% on power sold outside SEZ.

Exhibit 25 highlights our key operational and financial assumptions.

Exhibit 25: APL will sell ~22% of power on merchant basis post FY2014
Operational and financial assumptions of APL, FY2011-14E

	2011E	2012E	2013E	2014E
Capacity				
Installed (MW)	2,640	4,620	6,600	6,600
Effective (MW)	1,474	4,125	6,595	6,600
Gross generation (MU)	11,554	32,337	51,703	51,745
PLF (%)	90	90	90	90
Net generation (MU)	10,810	30,255	48,373	48,413
Sale arrangement				
Regulated (%)	—	—	—	—
Competitively bid (%)	69	30	52	80
Merchant (%)	31	70	48	20
Tariff				
Competitively bid (Rs/kwh)	2.8	2.4	2.7	2.9
Merchant (Rs/kwh)	5.0	4.0	3.5	3.5
Total (Rs/kwh)	3.5	3.5	3.1	3.0
Fuel consumption				
Domestic (mn tons)	0	3	11	11
Imported (mn tons)	3	6	6	6
Fuel cost				
Domestic (Rs mn)	5,214	17,976	32,736	33,751
Imported (Rs mn)	7,176	14,974	17,334	18,425
Total (Rs mn)	12,390	32,951	50,070	52,176
Fuel cost (Rs/kwh)	1.15	1.09	1.04	1.08
O&M				
Rs mn/MW	1.12	1.17	1.22	1.27
Rs/kwh	0.15	0.16	0.17	0.17
Total (Rs mn)	1,658	4,825	8,023	8,351

Source: Company, Kotak Institutional Equities estimates

Balance sheet—funded to meet equity support for current portfolio

APL has a net worth of Rs55 bn (Rs25/share) post IPO, and is well funded to meet the capex outlay of Rs303 bn, of which Rs58.9 bn will have to be met through equity funding. We note that as of December 2009, APL had incurred a capex of Rs117.5 bn, against debt funding of Rs85.2 bn, while the balance resources were met through equity support.

Exhibit 26: APL is well funded to meet its capex requirement of its projects currently under implementation

Funding details of APL, March fiscal year ends, 2010-15E (Rs mn)

	Up to 2010E	2011E	2012E	2013E	2014E	2015E
Capex	123,672	74,929	65,970	39,119	—	—
Funded by debt	(87,805)	(65,095)	(56,501)	(31,295)	—	—
Funded by minority	(1,336)	(379)	(1,180)	(1,217)	—	—
Funded by equity	34,532	9,455	8,289	6,606	—	—
Operational cash flows	1,610	13,581	41,147	60,263	64,693	69,702
Debt servicing	—	—	—	(3,314)	(8,221)	(21,725)
Internal accruals	1,610	13,581	41,147	56,949	56,472	47,977
Extant cash						
Unsecured loans						
Equity	30,200	—	—	—	—	—
No. of shares (mn)	302					
Issue price	100					
Capital raised	30,200	—	—	—	—	—
Equity (deficit)/surplus	(32,922)	4,126	32,858	50,343	56,472	47,977
Cumulative (deficit)/surplus	7,027	11,154	44,011	94,354	150,826	198,803

Source: Company, Kotak Institutional Equities estimates

In our view, the proceeds of Rs30.2 bn raised during the IPO of APL, along with internal accruals over the next few years, will meet the fund requirements of the current portfolio of 6,600 MW. We note that APL proposes to fund all of its projects using a 80:20 debt-equity mix.

Exhibit 27: APL's net debt to equity will reduce to 0.3 by FY2014E

Balance Sheet of APL, March fiscal year-ends, 2008-14E (Rs mn)

	2008	2009	2010E	2011E	2012E	2013E	2014E
Gross block	184	3,472	14,347	112,485	210,798	307,162	307,162
Accumulated depreciation	13	104	457	4,818	13,111	25,258	37,406
Net block	171	3,368	13,890	107,667	197,688	281,903	269,756
Capital WIP	24,424	65,845	112,797	89,588	57,244	—	—
Goodwill	—	—	—	—	—	—	—
Investments	532	—	—	—	—	—	—
Current assets	—	—	—	—	—	—	—
Cash & bank balances	1,921	5,585	28,205	32,331	65,189	115,532	172,003
Net current assets (excl. cash)	(2,598)	(1,456)	(678)	4,033	13,831	20,189	19,737
Utilization of funds	24,451	73,343	154,214	233,620	333,952	417,624	461,496
Total debt	10,112	49,897	96,805	161,900	218,401	246,382	238,161
Secured debt	10,112	40,897	87,805	152,900	209,401	237,382	229,161
Unsecured debt	0	9,000	9,000	9,000	9,000	9,000	9,000
Paid-up common stock	7,431	18,420	21,800	21,800	21,800	21,800	21,800
Share premium	6,979	4,517	31,697	31,697	31,697	31,697	31,697
Reserves and surplus	(72)	(194)	1,514	12,173	47,914	91,500	134,384
Shareholders' funds	14,339	22,743	55,011	65,670	101,411	144,997	187,881
Def. tax liability	—	—	360	3,632	9,294	16,801	22,796
Minority interest	—	703	2,039	2,417	4,847	9,444	12,659
Source of funds	24,451	73,343	154,214	233,620	333,952	417,624	461,496
Ratios (%)							
Net debt/ equity	57.1	189.0	120.2	190.3	144.2	84.7	33.0
ROCE	(0.6)	(0.1)	1.5	5.5	13.5	13.5	11.3
Return on equity	(1.0)	(0.1)	4.4	17.7	42.8	35.4	25.8
Book value per share (Rs)	19.3	12.3	25.4	31.8	50.8	74.2	96.6

Source: Company, Kotak Institutional Equities estimates

Exhibit 28: APL will generate sufficient operational cashflow for funding the current portfolio
Cashflow of APL, March fiscal year-ends, 2009-14E (Rs mn)

	2009	2010E	2011E	2012E	2013E	2014E
Operational cashflows						
Earnings before tax	(28)	2,035	13,932	44,097	58,367	55,703
less taxes paid	(3)	—	—	(1,446)	(3,894)	(3,610)
plus depreciation	—	354	4,361	8,293	12,148	12,148
decrease / (increase) in working capital	(1,142)	(778)	(4,711)	(9,798)	(6,357)	452
Total operational cashflow	(1,172)	1,610	13,581	41,147	60,263	64,693
Investment cashflow						
(Additions) / disposals of fixed assets	(44,709)	(57,827)	(74,929)	(65,970)	(39,119)	—
decr / (incr) in intangibles & capitalised assets	—	—	—	—	—	—
decr / (incr) in investments and advances	532	—	—	—	—	—
Add Others	—	—	—	—	—	—
Total investment cashflow	(44,176)	(57,827)	(74,929)	(65,970)	(39,119)	—
Financing cashflow						
incr / (decr) in other long term liabilities	—	—	—	—	—	—
incr / (decr) in common shares	10,989	3,380	—	—	—	—
incr / (decr) in share premium/Other reserves	(2,559)	27,180	—	—	—	—
less dividends paid	—	—	—	—	—	—
incr / (decr) in minority interest flows	705	1,336	379	1,180	1,217	—
incr / (decr) in debt	39,785	46,908	65,095	56,501	27,981	(8,221)
Total financing cashflow	48,920	78,803	65,474	57,681	29,199	(8,221)
Net cashflow	3,571	22,586	4,126	32,858	50,343	56,472
Cash at beginning of year	1,921	5,585	28,205	32,331	65,189	115,532
Cash at end of year	5,585	28,205	32,331	65,189	115,532	172,003

Source: Company, Kotak Institutional Equities estimates

Exhibit 29: APL has a capex of Rs303 bn to be incurred over the next few years to commission 6,600 MW of incremental capacity and dedicated transmission line

	Up to 2010E	2011E	2012E	2013E	Total
Capex					
Mundra 1&2	37,301	6,199	—	—	72,210
Mundra 3	42,311	11,882	3,767	—	84,042
Mundra 4	30,688	32,880	30,323	15,709	121,291
Tiroda 1	11,480	16,400	22,960	14,760	67,896
Tiroda 2	1,892	7,568	8,920	8,650	27,571
	123,672	74,929	65,970	39,119	303,690
Debt					
Mundra 1&2	31,258	5,195	—	—	60,512
Mundra 3	32,241	9,054	2,871	—	64,040
Mundra 4	18,782	28,335	26,289	12,567	85,973
Tiroda 1	4,010	16,457	20,205	11,808	52,480
Tiroda 2	1,513	6,055	7,136	6,920	21,624
	87,805	65,095	56,501	31,295	284,629
Equity					
Mundra 1&2	6,043	1,004	—	—	11,698
Mundra 3	10,070	2,828	897	—	20,002
Mundra 4	11,906	4,545	4,034	3,142	35,317
Tiroda 1	7,470	(57)	2,755	2,952	15,416
Tiroda 2	379	1,514	1,784	1,730	5,947
	35,868	9,834	9,469	7,824	88,380

Source: Company, Kotak Institutional Equities estimates

2HFY10—Earnings accrue from first 2 units in 2HFY10

The first two units of 330 MW at Mundra 1&2 commenced commercial operations in 2HFY10, yielding a net revenue of Rs4.3 bn and net income of Rs1.7 bn. Net generation for the year was ~1,221 MU and the power was sold at an average realization of Rs3.56/kwh. We note that the fuel cost of Rs1.62/kwh in 3QFY10 was not reflective of the sourcing of low-cost imported coal from AEL, as during the stabilizing phase APL was blending the high-moisture Indonesian coal with more expensive coal procured through the open market from South Africa. Significant reduction in fuel cost in 4QFY10 (Rs1.12/kwh) allays investor concerns on fuel cost risk for APL. We expect APL to source the bulk of its coal requirements from AEL on an ongoing basis, though we do not rule out the risks of higher fuel cost as highlighted by us previously.

Exhibit 30: APL sold power at an average realization of Rs3.56/kwh in 2HFY10
Interim P&L of APL for 2HFY2010

	Dec-09	Mar-10	2010	2011E
Sale of power	2,336	2,013	4,349	37,788
Net revenues	2,336	2,013	4,349	37,788
Fuel costs	(970)	(697)	(1,667)	(12,505)
O & M	(94)	(136)	(236)	(1,658)
EBITDA	1,272	1,180	2,446	23,625
Depreciation & amortization	(176)	(177)	(354)	(4,361)
EBIT	1,096	1,003	2,093	19,264
Interest (expense)	(167)	(210)	(377)	(5,473)
Interest/treasury income	—	319	319	140
Pre-tax profit	929	1,112	2,036	13,932
Income tax	—	—	—	—
Deferred tax	(204)	(123)	(327)	(3,272)
Fringe benefit tax	—	—	—	—
Minority interest / share of profits of associates	—	—	—	—
Net profit	725	989	1,709	10,659
Net generation (GWH)	600	621	1,221	10,810
Average realization (Rs/unit)	3.89	3.24	3.56	3.50
Average fuel cost (Rs/unit)	1.62	1.12	1.37	1.16
Average O&M (Rs/unit)	0.16	0.22	0.19	0.15

Source: Kotak Institutional Equities estimates, Company

INDONESIAN COAL: FUEL FOR THOUGHT

Indonesia is the world's largest thermal coal exporter with exports of 160 mn tons in 2008. India with its rapidly increasing demand for coal is becoming one of the major importers of thermal coal from Indonesia. Given the cost advantages of Indonesian coal over coal from Australia and South Africa, power companies in India are vying to acquire stake in Indonesian coal mines. AEL, through its subsidiary PT Adani Global, has acquired rights to exclusively mine coal in Bunyu Island and has agreed to supply coal to APL at a cost of US\$36/ton. Based on our analysis of landed cost of coal from Indonesia, we believe it would be a tough for AEL to profitably supply coal at US\$36/ton. However, we note that APL's contractual agreement with AEL limits the risks of coal supply for APL.

Indonesia coal becoming the fuel of choice for Indian Power

Indonesia is the world's largest thermal coal exporter with exports of 160 mn tons in 2008. India is fast becoming one of its major markets. In 2008, Indonesia supplied 72% of India's thermal coal imports. Indonesian coal is the cheapest import option for India vis-à-vis Australia and South Africa. Given the cost advantages of Indonesian coal, Indian power companies are vying for control over Indonesian mines either through JVs or by acquiring stakes in coal mines.

Ministry of Energy and Mineral Resources of Indonesia estimates coal deposits of 38.8 bn tons with 21.1 bn tons in Kalimantan, 17.8 bn tons in Sumatra, and the balance in Sulawesi, Java, and Papua. Most of the coal deposits are geologically young (Cenozoic) and this is reflected in their rank distribution: lignite at 58%; sub-bituminous at 27%; bituminous at 14%; and anthracite <0.5%. Most of the coal mined for export has heat values that range from 5,000 to 7,000 kcal/kg with low ash and sulfur content.

Kalimantan has higher quality coal and is the site for much exploration and development. Approximately, 2/3rd of total thermal coal export is produced from mines in South Kalimantan. We note that Indonesia has global reserve share of thermal coal at 0.5% and reserve life of 19 years. Coal production in Indonesia is from the following (1) State-owned enterprise, (2) holders of Coal Contracts of Work, (3) Mining Authorization Holders, (4) co-operative units.

Coal mining regulations still uncertain in Indonesia

Currently, domestic investment in mining industry is done through a mining license called 'Kuasa Pertambangan' (KP) and foreign investment is done through Coal Contract of Work (CCoW). Since acquiring a CCoW is a tedious process, most companies prefer buying out stakes in existing mines and CCoWs. Royalty of CCoW is charged at 13.5% of the FOB price of Indonesian coal.

However, the regulations remain uncertain in terms of policy stance on coal exports. The new coal policy under discussion proposes giving priority to domestic demand for coal before exports. With Indonesian domestic demand itself surging, there are indications that exports will be capped at certain levels. The growing priority of domestic demand over export does not augur well for Indian power players with increased reliance on imported coal from Indonesia.

APL to use Indonesian coal for Mundra I, II&III

PT Adani Global, a wholly owned subsidiary of AEL, has entered into agreements to exclusively mine coal in Bunyu Island, Indonesia. For Mundra Power Projects, AEL proposes to procure the coal from these mines in Indonesia. Under the coal supply agreement AEL has committed to supply coal with an average GCV of 5,200 Kcal/kg, at US\$36 per ton (CIF Mundra), adjusted for coal quality, with an escalation at the end of every five years.

We note that the landed cost of coal in India would presumably comprise the following – Cash cost or production cost of mining coal, inland transportation cost (transferring coal from mine to coal), royalty and freight cost of shipping coal to India. Exhibit 31 highlights the landed cost of coal for APL.

Exhibit 31: Total cost of imported coal works out to be ~\$45/ton
Landed cost assumptions for APL (US\$/ton)

Delivered price from AEL (US\$/ton)	36.0
Customs (US\$/ton)	1.8
Port and Cargo handling (Rs/ton)	300.0
Total (US\$/ton)	45.0

Source: Company, Kotak Institutional Equities

The low cash cost for AEL is likely attributable to a low strip ratio and no inland transportation cost (the coal mines being very close to the port). Exhibit 33 shows the location of Bunyu Island on the map. Comparing this to the average cash cost of other coal mining companies in Indonesia, we find that the cash cost assumptions of PT Adani Global are significantly low even after adjusting for the strip ratio. Exhibit 32 shows the average cash cost of top Indonesian coal companies.

Exhibit 32: Average cash cost of companies with strip ratio 4-5 is \$25/ton
Average cash cost of Indonesian coal mining companies (US\$/ton)

Company	Strip ratio (X)	Average cash cost (US\$/ton)	Cash cost adjusted for strip ratio (US\$/ton)
Adaro	5	25.1	12.6
Bumi	12	27.5	6.3
ITMG	12	32.0	7.4
PTBA	4	24.9	15.0

Source: Company, Kotak Institutional Equities

We note that for Bumi and ITMG, the adjusted cash cost comes close to our cash cost assumptions for PT Adani Global. However, both Bumi and ITMG have a very high strip ratio and Adaro and PTBA with strip ratios closer to PT Adani Global have much higher cash cost. We note that although there are risks attached to the landed cost of coal, APL has a contractual agreement with AEL to procure coal at US\$36/ton and hence, cost-related risks for APL are limited.

Freight cost assumptions are based on Baltic Dry Index which provides an assessment of the price of moving the major raw materials by sea.

Exhibit 33: Bunyu Island is close to the port, leading to almost zero inland transportation cost
Location map of Bunyu Island coal fields



Source: Google Maps, Kotak Institutional Equities

ANNEXURE-I: PROJECT PROFILES

Mundra Phase I&II—first 2 units of 330 MW each operational

Mundra Phase I&II is proposed as a 1,320 MW thermal power project consisting of four sub critical units of 330 MW each. The first unit became operational in October 2009 while the second unit got commissioned in March 2010. The project is situated Tunda and Siracha Mundra Village, Gujarat. The project is in the vicinity of Mundra Port owned by MPSEZL.

The project will use coal as the primary fuel which will be sourced from AEL. PT Adani Global, a wholly-owned subsidiary of AEL has entered into agreements to exclusively mine coal in Bunyu Island, Indonesia. AEL has committed to supply 4.6 mn tpa of coal for the project with an average GCV of 5,200 Kcal/kg annually for 15 years at US\$36/ton (CIF Mundra) for the first five years and then subject to an increase of 10% every five years.

APL has also executed a long-term power off-take agreement with GUVNL for a term of 25 years with 1st 500 MW starting in February 2010 and the balance 500 MW to start in June 2010. According to this agreement, GUVNL is entitled to the supply of 1,000 MW of electricity at tariffs ranging from Rs2.81/unit for the first year to Rs3.42/unit in the 25th year. This would account for 76% of the total capacity of the project; APL intends to sell the rest of the power on a merchant basis including to businesses operating in MPSEZL.

The total project cost is expected to be Rs43.5 bn and 83.8% of this will be funded by debt, which has already been committed. We note that all necessary environmental and other regulatory approvals for the project are in place. Also, APL has entered into a bulk power transmission agreement with PGCIL for power evacuation.

Exhibit 34: Profile of Mundra Phase I&II, 1,320 MW thermal power project

Project size (MW)	1,320	Concession period	NA
CoD (expected)	Sep-10	Detailed project report	
Financial closure	Done	Power evacuation	Agreement with PGCIL for open-access facility
Type	Thermal		
Project cost (Rs bn)	43.5	Tariff structure	Long-term PPA for 1,000 MW entered with GUVNL at tariffs ranging from Rs2.81/unit to Rs3.47/unit. Rest to be merchant sale
per MW capital cost (Rs mn)	33.0		
Project funding		Land acquisition	Done
Equity (%)	16.2	Fuel source	Contract with AEL for imported coal of 4.6 MPTA
Debt (%)	83.8	Water supply	Agreement with GWIL for use of sea water
Equity holding pattern (%)	100		

Source: Company, Kotak Institutional Equities

Exhibit 35: Key assumptions & summary financials for Mundra Phase I&II 1,320 MW project, March fiscal year-ends, 2010-15E (Rs mn)

	2011E	2012E	2013E	2014E	2015E
Plant Availability Factor (PAF) %					
Plant Load Factor (PLF) %	89.5	89.5	89.5	89.5	89.5
Net generation (mn units)	8,449	9,683	9,683	9,683	9,683
Primary energy sale (mn units)	7,430	7,940	7,940	7,940	7,940
Secondary energy sale (mn units)	1,019	1,743	1,743	1,743	1,743
Tariff rate (Rs/unit)	2.81	2.82	2.84	2.84	2.85
Merchant rate (Rs/unit)	5.00	4.00	3.50	3.50	3.50
Cost of coal (Rs/ton)	2,087	2,093	2,099	2,269	2,276
Net revenues	25,983	29,380	28,613	28,636	28,743
EBITDA	14,808	16,362	15,378	14,632	14,507
EBITDA/unit (Rs/kwh)	1.8	1.7	1.6	1.5	1.5
PBT	9,737	11,282	11,735	12,401	13,741
PAT	8,468	10,255	10,919	11,768	13,267
ROIC (%)	28.6	26.6	23.4	21.3	20.1
Free cash flow to equity (FCFE)	6,882	11,480	8,049	7,546	7,845

Source: Company, Kotak Institutional Equities estimates

Mundra Phase III—re-consideration of sale arrangement could add value

Mundra Phase III is proposed to be a 1,320 MW thermal power project consisting of two super critical units of 660 MW each. The first unit is expected to be commissioned by January 2011 and second by June 2011.

The project will use coal as the primary fuel which will be sourced from AEL. PT Adani Global, a wholly owned subsidiary of AEL has entered into agreements to exclusively mine coal in Bunyu Island, Indonesia. AEL has committed to supply 4.04 mn tpa of coal for the project with an average GCV of 5,200 Kcal/kg annually for 15 years at US\$36/ton (CIF Mundra) for the first five years and then subject to an increase of 10% every five years. Also, APL has entered into a contract with MPSEZL to utilize their port and cargo handling services.

APL has executed a long-term power off-take agreement with GUVNL for a term of 25 years starting Feb 2012. According to this agreement, GUVNL is entitled to a supply of 1,000 MW of electricity at a fixed tariff of Rs2.35/unit. More recently, APL has submitted a request to withdraw from the PPA for selling power from Mundra III at Rs2.35/kwh to Gujarat Urja Vikas Nigam Ltd (GUVNL). APL has contended that as GMDC is unable to supply coal from the Morga coal block, which was a condition precedent as per the PPA, APL is within its right to withdraw from the sale arrangement. While the petition to withdraw from the PPA is currently sub-judice, if allowed it will enable APL to sell the power from Mundra III in the short-term market (or enter into more lucrative bids), albeit at a penal cost of Rs1 bn.

Exhibit 36: Profile of Mundra Phase III, 1,320 MW thermal power project

Project size (MW)	1,320	Concession period	NA
CoD (expected)	Jun-11	Detailed project report	
Financial closure	Done	Power evacuation	Agreement with PGCIL for open-access facility
Type	Thermal		
Project cost (Rs bn)	58.0	Tariff structure	Long-term PPA for 1,000 MW entered with GUVNL at a fixed tariff of Rs2.35/unit. Rest to be merchant sale
per MW capital cost (Rs mn)	43.9		
Project funding		Land acquisition	Done
Equity (%)	23.8	Fuel source	Contract with AEL for imported coal of 4.04 MPTA
Debt (%)	76.2	Water supply	Agreement with GWIL for use of sea water
Equity holding pattern (%)	100		

Source: Company, Kotak Institutional Equities

Exhibit 37: Key assumptions & summary financials for Mundra Phase III, March fiscal year-ends, 2011-15E (Rs mn)

	2011E	2012E	2013E	2014E	2015E
Plant Availability Factor (PAF) %					
Plant Load Factor (PLF) %	89.5	89.5	89.5	89.5	89.5
Net generation (mn units)	1,180	8,873	9,683	9,683	9,683
Primary energy sale (mn units)	—	1,274	7,940	7,940	7,940
Secondary energy sale (mn units)	1,180	7,599	1,743	1,743	1,743
Tariff rate (Rs/unit)	0.00	0.00	2.65	2.65	2.65
Merchant rate (Rs/unit)	5.00	4.00	3.50	3.50	3.50
Cost of coal (Rs/ton)	2,087	2,093	2,099	2,269	2,276
Net revenues	5,902	30,397	27,136	27,136	27,136
EBITDA	4,483	19,552	15,102	14,405	14,190
EBITDA/unit (Rs/kwh)	3.8	2.2	1.6	1.5	1.5
PBT	2,271	12,888	8,975	9,726	10,795
PAT	1,384	11,282	7,680	8,701	10,006
ROIC (%)	6.8	27.7	19.0	18.2	17.9
Free cash flow to equity (FCFE)	(269)	10,104	10,205	4,533	4,935

Source: Company, Kotak Institutional Equities estimates

Mundra Phase IV—dedicated transmission line for sale to Haryana

Mundra Phase IV is proposed to be a 1,980 MW thermal power project consisting of three super critical units of 660 MW each. The first unit is expected to be commissioned by August 2011 and last by April 2012.

The project will use coal as the primary fuel which will be sourced domestically from Mahanadi Coalfields. Mahanadi Coalfields has provisionally agreed to supply 6.4 mn tpa of coal for the project conditional upon APL achieving key milestones. For any balance requirement, APL will use imported coal.

APL has executed a long-term power off-take agreement with UHBVNL and DHBVNL for a term of 25 years starting from Feb 2013. As per this agreement, UHBVNL and DHBVNL are each entitled to the supply of 712 MW of electricity at tariffs ranging from Rs2.35/unit to Rs3.26/unit. This would account for 72% of the total capacity of the project and APL intends to sell the rest of the power on merchant basis. The total project cost is expected to be Rs89.6 bn and 80.0% of this will be funded by debt.

Exhibit 38: Profile of Mundra Phase IV 1,980 MW thermal power project

Project size (MW)	1,980	Concession period	NA
CoD (expected)	Apr-12	Detailed project report	
Financial closure	Done	Power evacuation	Contracts in place
Type	Thermal		
Project cost (Rs bn)	109.6	Tariff structure	Long-term PPA for 1,424 MW entered with UHBVNL and DHBVNL at tariffs ranging from Rs2.35/unit to Rs3.26/unit. Rest to be merchant sale
per MW capital cost (Rs mn)	55.4		
Project funding		Land acquisition	Done
Equity (%)	20.0	Fuel source	Coal from Mahanadi Coalfields
Debt (%)	80.0	Water supply	Agreement with GWIL for use of sea water
Equity holding pattern (%)	100		

Source: Company, Kotak Institutional Equities

Exhibit 39: Key assumptions & summary financials for Mundra Phase IV, March fiscal year-ends, 2011-15E (Rs mn)

	2011E	2012E	2013E	2014E	2015E
Plant Availability Factor (PAF) %					
Plant Load Factor (PLF) %	89.5	89.5	89.5	89.5	89.5
Net generation (mn units)	1,180	8,064	14,511	14,524	14,524
Primary energy sale (mn units)	—	—	—	12,273	11,038
Secondary energy sale (mn units)	1,180	8,064	14,511	2,250	3,486
Tariff rate (Rs/unit)	2.35	3.26	3.24	3.23	3.21
Merchant rate (Rs/unit)	5.00	4.00	3.50	3.50	3.50
Cost of coal (Rs/ton)	2,081	2,087	2,093	2,099	2,269
Net revenues	5,902	32,258	50,787	47,495	47,621
EBITDA	4,334	21,268	30,505	26,670	25,941
EBITDA/unit (Rs/kwh)	3.7	2.6	2.1	1.8	1.8
PBT	1,924	12,673	18,118	15,465	17,180
PAT	807	10,647	15,368	13,266	15,460
ROIC (%)	6.0	21.9	22.8	17.9	17.5
Free cash flow to equity (FCFE)	(2,043)	7,140	14,784	16,883	8,959

Source: Company, Kotak Institutional Equities estimates

Tiroda — catering to the needs of power deficit Maharashtra

APL, through its 74% owned subsidiary Adani Power Maharashtra Ltd. (APML) is implementing the Tiroda power project at Gondia in Maharashtra. The project is supposed to be developed in two phases (1) 1,320 MW in Phase I consisting of two super critical units of 660 MW each and (2) 660 MW in Phase II consisting of one super critical unit. The project is located in MIDC's Tiroda Industrial area near the State highway.

The project will use coal as the primary fuel which will be sourced domestically. APL had been allocated two coal mines by Ministry of Coal at Lohara West and Lohara Extension but the development of these mines was derailed owing to environmental concerns and APL has withdrawn the TOR. Meanwhile, the Ministry of Coal has provided tapering linkage of 800 MW to APL. For the balance requirement, South Eastern and Western coalfields have provisionally agreed to supply 2.5 MPTA (Grade F) and 2.2 MPTA (Grade E) of coal. However, this is subject to APL achieving certain milestones in the next 24 months.

APL has executed a long-term power off-take agreement with MSEDCL for a term of 25 years starting from September 2012. As per this agreement, MSEDCL is entitled to the supply of 1,320 MW of electricity at tariffs ranging from Rs2.55/unit to Rs3.47/unit. This would account for 67% of the total capacity of the project and APL intends to make sale of the rest of the power on merchant basis. The total project cost is expected to be Rs92.6 bn and 80.0% of this will be funded by debt.

Exhibit 40: Profile of Tiroda Phase I – 1,320 MW thermal power project

Project size (MW)	1,320	Concession period	NA
CoD (expected)	Apr-11	Detailed project report	
Financial closure	Done	Power evacuation	To be done
Type	Thermal		
Project cost (Rs bn)	65.6	Tariff structure	Long-term PPA for 1,320 MW entered with MSEDCL (combined for Tiroda I and II) at tariffs ranging from Rs2.55/unit to Rs3.47/unit. Rest will be merchant sale
per MW capital cost (Rs mn)	49.7		
Project funding		Land acquisition	210 hectare of land still to be acquired. 192 hectares pending allotment
Equity (%)	20.0	Fuel source	Domestic coal
Debt (%)	80.0	Water supply	LoL received from WRD for utilization of Wainganga river water
Equity holding pattern (%)	74		

Source: Company, Kotak Institutional Equities

Exhibit 41: Key assumptions & summary financials for Ratnagiri, March fiscal year-ends, 2012-15E (Rs mn)

	2012E	2013E	2014E	2015E
Plant Availability Factor (PAF) %				
Plant Load Factor (PLF) %	89.5	89.5	89.5	89.5
Net generation (mn units)	3,634	9,669	9,683	9,683
Primary energy sale (mn units)	-	5,675	7,165	7,165
Secondary energy sale (mn units)	3,634	3,994	2,517	2,517
Tariff rate (Rs/unit)	2.55	2.55	2.55	2.55
Merchant rate (Rs/unit)	4.00	3.50	3.50	3.50
Cost of coal (Rs/ton)	1,200	1,200	1,236	1,273
Net revenues	14,537	28,468	27,104	27,104
EBITDA	11,320	19,744	18,090	17,802
EBITDA/unit (Rs/kwh)	3.1	2.0	1.9	1.8
PBT	7,254	12,038	10,664	11,770
PAT	4,805	7,820	7,073	8,265
ROIC (%)	19.2	21.1	16.6	16.3
Free cash flow to equity (FCFE)	3,678	6,626	10,106	5,542

Source: Company, Kotak Institutional Equities estimates

Exhibit 42: Profile of Tiroda Phase II - 660 MW thermal power project

Project size (MW)	660	Concession period	NA
CoD (expected)	Apr-11	Detailed project report	
Financial closure	Done	Power evacuation	To be done
Type	Thermal		
Project cost (Rs bn)	27.0	Tariff structure	Long-term PPA for 1,320 MW entered with MSEDCL (combined for Tiroda I and II) at tariffs ranging from Rs2.55/unit to Rs3.47/unit. Rest will be merchant sale
per MW capital cost (Rs mn)	41.0		
Project funding		Land acquisition	109 hectare of land still to be acquired. 192 hectares pending allotment
Equity (%)	20.0	Fuel source	Dometic coal
Debt (%)	80.0	Water supply	Lol received from WRD for utilization of Wainganga river water
Equity holding pattern (%)	74		

Source: Company, Kotak Institutional Equities

Exhibit 43: Key assumptions & summary financials for Tiroda Phase II, March fiscal year-ends, 2013-15E (Rs mn)

	2013E	2014E	2015E
Plant Availability Factor (PAF) %			
Plant Load Factor (PLF) %	89.5	89.5	89.5
Net generation (mn units)	4,828	4,841	4,841
Primary energy sale (mn units)	3,573	3,583	3,583
Secondary energy sale (mn units)	1,255	1,259	1,259
Tariff rate (Rs/unit)	3.00	3.00	3.00
Merchant rate (Rs/unit)	3.50	3.50	3.50
Cost of coal (Rs/ton)	1,200	1,236	1,273
Net revenues	15,112	15,153	15,153
EBITDA	10,756	10,646	10,503
EBITDA/unit (Rs/kwh)	2.2	2.2	2.2
PBT	7,501	7,447	8,124
PAT	5,179	5,291	5,968
ROIC (%)	30.6	23.1	21.5
Free cash flow to equity (FCFE)	3,039	6,642	4,661

Source: Company, Kotak Institutional Equities estimates

6.6 GW of capacity under various stages of planning

Apart from the existing 6,600 MW of capacity under implementation, APL has another 6,600 MW of capacity under various stages of planning. These projects include 1,320 MW at Kawai, Rajasthan, 1,320 MW at Tiroda III, 2,640 MW at Dahej and 1,320 MW at Chindwada. We note that Kawai and Tiroda III have achieved significant milestones whereas Dahej and Chindwada remain in initial planning stage. Commissioning of these capacities would take the overall generation portfolio of APL to 13.2 GW.

For Kawai project, APL has signed a PPA with RRVPNL for supply of 1,200 MW at a levelled tariff of Rs3.24/kwh. This PPA will start from August 31, 2013. Land for Kawai is entirely in possession and management expects financial closure in the next 2-3 months. Meanwhile, for both Kawai and Tiroda III, NIT has already been floated and management has indicated that EPC should be awarded within a month.

Exhibit 44 highlights the key details of the projects currently under planning phase.

Exhibit 44: Commissioning of planned projects will take the total generation portfolio of APL to 15.2 GW

Details of projects planned projects of APL

Project	Capacity (MW)	Fuel	Land	Environmental clearance	Fuel arrangement	Financial closure
Kawai	1,320	Thermal	✓	TOR approved & EIA study under progress	Applied for coal linkage	WIP
Dahej	2,640	Thermal	✓	TOR approved & EIA study under progress	Applied for coal linkage	✗
Tiroda III	1,320	Thermal	WIP	TOR approved & EIA study under progress	Applied for coal linkage	WIP
Chindwada	1,320	Thermal	WIP	Applied for TOR	Applied for coal linkage	✗
Total	6,600					

Source: Company, Kotak Institutional Equities

ANNEXURE-II: INDIAN POWER SECTOR

We believe that a poor implementation track record and high demand growth provides visibility for the prevailing power deficit scenario to persist till FY2013E, post which India could potentially be in a surplus situation. We assume a merchant tariff of Rs5.5/unit for FY2010E, Rs5/unit for FY2011-13E and Rs3-3.5/unit beyond. We expect coal-based power stations to continue to operate as merchant power plants at full load over the next few years. However, attractive returns and large planned capacity additions by private sector reduces the visibility of high merchant tariffs sustaining beyond FY2014.

Power deficit likely to persist

In our view, the likely capacity additions in FY2010-12E will not be able to bridge the energy deficit, which currently stands at 10%. We estimate capacity addition of about 50 GW during the 11th five-year plan as against a target of 78 GW, which will help reduce the energy deficit to 8% in FY2012E. Post FY2014, we believe India could potentially be in a surplus situation. Exhibit 45 gives our estimate of the energy deficit based on a GDP growth assumption of 8% in FY2011-12E and 9% in FY2013-15E.

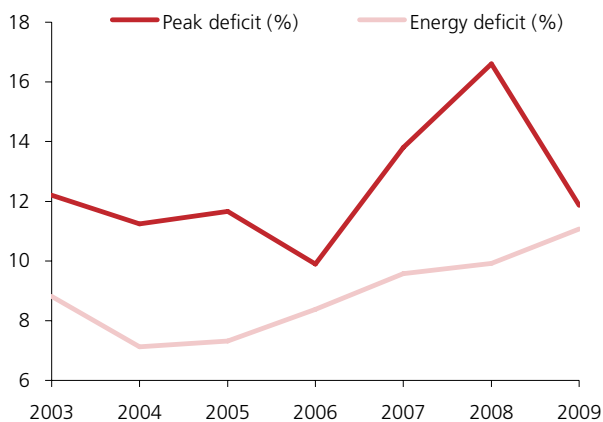
Exhibit 45: Energy deficit will likely persist at ~6% till FY2013E post which there could be a likely surplus scenario
Estimates of energy requirement (MU), availability (MU) and deficit (%), March fiscal year-ends, 2009-15E

	2009	2010	2011E	2012E	2013E	2014E	2015E	2012E	
								KIE	17th EPS/ CEA
Energy requirement									
Assumed GDP growth (%)			8.0	8.0	9.0	9.0	9.0		
Elasticity to GDP growth (X)			0.95	0.95	0.95	0.95	0.95		
Total requirement (MU)	777,039	830,300	893,403	961,301	1,043,493	1,132,711	1,229,558	961,301	968,659
Energy availability									
Hydro	1,008	39	186	1,663	4,938	3,622	3,012		
Coal	3,510	7,000	9,940	11,260	26,948	30,537	12,978		
Gas	475	2,106	232	2,717	4,548	—	—		
Diesel									
Nuclear	—	440	1,440	500	—	—	—		
Renewable									
Capacity addition (MW)	4,993	9,585	11,798	16,140	36,435	33,158	14,990	37,523	
Incremental generation (MU)									
From new capacities			47,367	73,498	98,885	199,567	172,878	187,686	316,135
Improved PLF of gas/nuclear stations			11,366						
Total availability (MU)	691,038	746,493	805,226	878,724	977,608	1,177,175	1,350,053	878,724	1,007,173
Energy deficit (%)	11.1	10.1	9.9	8.6	6.3	(3.9)	(9.8)	8.6	(4.0)
Energy deficit for 1% higher GDP growth (%)		10.1	10.7	10.2	8.7	(0.4)	(5.1)		

Source: CERC, Kotak Institutional Equities estimates

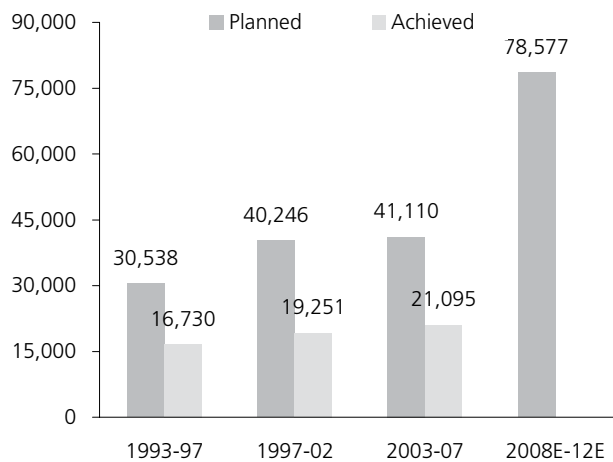
Exhibit 46 highlights the trend in total energy shortage and shortfall in meeting peak power requirements for the past several years in India. Exhibit 47 highlights the implementation track record of the past three five-year plans where the power capacity addition has been only about 50% of the planned capacity addition. We note 13 GW has already been commissioned in the current five-year plan and we expect another 37 GW capacity addition during FY2010-12E.

Exhibit 46: Consistently living in a power deficit scenario
Energy shortage (%) and peak power shortage (%), March fiscal yearends



Source: Ministry of Power, CEA

Exhibit 47: Actual capacity addition has lagged the targeted addition by almost 50%
Actual capacity addition vs. planned capacity addition (MW)

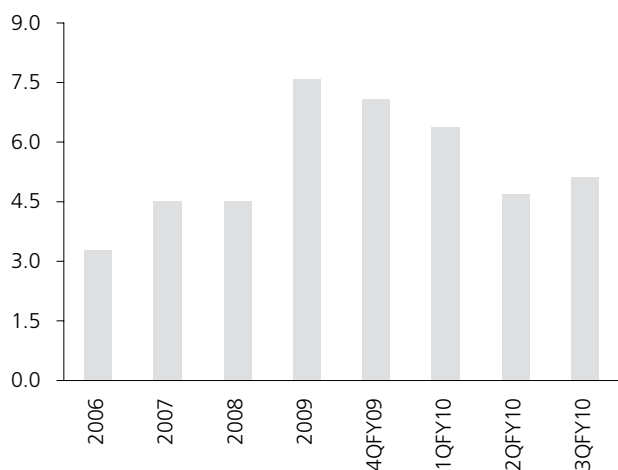


Source: CEA, MOP, Infraline, Kotak Institutional Equities estimates

Deficit scenario provides ready market for higher tariffs

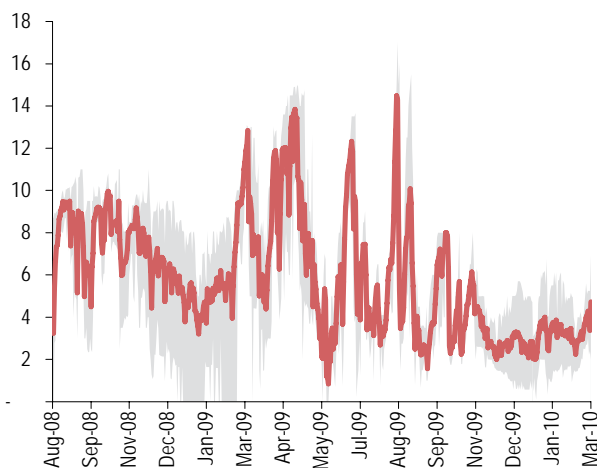
A power-deficit situation will translate into higher tariffs for merchant power and sale of power under short-term PPAs. Utilities are usually willing to pay extra charges to bridge the power deficit in the short term and avoid any negative politico-economic consequences. We have seen a gradual increase in prices of power under short-term trading over the past few years as the demand-supply gap has persisted.

Exhibit 48: The price of power traded in the short-term market has been moving up
Average price of short-term power traded through traders (Rs/unit)



Source: CEA, Kotak Institutional Equities

Exhibit 49: Extreme volatility of tariffs in Day ahead market
Average tariffs for power traded at IEX (Rs/unit)



Source: IEX, Kotak Institutional Equities

Power demand expected to grow at 6.5%-7.5% per annum during FY2012-22

The 17th EPSR projects annual power demand to grow at 7.5% during FY2012-17 and 6.5% during FY2017-22 (see Exhibit 50) to sustain a GDP growth rate of 8-10%. Failure to plug the leakage in the form of T&D losses assumed in the 17th EPSR will likely result in a higher-than projected growth requirement in energy generation.

Exhibit 50: Power demand expected to grow at 6.5-7.5% p.a. during FY2012-22
Growth projections from 17th Electric Power survey of India

	Electrical energy requirement		Annual peak power load	
	(GWh)	(CAGR %)	(MW)	(CAGR %)
2012E	968,659		152,746	
2017E	1,392,066	7.52	218,209	7.39
2022E	1,914,508	6.58	298,253	6.45

Source: 17th Electric Power Survey of India

ANNEXURE-III: SITE PHOTOGRAPHS

Exhibit 51: Chimney erection completed for all the 4 phases of Mundra project
Site photograph of Mundra phase I-IV



Source: Company, Kotak Institutional Equities

Exhibit 52: Satisfactory progress in all phases of Mundra
Site photograph of Mundra phase I-IV



Source: Company, Kotak Institutional Equities

Exhibit 53: Boiler erection in progress at Tiroda 1st unit (660 MW)
Site photograph of Tiroda 1st unit



Source: Company, Kotak Institutional Equities

Exhibit 54: Initial work has commenced at Tiroda 2nd unit (660 MW)
Site photograph of Tiroda 2nd unit

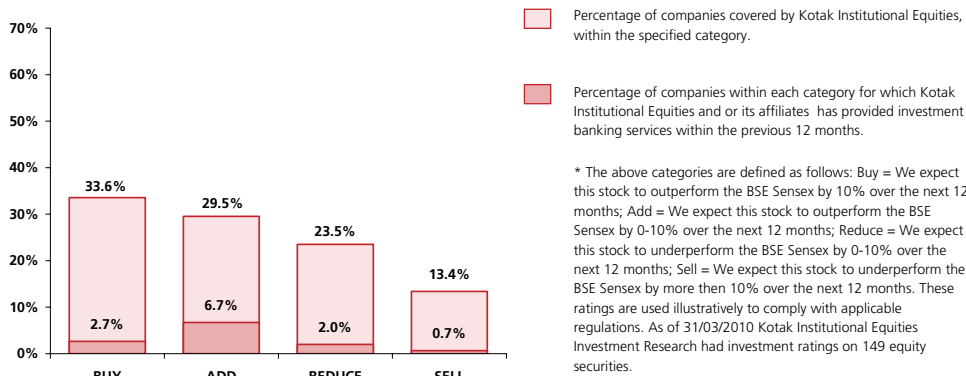


Source: Company, Kotak Institutional Equities

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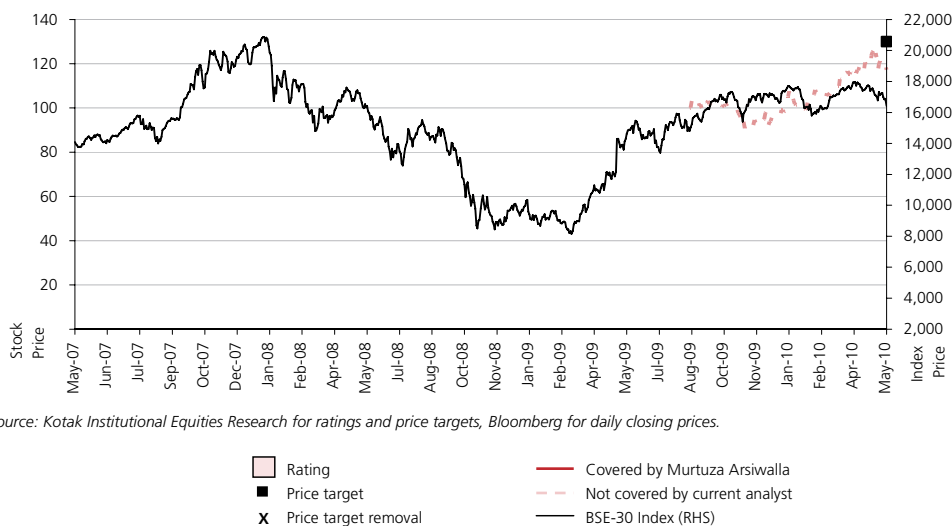


Source: Kotak Institutional Equities

As of March 31, 2010

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