

22 June 2009

BSE Sensex: 14326

# Adani Enterprises

Rs688 OUTPERFORMER

Mkt Cap: Rs182bn; US\$3.8bn

## Hungry for more!

Adani Enterprises (AEL) is redefining its business model and scale of operations. Moving away from low capex, lumpy and low-margin trading to capex heavy and high-margin annuity businesses, AEL is emerging as an infrastructure conglomerate (Rs421bn of revenues by FY12E). AEL plans to invest Rs300bn+ across sectors with 90% in power generation and coal mining by FY12. Commencement of power generation (total capacity of 6,600MW) and coal mining (75m tonnes at peak) imparts visibility of scale to what were 'just potential opportunities'. While near-term risks pertain to execution and financial leverage, we derive comfort from AEL's track record (8x revenue scale-up since FY02) and entrepreneurial vision. With current projects valued at Rs1,105-1,279 per share, and further upside likely as planned projects gain visibility as also from scale-up beyond the existing plans, we maintain Outperformer.

**In quest of scale:** AEL is transitioning from a Star Trading House (power, coal, agri, precious metals, scrap, etc) to an infrastructure conglomerate (power generation, coal mining, city gas distribution, oil & gas exploration, agri logistics, etc). A marked shift is underway from asset light businesses to asset creation, lumpy trading to annuity model and 5-6% margins to a 40%+ margin profile.

**Power and coal businesses at the core:** AEL is executing 6,600MW of power plants with 330MW capacity going on stream immediately and 1,320MW by FY10. In coal mining business, Indonesian mines with annual extract of 10m tonnes are operational and Indian mines (65m tonnes by FY16) would commission in FY11. Power generation and coal mining would account for 25% of revenues and 80% of EBITDA by FY12.

Execution the key; we see a winner: As AEL enters uncharted territories and creates scale (Rs421bn by FY12), execution will hold the key. However, timely commissioning of Mundra Port and power plants, position as India's third largest power and largest coal trader, and promoters' entrepreneurial acumen infuse confidence. Power would be the largest value creator with pre-money valuation of Rs204bn (Rs242bn post money). We value AEL's existing projects at Rs1,105-1,279 per share (Rs688-862 for power and Rs221 for coal mining). Further upside could accrue as AEL capitalizes on the massive government thrust on infrastructure.

## Key financials

As on 31 March	FY08	FY09	FY10E	FY11E	FY12E
Net sales (Rs m)	196,097	262,583	250,091	322,596	420,688
Adj. net profit (Rs m)	3,694	5,064	12,786	23,353	46,019
Shares in issue (m)	247	247	247	247	265
Adj. EPS (Rs)	15.0	20.5	51.9	94.7	173.9
% change	112.4	37.0	152.5	82.6	83.6
PE (x)	45.9	33.5	13.3	7.3	4.0
Price/ Book (x)	6.9	4.9	3.8	2.4	1.4
EV/ EBITDA (x)	30.6	26.9	16.3	9.7	5.4
RoE (%)	20.4	17.0	32.3	40.9	45.8
RoCE (%)	9.4	7.6	10.3	13.8	20.2

\*Refer to page no. 13 for impact on financials of power business due to change in Commercial Operation Date of power projects

"For Private Circulation only"

"Important disclosures appear at the back of this report"

#### Stock data

Reuters	ADEL.BO
Bloomberg	ADE IN
1-yr high/low (Rs)	825/238
1-yr avg daily volumes (m)	0.27
Free Float (%)	25.1

#### Price performance



#### Performance (%)

	3-mth	6-mth	1-yr	3-yr
Adani	188.4	117.7	(14.0)	449.5
Sensex	61.3	43.8	(3.8)	45.3

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Trading: Changing mix	30

## **INVESTMENT ARGUMENT**

From Rs27bn of revenues, primarily from trading, at the onset of this decade to ~Rs263bn in FY09, AEL has come a long way. Not only has the scale grown 10-fold, the constituents of the business too have changed markedly. From being a Star Trading House dealing mainly in precious metal exports, AEL is on its way to become a leading conglomerate with asset-heavy infrastructure businesses. While coal trading, precious metal trading, agri and edible oil dominate the existing revenue mix, scale would be further redefined on commencement of commercial operations in power generation, coal mining, real estate and scale-up of city gas distribution.

Exhibit 1: AEL - a well diversified conglomerate

Adani Enterprises Ltd.					
	Tradin	g operations			
Power & c	oal trading		Agri - Soya Castor Meal & Oil Grains & Pulses		
End	ergy	Real Estate	Agro		
Power Generation & Transmission (83% holding)	Oil & Gas Exploration (65% JV with Welspun Gujarat)		Edible Oil (50% JV with Wilmar Group of Singapore)		
		Shantigram (71% holding)			
Indonesian Coal Mining (100% holding)	City Gas Distribution (100% holding)	BKC (95% holding) Khatau (57% holding	Fruits & Vegetables (100% holding)		
Indian Coal Mining	Bunkering (50% JV with Chemoil of Singapore)		Grain Silos (100% holding)		
Source: IDEC - SSKI Research Comp	(100	p Owning % holding)			

Source: IDFC - SSKI Research, Company

Exhibit 2: Business scaled up by 8x in seven years



Source: IDFC - SSKI Research, Company

Rs300bn+ investments lined up in asset heavy, high margin annuity-like businesses

#### ☐ A tale of transition...

In the last three years, Adani Group has undergone a complete transition. The business model now offers higher scalability, a better earnings profile and strong growth visibility. AEL is transitioning from customer ownership (trading) to asset ownership (power, coal mining, real estate, oil & gas exploration, agri logistics, etc), a lumpy trading business to an annuity model and from 5-6% margin commodity businesses to a 40%+ margin profile. AEL is in an aggressive investment mode with Rs300bn+ of investments lined up in asset-heavy businesses like power generation, coal mining, real estate, city gas distribution, etc.

Exhibit 3: AEL - charting a new route

Old businesses Power Agri trading Coal trading Coal mining Generation Precious metal Real estate Power trading Agri logistics trading **Business** City Gas Oil & gas Edible oil Scrap trading distribution exploration High capex business Asset creation Low capital employed business Rs300bn of gross block addition Rs20bn of gross block till date by FY12 Lumpiness of trading business 20-30 years of assured revenues **Earnings** Exposed to price volatility Rs135bn of annuity visibility & macro risks Quality of 5-6% margin 40%+ margins earnings

Source: IDFC - SSKI Research

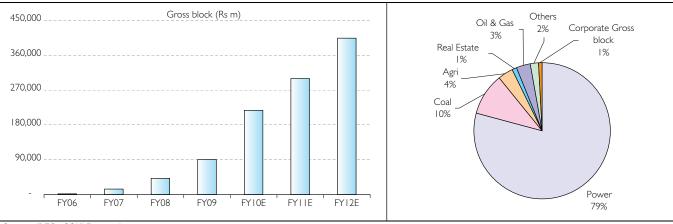
Asset creation – moving backward to complete the value chain

#### ☐ Asset creation to complete the value chain presence

Operating in the trading space, barring edible oil business under Adani Wilmar, all of AEL's businesses have been asset light. In FY09, AEL generated Rs263bn of revenues on a gross block of Rs21bn. However, recognizing that managing trading businesses beyond a particular scale is always difficult and prone to volatility, the Adani group has started investing into creation of hard assets with Rs300bn+ of investments lined up across businesses over FY09-12. While Rs230bn of incremental capex has been earmarked for the power business (total Rs283bn), AEL has envisaged Rs35bn of capex in coal mining over FY09-12 (total of Rs86bn) and Rs30bn in real estate operations. By FY12, we expect AEL's gross block to increase by ~10x to Rs400bn from Rs42bn in FY08. Besides the transition to asset heavy businesses, AEL is also plugging the gaps in its value chain by moving backward to own the assets or resources. For instance, while AEL has presence in power trading business, it has now moved to power generation and further to coal mining for fuel linkages. Similarly, AEL has extended its presence in the oil & gas value chain from city gas distribution to exploration.

Exhibit 4: A transition to asset heavy businesses reflecting in capex





Source: IDFC - SSKI Research

By FY12, we expect annuity based businesses to account for 85% of AEL's EBITDA

## ☐ An annuity model – imparting growth visibility

AEL has proven its ability to manage a vast trading portfolio and sustain profitable growth. However, the trading business is inherently lumpy as it is governed by commodity price fluctuations – more marked in agri and precious metals. In sharp contrast, the newer asset-based businesses offer a strong annuity stream with assured cash flows, be it power generation, coal mining, lease rentals, city gas distribution or agri logistics. These businesses, we believe, impart high earnings visibility to AEL. For instance, power business at full scale (by FY13) would generate revenues of Rs138bn and cash profits of Rs61bn annually. Similarly, once mining assets are fully operational, they would generate Rs18bn+ of cash profits annually and each are long term contracts. By FY12, we expect annuity based businesses to account for 85% of AEL's EBITDA.

Exhibit 5: High cash generation ability

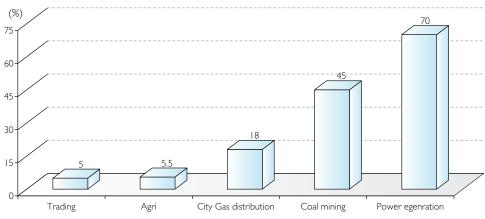
Business	Cash profit generation by FY14E (Rs bn)
Power generation	55
Coal Mining	14
Lease rentals	7
City Gas Distribution	2
Agri Logistics	1

Source: IDFC - SSKI Research

## ☐ Improving earnings profile – high-margin businesses

Besides being lumpy, commodity trading businesses also entail low margins. Currently, each of AEL's businesses has a contribution margin less than 10% and EBITDA margin of 5-6% at best. On the other hand, businesses like power generation offer ~70% margins, coal mining operates at a margin of 45-50% and city gas distribution at 18-20%.

Exhibit 6: Newer businesses far ahead on margins



Source: IDFC - SSKI Research

## ☐ High scalability potential in all new businesses

AEL has demonstrated its ability to attain scale in any business it has ventured into—the company has been among the top five players in each of them. Currently, it is the largest trading house in India and the second largest edible oil player with Rs58bn of revenues. Within a span of two years, AEL has emerged as the largest private sector player in coal trading at 20m tonnes of contracts in FY09. Similarly, AEL is now the third largest player in power trading after Power Trading Corporation and NTPC. AEL aspires to replicate the same success in its new businesses. With 6,600MW of power plants under implementation, we expect AEL to be one of the top five private power generators in the country. In coal mining, AEL has commenced mining in Indonesia and would start operations in India (Machhakata, Lohara and Parsa Kente) FY11 onwards. While it extracted 1m tonnes of coal in FY09, the total annual extraction opportunity from Indian and Indonesian mines is 75m tonnes (25m tonnes by FY12). With this, AEL would become one of the largest private coal mining companies of India.

Against trading margins of 5-6%, AEL moving towards a 40%+ margin profile

At full capacity, AEL to be one of the top five power generators in India and largest private coalminer

## IDFC - SSKI INDIA

Exhibit 7: All businesses promise scale

<b>Business Segment</b>	Total capex plans (FY09-12)	Current scale	Proposed scale of operations	Overall positioning
Power generation	Rs284bn	To be operational	6,600MW	Will emerge as among the top 5 private power generation companies in India
Coal mining	Rs86bn	1m tonnes	75m tonnes	One of the largest private mining companies of India
Power trading		2.8bn units	5bn units	Is the 3rd largest player with 14% market share; next only to PTC and NTPC
Coal trading		20m tonnes	50m tonnes	Largest importer with 50% share of the market
City Gas distribution	Rs5bn	0.4mmscmd	2.4mmscmd	By FY11E will have scale equivalent to Gujarat Gas - the largest listed play
Edible Oil	Rs3bn	Rs58bn	Rs95bn	Second largest edible oil player after Ruchi Soya; owns largest brand - <i>Fortune</i>

Source: IDFC - SSKI Research

## POWER AND COAL BUSINESSES FORM THE CORE

AEL has created a broad-based portfolio, with power generation and coal mining forming the core of AEL's business model going forward. Of the proposed Rs300bn+ of incremental capex plan over the next five years, ~90% would be channelized into power generation and coal mining ventures. By FY12, we expect these two businesses to scale up to Rs112bn, with the overall business expected to grow to Rs421bn. As the mix moves in favour of higher-margin businesses, AEL is expected to garner Rs46bn of PAT post minority by FY12 – 109% CAGR over the period.

## ☐ Power generation – 6,600MW of power generation capacity

Power generation would emerge as the largest component of AEL's business model in the coming years as AEL lines up Rs284bn of total capex to execute 6,600MW of power plants.

#### Industry outlook

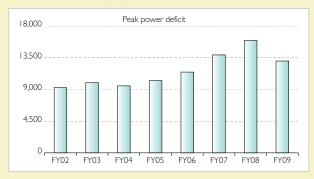
Peak power deficit in India goes to as high as 18.6%

We expect increasing government thrust on private participation in power projects

Power generation capacity in India has increased from 132,329MW at the beginning of 11<sup>th</sup> five year plan to 145,000MW in FY09

Target is to add 77,000MW over the next five years

**Exhibit 8: Power deficit in India** 



#### AEL's Ownership of power assets

Mundra (Gujarat) power plant held by AEL's 83% subsidiary Adani Power Limited (APL)

Tiroda (Maharashtra) project is owned by APL's 77% subsidiary – Adani Power Maharashtra Limited

#### Projects under execution

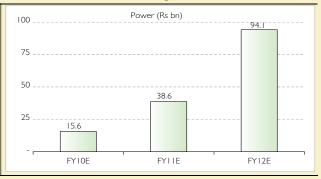
6,600MW of plants at Mundra (4,620MW) and Tiroda (1,980MW)

First of the 330MW of power capacity would commence commercial operations in June 2009 and then in tranches of 330MW up to 1,320MW in Mundra by FY10; all projects fully operational by March 2012

Exhibit 9: AEL's power projects

Exhibit of ALL o power projects					
Capacity (MW)	Project cost (Rs bn)	CoD (last unit)	Off-take secured (MW)		
	191		1,000		
1,320		Mar-10	1,000		
1,320		Jun-11	712		
1,980		Apr-12	713		
1,980	92.6	Apr-12	1,320		
6,600	283.6		4,745		
	Capacity (MW)  1,320 1,320 1,980 1,980	Capacity (MW) Project cost (Rs bn)  191  1,320  1,320  1,980  1,980  92.6	Capacity (MW)         Project cost (Rs bn)         CoD (last unit)           191         191           1,320         Mar-10           1,320         Jun-11           1,980         Apr-12           1,980         92.6		

Power business - execution begins - Revenues



#### Projected scale and our view

With the first tranche of 330MW of power generation going on stream immediately, PPA agreement for 4,745MW and AEL's presence in power trading gives comfort over execution. We expect APL to account for Rs94bn of revenues (22% of AEL's revenues), Rs67bn of EBIDTA (73% of AEL's EBITDA) and Rs34bn of PAT contribution to AEL.

#### □ Coal mining

Having ventured into the coal business as a backward fuel linkage for its power plants, coal mining will soon emerge as the second biggest business within AEL's portfolio. With an overall annual mining throughput of ~75m tonnes from its mines in India and Indonesia, the business is all set to scale up from 1m tonnes of operations in FY09 to ~25m tonnes by FY12 (Rs18bn of revenues).

#### Industry outlook

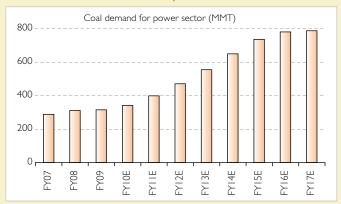
India is world's third largest coal producing country with ~100bn tonnes of proven reserves

Mines 450m tonnes of coal; deficit of 50m tonnes

Power sector demand to increase from 290m tonnes now to 790m tonnes by 2017.

Overall demand to grow 4x over the next two decades

Exhibit 10: Coal demand – on a rapid rise



#### AEL's Ownership of mining assets

Parsa Kente Collieries Limited – JV between AEL and RUVNL

Subcontracting rights for mining at Parsa Kente, mining rights for Lohara and Machhakata – Adani Mining Private Limited (100% holding)

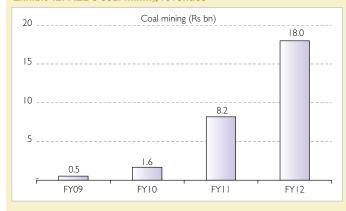
Coal mining in Indonesia – PT Adani Global (100% subsidiary)

**Exhibit 11: Projects under execution** 

Project	Location	Mineable reserves (MMT)	Target annual coal extract (MMT)	Project Cost (Rs bn)	Commissioning	Terminal year	Supply contracts with
Parsa Kente	Chattisgarh	450	15	31.1	Dec-10	Mar-41	Supply to Rajasthan State Electricity Board
Machhakata	Orissa	1,170	50	49.9	Dec-11	Mar-37	Supply to MahaGuj Collieries
Bunyu	Indonesia	140	10	5.8	Mar-8	Mar-25	Supply to APL's Mundra Unit

Source: IDFC - SSKI Research, Company

Exhibit 12: AEL's coal mining revenues



## Projected scale and our view

- Coal mining business is expected to contribute revenues of Rs18bn (4.3% of total), Rs7.5bn of EBITDA (8%) and Rs2.9bn of PAT to AEL's books by FY12; Rs48bn of revenues and Rs11.3bn of PAT by FY14E.
- With government increasing thrust on private participation in coal mining, increasing demand for coal from power businesses in India as also the fuel linkage for its own power plants, we see merit in AEL's coal mining operations.

#### ☐ Real estate

Real estate is an opportunistic, but a highly value-accretive, business extension for AEL. Having spent Rs23bn on property acquisition across Mumbai, Ahmedabad, Surat, Mundra and Kochi, AEL would develop 21m sq. ft of property over the next four years and has a residual saleable land bank of 34msf. The development plan includes 1.5m sq. ft of a commercial project in Bandra Kurla Complex in Mumbai and 41m sq. ft of integrated township development at Shantigram (an integrated township) in Ahmedabad, of which 14.4msf would be developed in the first phase. All the real estate projects of AEL reside in its 95% subsidiary – Adani Infrastructure and Developer Private Limited.

Exhibit 13: Real estate presence

Project	City	Partner	AIDPL's stake (%)	Saleable area (msf)	Commercial (%)	Residential (%)
Shantigram	Ahmedabad	Saumya Constructions (25%)	75	41.0	30	70
Bandra-Kurla Complex	Mumbai		100	1.5	100	
Khatau	Mumbai- Borivali	Marathon Group (40%)	60	1.25	15	85
	Mumbai- Byculla	Marathon Group (40%)	60	0.75	-	100
Mundra	Mundra		100	3.2	-	100

Source: IDFC - SSKI Research, Company

#### □ Trading

AEL started its journey as a Star Trading House and is one of the largest trading companies in India with trading revenues of ~Rs227bn as of FY09. AEL's trading portfolio spans power, coal, agri, precious metals and scrap metal. While the business is the largest contributor to revenues today, the focus now would be to scale up power and coal trading given its synergies with the power generation business. We expect 5% CAGR in AEL's trading business over FY09-12 with power trading and coal trading reporting growth of 7% and 16% respectively.

Exhibit 14: AEL's trading portfolio

Trading business	Current scale (Rs bn)	Details	Outlook
Power trading	20.5	14% market share with 2.8bn units traded in FY09	Synergies with power generation business; merchant trading for its own power plant
Coal trading	93.6	50% market share with volumes of 20m tonnes in FY09	Synergies with coal mining and power generation; plans to double in three years
Agri trading	28.8	With 1m tonnes of agri trade, AEL among the largest players	A steady state volume growth of 5%
Precious metal trading	52.3		Reducing focus
Scrap metal trading	10.0		Reducing focus

Source: IDFC - SSKI Research

#### □ Agri

AEL's agri portfolio includes the edible oil business in a 50:50 JV with Wilmar, grain silos business under Agri Logistics, and fruits and vegetable storage operations under Agri Fresh. With Rs58bn of annual revenues from edible oil operations, Adani Wilmar is the second largest edible oil company in India and owns *Fortune* – the largest edible oil brand. AEL is also present in the attractive niche of agri logistics – with 550,000 tonnes of grain silos capacity and integrated controlled-atmosphere storage facilities aggregating 18,000 tonnes at three different locations (Rohru, Sainj and Rampur) in proximity to apple orchards Himachal Pradesh. We expect 13% CAGR in AEL's agri business over FY09-12 and EBITDA of Rs2.6bn (includes only 50% share in Adani Wilmar) in FY12.

Exhibit 15: AEL's agri portfolio

	Business segment	Capacities	Current scale (Rs bn)	FY09-12E CAGR (%)
Adani Wilmar	Edible Oil	4100tpd crushing, 3090tpd refining	58	13.2
Agri Logistics	Grain silos for FCI	400,000MT at base depot, 150,000 MT at distribution depot	0.7	15.9
Agri Fresh	Controlled atmosphere storage	18,000MT	0.9	18.2

Source: IDFC - SSKI Research

## ☐ City gas distribution

In a move to expand its scope of operations within the energy portfolio, AEL has forayed into city gas distribution (CGD). Given the increasing shift from other forms of fuel to natural gas, we envisage natural gas demand in India to increase from 170mmscmd in FY08 to 280mmscmd by FY12. This opens up a vast opportunity for gas supply (gas exploration) as well as gas distribution businesses. With a planned grid network of 498km (305km currently) and envisaged 2.4mmscmd of volumes by FY12E, we expect AEL to emerge as one of the top four players in the CGD space.

Exhibit 16: AEL's city gas distribution - in scale-up mode

Current network	305km
Cities present in	Ahmedabad, Baroda, Faridabad
Distribution reach	55 CNG stations, 45,000 households, 300 industrial units, 300 commercial
Current scale - FY09	0.5mmscmd
New cities operational by FY12	Lucknow, Noida, Khurja, Udaipur, Jaipur
Proposed network expansion	498km
Proposed scale	2.4mmscmd
Gas supply tie up	GSPC, talks with GAIL

Source: IDFC - SSKI Research

Besides these ventures, AEL has forayed into businesses like shipping and ship fuelling (50:50 JV with Chemoil Energy). AEL has also entered into a 65:35 JV with Welspun Group for Oil & Gas exploration – Adani Welspun Exploration (AWEL). AWEL has been awarded two onshore blocks in India, two in Thailand, one block on Mumbai offshore and one at Gulf of Suez, Egypt in partnership with GSPC (60:40).

## FINANCIALS & VALUATIONS

For AEL, the investments committed a couple of years ago have started showing results. With commissioning of various projects over the next two years, we expect a rapid ramp-up in revenues. We expect 17% revenue CAGR over FY09-12 (Rs421bn of revenues) and 16% revenue CAGR over FY12-14. The business mix is increasingly tilting towards high-margin businesses, which implies a PAT CAGR of 109% over FY09-12E and 18% over FY12-14E. Given AEL's well-diversified business portfolio, we have valued the entity on SoTP basis. While we have valued the projects under execution at Rs1,105 per share (Rs688 for power generation and Rs221 for coal mining), further upside could accrue from execution of projects on hand as also newer projects added to capitalize on the government thrust on infrastructure over the next few years.

## ☐ Investments have started paying off

With commissioning of power plants, Indonesia mines and scale-up of CGD, investments are paying off AEL has been in an aggressive investment mode, which we believe will continue in the coming years as well. All the investments made over the past couple of years into power generation, Indonesian coal mine and city gas distribution businesses would start contributing materially to revenues FY10 onwards. Further impetus would come with the Indian coalmine commencing commercial operations in December 2010. From here up to the next five years, AEL will have a new project commissioning commercial operations, either in power generation or coal mining business. We expect 17% revenue CAGR for AEL over FY09-12 (Rs421bn of revenues) and 16% revenue CAGR over FY12-14. Besides these businesses, further capacity addition in power business, and/ or any oil & gas discovery at the six blocks that AEL has been awarded would redefine the scale of business operations.





Source: IDFC - SSKI Research

☐ Improving earnings profile

High margin newer ventures to account for 30% of revenues by FY12E, from 1.4% now Not only does AEL offer strong growth momentum, its earnings profile is also undergoing a sea change. With high margin businesses of power, coal mining, city gas distribution and real estate expected to account for 30% of revenues by FY12 (1.4% in FY09) and 39% by FY14, we expect overall operating margins to improve from 3.8% in FY09 to 22% by FY12 and 25% by FY14. We see 109% CAGR in AEL's PAT over FY09-12 and 18% CAGR over FY12-14.

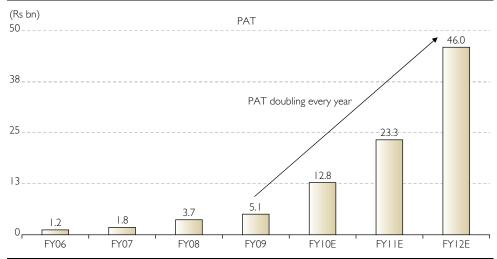
Coal

4%

Agri 11%

Real Estate





Source: IDFC - SSKI Research

## ☐ Reported profit can change depending on power plant CoD

The management has an option to declare COD (Commercial Operational Date) for its power plant either after stabilization of the power plant or on start date of the PPA. We have assumed the management will declare the COD on stabilization of the power plant. However, if the management decides to declare COD on the start of the PPA date, then revenues and cost will be capitalized and cash flows till the PPA date will be routed through balance sheet directly and not through P&L. In this scenario, the reported PAT for FY10E could be lower at Rs7.9bn vis-à-vis our estimate of Rs12.8bn, for FY11E at Rs19.6bn vis-à-vis Rs23.3bn and for FY12E at Rs32.8bn vis-à-vis Rs46bn. While this accounting policy would impact the P&L, it will have no bearing on AEL's NAV.

Reported PAT to be lower depending upon the CoD

Exhibit 19: Variance in estimated financials and reported financials in case of change in CoD

As per existing estimates	FY09	FY10E	FY11E	FY12E
Net sales (Rs m)	262,582.8	250,090.5	322,595.6	420,688.1
Adj. net profit (Rs m)	5,047	12,786	23,353	46,019
Adj. EPS (Rs)	20.5	51.9	94.7	173.9
Alternative				
Net sales (Rs m)	262,582.8	238,816.2	316,632.3	390,791.4
Adj. net profit (Rs m)	5,047	7,861	19,601	32,787
Adj. EPS (Rs)	20.5	31.9	79.5	123.9

Source: IDFC - SSKI Research

## □ SoTP valuation of Rs1,105-1,279 per share

Power and coal mining businesses – the biggest contributors to SoTP Power generation and coal mining would be the largest value creators in AEL's business portfolio. Using the DCF-based model to value the power generation business (Mundra and Tiroda power plants), we have arrived at an equity value of Rs169bn (Rs688 per share) for AEL's 83% stake in Adani Power. Similarly, we have valued AEL's coal mining business based on the DCF model, which gives an equity value of Rs55bn (Rs221 per share) with Machhakata project contributing ~70% of the value. Real estate NAV for the 55msf of projects on hand comes to Rs29bn for AEL's 95% stake in AIDPL (Rs119 per share). Within the real estate portfolio, the commercial project at Bandra Kurla Complex would contribute the maximum value

at 70% of the overall real estate business NAV. We have attributed 3x EV/ EBITDA for FY10E multiple to trading business and 8x EV/ EBITDA multiple to agri business (similar to Ruchi Soya, the largest edible oil company in India), and have arrived at a per share value of Rs102 and Rs30 per share respectively. Our overall equity valuation for AEL stands at Rs1,105 per share.

Exhibit 20: SoTP based value of Rs1,105 per share

<b>Business segment</b>	Method of	Equity Value	Adani's share	Value for AEL's	Per share
	Valuation	(Rs m)	(%)	stake (Rs m)	value (Rs)
Trading	3x FY10E EBITDA	25,180.2	100	25,180	102.1
Power Generation	DCF	204,347.2	83	169,608	687.8
Coal Mining	DCF	54,558.1	100	54,558	221.2
Real Estate	DCF	30,859.6	95	29,317	118.9
Agri (excluding trading)	8x FY10E EBITDA	7,280.8	100	7,281	29.5
City Gas	6x FY10E EV/ E	2,283.6	100	2,284	9.3
Shipping	Capital Employed	1,516.8	100	1,517	6.2
Chem Oil	5x FY!0E EV/ E	1,027.7	100	1,028	4.2
Total Enterprise value	-			290,772	1,179.1
Less Corporate Debt		(18,265.1)		(18,265.1)	(74.1)
				272,507	1,105

Source: IDFC - SSKI Research

However, on working out sensitivity of a 1% lower discounting rate and by increasing our merchant trade rates from Rs3 to Rs4 FY14 onwards, value for power business increases to Rs862 and takes AEL's overall value up to Rs1,279. While this valuation factors in the projects currently in execution mode, further upside is likely from better execution visibility of these projects and addition of new projects to the portfolio.

While we value the current business operations of AEL at Rs1,105-1,279 per share, further upside could be triggered by AEL's active participation in new projects in the infrastructure space. Given the track record and high cash generation from the current proposed projects, we are positive on AEL's ability to capitalize upon the incremental opportunity created by government's massive thrust on infrastructure projects.

## **EXECUTION: THE KEY MONITORABLE**

As AEL ups its ante and lines up heavy capex across multiple businesses, execution of these projects, i.e. managing scale as indeed the high leverage on balance sheet, becomes the most critical monitorable. Also, as power projects and coal mining activities are subject to regulatory clearances, the business is exposed to the risk of regulatory delays. Having said that, the visionary promoters, proven track record of scaling up business revenues by 8x in the last seven years and smooth execution of big-ticket projects like Mundra Port and SEZ give us comfort over execution of the new business lines.

#### ☐ Key business risks...

Key risks – high financial leverage, execution risks and regulatory delays Three key risks that AEL is exposed to pertain to execution and managing the scale, high debt of Rs120bn on the books and regulatory delays. We expect power generation and coal mining to be the key value drivers for AEL – both relatively uncharted territories for the company. Therefore, timely and cost-effective execution of these businesses would be the most important aspect. Also, AEL has a huge debt of Rs120bn as of FY09 and we expect the overall debt on AEL's books to increase to Rs299bn by FY12. However, we like the fact that barring Rs32bn of debt on books of the standalone entity, all other debt rests with various subsidiaries and SPVs. AEL is also up against regulatory risks, particularly in the coal mining business. Regulatory delays in site clearance, environmental clearance, etc would mean delay in commissioning of projects, and hence delayed commencement of revenues from these projects.

## □ ...but we value the entrepreneurial drive

A journey from Rs0.5m of initial capital in 1988 to the current enterprise value of Rs300bn is a testimony to Adani Group's ability to identify scalable business opportunities as indeed execute large projects. Gautam Adani, a first generation entrepreneur, has consistently created scale through entry into new businesses and deploying funds for future growth. We also see a methodology in enhancing the business model from a lumpy commodity business to an annuity based one. The scale of operations and the business width that AEL has managed to attain in the last five years give us comfort over long-term scalability. We also like the fact that all the businesses except Mundra Port and SEZ reside in AEL.

#### ☐ A proven track record in executing mega projects

Adani Group has successfully executed large projects like Mundra Port. The port is one of the fastest growing private ports in India with a 2-year CAGR of 35% in cargo volumes handled (35.7m tonnes in FY09). The company commissioned its second container terminal in FY08 and is on schedule for commissioning a dedicated coal terminal in the current fiscal. Out of the proposed ~32,000 acres of SEZ at Mundra, 18,480 acres of land is under possession and 14,629 acres has already been notified. The company has also developed the necessary road and rail access to connect the port to the trunk routes. The Group's project management skills are amply demonstrated in the quick progress of projects under Adani Power, where fuel has been tied up and EPC contracts awarded for the entire 6,600MW of proposed power plants with offtake secured for ~4,745MW.

We back promoter's ability to identify new avenues and aggressive approach

Proven track record -Mundra port, commissioning of power plants, scale in power and coal trading

## POWER: A 'POWERFUL' VEHICLE

Adani Power (APL) - an 83% subsidiary of AEL, with 6,600MW of power plants under development, is likely to emerge as a key contributor to the huge incremental power capacity envisaged in the country over the next 5-6 years. Importantly, APL would have a considerable control over its cost of power generation as it leverages Adani Group's project execution skills and presence across the entire power value chain - from coal mining to power trading. Control over cost of power would give APL a critical edge in participating profitably in competitive tariff-based bidding processes and to earn robust returns on merchant sales of power. Significant progress already achieved in key milestones such as firm fuel tie-ups, favourable debt syndication and award of equipment and EPC orders provides high visibility on timely project execution. Moreover, tie-up of 4,745MW of power off-take under long-term PPAs at an average RoE of over 50% offers high revenue and earnings visibility. Based on SOTP using the equity cash flow discounting method (discount rates of 14-15%), our pre-money valuation for APL works out to Rs204bn (post money valuation of Rs242bn).

## ☐ Leveraging synergies

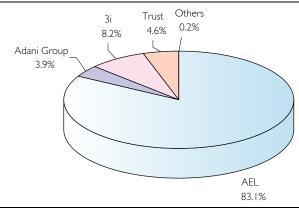
APL leverages its presence across the value chain of power business AEL is one of the largest importers of coal in India, with coal mining rights in both the domestic and international markets. AEL is also one of the leading power trading companies in India with ~14.3% market share. Mundra Port and SEZ, held 81.2% by the Adani Group, operates a deep draught, multi-product port at Mundra (Gujarat) and is developing India's largest multi-product SEZ spanning ~32,000 acres at Mundra. Besides, the Group also has interests in shipping and logistics. With strong potential synergies in sight – fuel linkage, vicinity of port for coal/project imports and potential captive user base from SEZ, AEL has forayed into power generation through APL. APL is proposed to be the holding company for all power generation assets of AEL.

Exhibit 21: Adani Group's presence over the power value chain bodes well for APL

Coal Mining	Coal Tradii	Shipping	Port Infrastructu	Power Generation	Power Transmissio	Power Trading
Exclusive mining contracts in Indonesia (AEL) and captive coal blocks in India (APL)	One of the largest importer of coal in India importing 20m tons in FY09 (AEL)	2 Capesize vessels ordered and to be delivered by FY11 (AEL)	Dedicated coal terminal at Mundra port & dry cargo terminal at Dahej port under development (MPSEZ)	2 power projects planned with combined capacity of 6,600MW (APL)	Transmission lines being constructed to evacuate power generated (APL)	Third largest power trader in India for FY09, 2.8bn units traded (AEL)

Source: IDFC - SSKI Research

Exhibit 22: Adani Power's shareholding



Source: Adani Power DRHP April 2009

## ☐ APL – setting up 6,600MW generation capacity by April 2012

APL is currently in the process of setting up 6,600MW of power generation capacity, with the projects in various stages of implementation. While 4,620MW of power capacity is located at Mundra (Gujarat), 1,980MW is being set up at Tiroda (Maharashtra). Power generation at Mundra is scheduled to be commissioned in phases starting June 2009 through April 2012. On the other hand, the Tiroda capacity is scheduled to be commissioned over August 2011-April 2012.

## **BUILDING BLOCKS IN PLACE**

## ☐ Control over fuel – a significant competitive advantage

APL has secured all the necessary tie-ups for the entire 6,600MW power capacity under implementation. Fuel sourcing has been secured through long-term coal supply agreements with AEL for imported coal (which in turn has sourcing tie-ups with owners of the fuel source), as also by way of captive coalmines allocated by the government and tie-ups with other domestic sources.

Fuel sourcing secured through long-term arrangements with AEL for imported coal and captive coalmines as also other domestic tie-ups

Power plants strategically located in Gujarat and

Maharashtra, highly

industrialized states

Exhibit 23: Fuel supply secured for ~100% of planned capacity

<b>Project Name</b>	Capacity (MW)	Fuel Supply Status
Mundra I	1,320	Coal supply agreement entered into with AEL
Mundra II & III	1,320	Coal supply agreement entered into with AEL
Mundra IV	1,980	Coal supply agreement with AEL, linkage recommended for 1366MW
Tiroda	1,980	Captive mines allocated and linkage recommended for capacity up to 1180MW

Source: Company; IDFC - SSKI Research

#### A significant competitive advantage

Firm fuel tie-ups give control over power generation cost

The coal supply agreements ensure availability of a fixed quantity of coal at predetermined prices to APL, thereby insulating it from wide fluctuations in coal prices. Also, captive coalmines give the company complete control over the quality and cost of fuel. Given the dedicated and established fuel supply line, APL has a firm control over its fuel costs – and thus a critical advantage in bidding for power off-take under competitive tariff based bidding processes (Case I type bids). Further, in case of merchant sales of power where tariffs are high, control over fuel costs ensures robust profitability and protected returns in case tariffs decrease over a period of time.

PPAs secured for more than one-third of capacity; remaining to be sold in open market at higher tariffs

## ☐ Power off-take risks managed with Case I type PPAs for 4,745MW

APL has already tied up off-take for 4,745MW (71%) of the power to be generated from its power plants. The PPAs entered into by APL, under Case I bids, are at levelized tariffs ranging from Rs2.35-2.94 per unit. At these tariffs, we expect APL to generate extremely lucrative RoEs of 50-80%, leading to strong overall profitability across power plants. Further, APL has retained the option to sell the remaining power in the open market (merchant sales), which can translate into a substantial upside for the company in view of the acute shortage of power in India.

Exhibit 24: APL has already tied up power sales for 4,745MW

Project	Total capacity	Off-take secured	Procurer	Levelised tariff	PPA term
	(MW)	(MW)		(Rs / unit)	(years)
Mundra -I	1,320	1,000	Gujarat Urja Vikas Nigam Ltd. (GUVNL)	2.89	25
Mundra -II &III	1,320	1,000	Gujarat Urja Vikas Nigam Ltd. (GUVNL)	2.35	25
Mundra IV	1,980	712	Uttar Haryana Bijli Vitaran Nigam Ltd (UHBVNL)	2.94	25
		713	Dakshin Haryana Bijli Vitaran Nigam Ltd (UHBVNL)	2.94	25
Tiroda	1,980	1,320	Maharashtra State Electricity	2.68 for 660MW	25
			Distribution Company Ltd. (MSEDCL)	2.64 for 660MW	
Total	6,600	4,745			

Source: Company: IDFC - SSKI Research

Plants located in states with huge power deficits; scope for merchant sales at high tariffs

## ☐ Power plant locations – ideal for merchant sales

APL proposes to retain a portion of the power generated from all its power plants for sale on merchant basis – either directly to industrial users or to power procurers in the spot market. Notably, the power plants are located in heavily industrialized, or rapidly industrializing areas, and in regions fraught with large power deficits. Thus, these locations are lucrative markets for merchant sales of power. The power plants in Mundra are likely to attract a large number of captive users within the Mundra SEZ itself, while the Tiroda (Maharashtra) power plant is expected to benefit from the huge supply deficit within the state as also in neighbouring states such as Andhra Pradesh. In our estimates, we have factored in merchant power tariff of Rs6 per unit for FY10 and FY11, Rs5 per unit for FY12, Rs4 per unit for FY13 and Rs3 per unit thereafter.

Exhibit 25: APL's power plants offer lucrative merchant sale potential

Project	Off-take pending tie-up (MW)	Merchant sale opportunities
Mundra – I	320	Captive units within Mundra SEZ
Mundra – II	320	Captive units within Mundra SEZ
Mundra – IV	555	Captive units within Mundra SEZ
Tiroda	660	Spot sales to power deficit states such as Maharashtra and Andhra Pradesh

Source: Company, IDFC - SSKI Research

Power plants connected to the state as well as national grid

## Own transmission lines to give direct access to demand centres

APL plans to set up its own transmission lines in order to ensure connectivity of power plants with the state as well as national grid. A ready transmission network connecting the power plants to the grid would enable APL to have direct access to demand centres and sell its merchant power at the most profitable tariffs. Moreover, with transmission lines established outside the power plants, APL would have the option to evacuate power to other regional centres in case of lower off-take by the procurers with whom it has entered into PPAs.

Exhibit 26: Establishing own transmission lines to access lucrative markets

Project	Transmission line length (kms)	Connecting grid	Connection point
Mundra – I &		PGCIL	Dehgam, Gujarat
Mundra IV	800	Haryana, PGCIL	
Tiroda	225	PGCIL, National Grid	Wardha, Maharashtra
	140	Mahatransco, State Grid	Koradi, Maharashtra

Source: Company; IDFC - SSKI Research

#### ☐ Rapid progress on implementation

Equipment & EPC orders already placed; project execution on schedule APL has achieved considerable progress on implementation of its power plants. Mundra I (1,320MW) is on track for meeting its COD target of June 2009 for the first unit of 330MW, October 2009 for the second unit, December 2009 for the third unit and February 2010 for the fourth unit. The company has already awarded equipment and EPC contracts for Mundra II and III and Mundra Extension, with rapid progress on construction work. Land is also in the process of being acquired for the proposed power plant at Tiroda. The rapid progress on equipment procurement and EPC orders as also on project construction provide high visibility on completion of the power plants as per the schedule.

## Enhancing returns through aggressive gearing

Mundra I & II funded at a gearing of 5.2x and Mundra III at 3.3x APL has demonstrated keen financial acumen in securing an optimum funding mix for its power projects to enhance shareholder value. The company has funded the 1,320MW Mundra I and II power projects at a gearing of 5.2x with a total equity contribution of Rs7.1bn. While Mundra III has been funded at a gearing of 3.3x, the management targets to fund Mundra IV at a gearing of 3x. With lower equity contributions, APL is not only expected to earn superior equity returns on projects, but is also likely to be in a position to fund larger projects with the same amount of funds.

#### **VALUATIONS**

Our DCF model uses equity discounting rates of 14-15% depending on risk

## ☐ APL valued on SOTP basis, using DCF methodology for assets

We have valued APL on sum-of-parts basis by adopting the discounted cash flow to equity methodology for valuing individual power plants under development. We have used equity discount rates that reflect the relative risks of each project and accordingly, we have discounted the equity cash flows at rates ranging from 14-15%.

## ☐ Long-term merchant tariff assumed at Rs3 per unit

India is currently facing huge power deficits, which has been driving a sustained increase in traded power tariffs. Weighted average power tariffs increased from Rs3.1 per unit in FY06 to ~Rs4.5 per unit in FY08 and further to Rs6.9 per unit in Q2FY09. Certain state distribution companies are reported to have purchased power in the spot market at peak hours at tariffs as high as Rs7-8 per unit. Going forward, we expect traded power tariffs to range from Rs2.5 per unit for off-peak hours (~16 hours in a day) to Rs5 per unit for peak hours (~8 hours in a day) in the peak demand period of summer and high winter. Consequently, we factor in a long-term merchant power tariff of Rs3 per unit (Rs6 per unit for FY10 and FY11, Rs5 per unit for FY12, Rs4 per unit for FY13 and Rs3 per unit thereafter) for the 1,855MW of power capacity that APL intends to sell in the open market on merchant basis.

Exhibit 27: Weighted average merchant tariff of Rs3/unit realizable

	Base Case
No. of hours per annum (24 * 365)	8,760
Assumed PLF (%)	90
Hours under operation	7,884
Peak hours (8 hours per day)	2,628
Non-peak hours (16 hours per day)	5,256
Peak season months in a year	6
Non-peak Seasons in a year (months)	6
Tariffs (Rs/ unit)	
- Peak hour tariffs in peak season	5.00
- Peak hour tariffs in non-peak season	3.00
- Non-peak hour tariffs in non-peak season	2.50
- Weighted average tariff	3.00

Source: IDFC - SSKI Research

## ☐ APL valued at Rs204bn on pre-money basis

Our valuation of APL builds in long-term merchant power tariff of Rs3 per unit We have estimated NPV of equity cash flows of Rs220bn for all power plants under development by APL, building in a long-term merchant rate assumption of Rs3 per unit and equity discount rates of 14-15%. Adjusted for its stake in individual power plants, we assign an equity fair value of Rs204bn to APL (Rs688 per share for AEL). Assuming the successful completion of APL's proposed IPO for 337.7m shares, we estimate APL's post-money value at Rs241.8bn.

Exhibit 28: APL valued at Rs204bn (pre-money)

Project (Rs m)	Capacity	CoD (last unit)	TPC	Equity Dis	c Rate (%)	NPV	APL Stake (%)	APL Value
Mundra I & II	1,320	Mar-10	43,500	7,060	14	72,513	100	72,513
Mundra III	1,320	Jun-11	57,960	13,420	15	32,532	100	32,532
Mundra IV	1,980	Apr-12	89,600	22,400	15	49,469	100	49,469
Tiroda	1,980	Apr-12	92,630	23,158	15	65,022	77	49,833
Total	6,600		283,690	66,038		219,536		204,347

Source: IDFC - SSKI Research

Re1 higher merchant rates and 1% lower discount – APL's value increases to Rs256bn

## ☐ Higher merchant rates and lower discount rates – value of Rs256bn

In view of the changing business environment, especially with softening interest rates and continued high power deficits, we have analysed the sensitivity of APL's valuations to changes in discounting rate and merchant tariff assumptions. We have assumed merchant tariffs to stabilize at Rs4 per unit FY13 onwards (compared to Rs3 per unit FY14 onwards in our base case assumptions) and have reduced our equity discount rates by 1% for each project. In such a scenario, our fair value estimate of APL, on pre-money basis, works out Rs256bn (Rs862 per share for AEL) and Rs299bn post-money.

Exhibit 29: APL's consolidated earnings expected to increase at 40% CAGR over FY10-15

(Rs m)	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E
Revenues	15,643	38,646	94,119	138,046	145,383	133,849
yoy chg (%)		147.1	143.5	46.7	5.3	(7.9)
EBITDA	11,069	27,558	67,440	95,769	100,216	87,070
yoy chg (%)		149.0	144.7	42.0	4.6	(13.1)
PAT	8,435	17,763	42,457	46,503	54,805	46,592
Minorities (23% in Tiroda)	-	-	1,510	4,198	4,831	4,102
PAT post minorities	8,435	17,763	40,947	42,305	49,974	42,490

Source: IDFC - SSKI Research

Exhibit 30: APL - Consolidated Balance Sheet

(Rs m)	FY07	FY08	FY09E	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E
Equity Capital	2,607	5,521	18,420	18,424	18,424	18,424	18,424	18,424	18,424
Total Shareholders' Equity	2,807	14,043	23,564	32,026	52,407	97,028	143,531	198,336	244,927
Debt	-	8,050	26,995	102,952	152,968	209,723	195,382	177,244	159,107
Deferred Taxes	-	-	-	214	2,819	6,729	15,396	21,715	25,603
Total	2,807	22,093	50,559	135,192	208,195	313,480	354,309	397,295	429,637
NFA	2,607	21,343	45,415	127,975	195,019	272,663	257,780	242,886	227,992
Cash	2,864	3,413	5,144	6,592	11,630	37,053	91,007	148,594	196,290
NWC	(2,664)	(2,664)	-	626	1,546	3,765	5,522	5,815	5,354
Total	2,807	22,093	50,559	135,192	208,195	313,480	354,309	397,295	429,637

Source: IDFC - SSKI Research

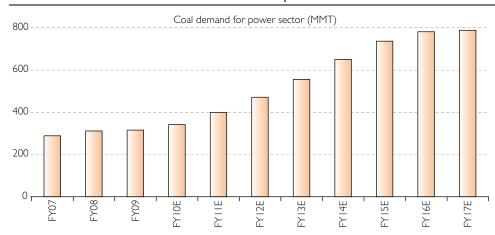
## **COAL MINING: TIME TO MINE**

What started as a 'need' to get fuel linkages for power business is turning out to be the most relevant component of AEL's business model after power. Having proven its mettle in the coal trading business (largest importer in India), AEL has forayed into coal mining. While the Indonesian mine (10m tonnes of annual throughput) is already operational and extracted 1m tonnes of coal in FY09, the mines in Parsa Kente (Chhattisgarh), Lohara (Maharashtra) and Machhakata (Orissa) are in the execution phase. These mines are likely to be operational in FY11. With a total annual throughput of ~25m tonnes by FY12 (75m tonnes at full scale of operations) from its Indian and Indonesian coalmines, the business could potentially generate Rs18bn of revenues by FY12 and Rs48bn by FY14. Using the DCF valuation methodology, we assign the coal mining business a fair value of Rs221 per share of AEL.

## ☐ Indian coal landscape – mining profits

India is world's third largest coal producing country and has abundant coal reserves – estimated at 256bn tonnes with proven reserves of ~100bn tonnes. Though ~450m tonnes of coal are mined annually, India is still coal-deficit given the increasing demand – particularly from the power sector. Coal demand in India is currently pegged at ~500m tonnes and increasing. Of the total 145,000MW of installed power generation capacity in India, two-third is fueled by coal. Currently, power sector alone consumes 290m tonnes of coal annually, which is expected to increase to ~790m tonnes by 2017. This throws open a huge opportunity for mining in India. Coal India (CIL), a state-owned entity, is currently mining 380m tonnes of coal, way short of the indicative coal demand. We anticipate increasing private participation in coal mining projects and further impetus would come as the government is mulling over opening the sector to non-captive private miners.

Exhibit 31: Incremental 500m tones of coal demand for power sector



Source: IDFC - SSKI Research

India's coal demand tp be up from 500m tonnes to 2bn tonnes over two decades

500m tonnes of incremental coal demand from power sector alone by FY17

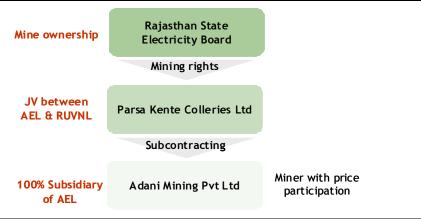
#### ☐ Indian coal mining operations

#### Parsa Kente - JV with RVUNL

AEL, through its 100% subsidiary Adani Mining Private Limited (AMPL), has ventured into coal mining business in India. AEL has entered into a 76:24 joint venture (Parsa Kente Collieries Limited) with Rajasthan Urja Vikas Nigam Limited (RUVNL) to mine coal at Parsa Kente Basin in Chhattisgarh. The coal from this mine would be used by RSEB for captive consumption. While the mining rights rest with PKCL, PKCL has further proposed to subcontract the mining to AMPL as a service provider for the next 30 years. The Parsa Kente site has 450m tonnes of mineable reserves (F Grade coal), which will extract 15m tones at full operations. AMPL plans to commence mine development in the current year and the mine is expected to start commercial operations in December 2010. Total project cost (including railway sidings) is pegged at Rs31bn, 70% of which would be funded through debt. In FY12, AMPL is expected to generate revenues of Rs6.3bn from this mine.

AEL forms a 74:26 JV with RUVNL for coal mining at Parsa Kente

**Exhibit 32: Structure of mining rights at Parsa Kente** 



Source: IDFC - SSKI Research, Company

Exhibit 33: Parsa Kente mining - 15m tonnes on fully operational

	Parsa Kente
Mineable reserves	450m tonnes
Annual target	15m tonnes
Extracted coal quality	F Grade
Commercial operations commencement	Dec-10
Terminal year	Mar-41
Washed coal ratio	77.50%
Supply contract	Rajasthan State Electricity Board
Strip ratio	5.16
Project cost	Rs31.3bn
Debt funding	70%

Source: IDFC - SSKI Research

AMPL has also acquired mining rights for Lohara mines, which would have an annual throughput of 4m tonnes. Coal from this mine would be used for captive consumption at Adani Power's 1,980MW Tiroda power plant in Maharashtra.

30 years of mining contract with Adani Mining Private Limited

#### Machhakata (Orissa)

AEL has received the LoI for mining rights at Machhakata mines in Orissa. Expected to start commercial operations in December 2011, AEL would start extracting 5m tonnes in FY12 and would gradually scale up to 50m tonnes by FY17 (washed coal of 36m tonnes). Total mineable reserves stand at 1,170m tonnes (F Grade). AEL has received the LoI for a 30-year contract with MahaGuj (a JV between MahaGenco and Gujarat State Electricity Corporation Limited) for coal supply. AEL will further contract mining to AMPL. On being operational at full capacity (expected in FY17), this mine is estimated to generate revenues of Rs51bn+ (pricing at quote price or applicable price as per Mahanadi Coal Fields Limited, whichever is lower). Total project cost works out to Rs50bn, 75% of which would be funded through debt. While this mining right could potentially be the biggest value creator within mining business, AMPL is in very early days of execution.

Exhibit 34: Machhakata mining – 50m tonnes at full operations

Biggest potential – 50m tonnes at full scale

	Machhakata
Mineable reserves	1170m tonnes
Annual target	50m tonnes
Extracted coal quality	F Grade
Commercial operations commencement	Dec-11
Terminal year	Mar-37
Washed coal ratio	72%
Supply contract	MahaGuj
Strip ratio	2.5
Project cost	Rs49.9bn
Debt funding	75%
0 IDEO 00KI D	

Source: IDFC - SSKI Research

## ☐ Indonesian mining operations

Indonesia is world's seventh largest coal producer with mineable reserves of 5.3bn tonnes. AEL, through its subsidiary PT Adani Global, has acquired mining rights for a site at Bunyu Island having 140m tonnes of mineable reserves, a higher calorific value (5,200 GCV) and stripping ratio (2.75). PT Adani Global has received exploitation license for two concessions and has been commercially operational since March 2008. However, mining reserves are expected to get fully exploited by FY25. AEL extracted 1m tonnes of washed coal in FY09 and plans to scale up operations to 3m tonnes in FY10 and further to 9.5m tonnes in the next three years. Going forward, all the coal produced from the Bunyu site would be utilized for Adani Power's Mundra Power plant. On full scale, this mine would generate revenues of ~USD160m and EBITDA of USD95m. PT Adani Global is further carrying out preliminary exploration on sites in the Sumatra region of Indonesia.

Already operational – scale-up from 1m tonnes in FY09 to 3m tonnes in FY10

Exhibit 35: Indonesian mining – 9.5m tonnes at full operations

	Bunyu (Indonesia)
Mineable reserves	140 m tonnes
Annual target	9.5m tonnes
Coal quality	5200GCV
Commercial operations commencement	Mar-08
Terminal year	Mar-25
Supply contract	Supply to AEL (in turn supply to Adani
	Power)
Strip ratio	2.75
Project cost	Rs6bn
Debt funding	70%

Source: IDFC - SSKI Research

#### ☐ Financial analysis and valuations

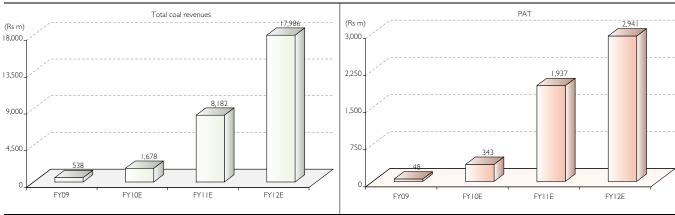
Scale-up to 25m tonnes of coal extraction by FY12; 75m tonnes at full scale of operations AEL has lined up Rs86bn of cumulative capex across the mines in India and Indonesia. AEL would generate estimated revenues of Rs18bn, EBITDA of Rs7.5bn and PAT of Rs2.9bn in FY12. On a full scale by FY17, the business would generate revenues of Rs84bn and PAT of Rs26bn. With the extent of scale that AEL strives to achieve for its coal mining operations, this business would be the second largest contributor to AEL's profits by FY14E, and thus value. Using DCF-based valuation for each of the mining site, we have arrived at an equity value of Rs55bn for AEL's coal operations (Rs221 per share of AEL). Machhakata mining would account for more than 72% of the total value attributed to the coal mining operations.

Exhibit 36: Gradual scale-up in coal mining throughput

Washed coal quantity (m tones)	FY09	FY10E	FY11E	FY12E	FY13E	FY14E
Parsa Kente			2.3	5.8	7.8	11.6
Machhakata				3.6	7.2	15.8
Bunyu, Indonesia	1.0	3.0	5.4	7.9	9.5	9.5

Source: IDFC - SSKI Research

Exhibit 37: Coal mining – Multifold growth in revenues...



...and in PAT

Source: IDFC - SSKI Research

## Exhibit 38: SoTP valuations – Rs221 per share

Machhakata to account for 70% of the overall value for coal mining business

(Rs m)	Project cost	Revenues	PAT	NAV	Adani's	Value for
		FY12E	FY12E		share (%)	Adani
AMPL (PKCL+ Lohara)	31,140.9	6,252	869	13,081	100	13,081
PKCL (74% share in JV)		5,571	9.5	104	74	77
Machhakata	49,875.0	1,955	40.5	36,347	100	36,347
Bunyu	5,819.0	5,656	2,018	5,053	100	5,053
Total value				54,585		54,558
Per share value (Rs)						221

Source: IDFC - SSKI Research

## **REAL ESTATE: AN OPPORTUNISTIC ENTRY**

Entry into real estate is an opportunistic extension to AEL's existing business operations. AEL has forayed into real estate business through Adani Infrastructure Developers Private Limited (AIDPL) – its 95% subsidiary. Having spent Rs23bn on property acquisition across Mumbai, Ahmedabad, Surat, Mundra and Kochi, AIDPL has 55m sq. ft of saleable property (21m sq. ft. will be developed over the next four years). The development plan includes 1.5m sq. ft of a commercial project in Bandra Kurla Complex in Mumbai and 41m sq. ft of integrated township development at Shantigram in Ahmedabad. We have assigned an NAV of Rs119 per share to the business for AEL's 95% stake.

## ☐ 55m sq. ft of total property development

21msf of the total 55msf of saleable land bank to be developed over the next four years AIDPL has accreted land bank across Mumbai, Ahmedabad, Mundra, Surat and Kochi, and has lined up ~55m sq. ft of property development. Of this saleable area, two key projects for AIDPL are a 41m integrated township project in Shantigram, Ahmedabad and another 1.5m sq. ft of commercial property development at BKC, Mumbai. AIDPL also plans to develop a residential property at Byculla (0.75m sq. ft) at the recently acquired Khatau Mills and a residential-cum-commercial project at Borivali property (1.25m sq. ft) of Khatau Mills.

AIDPL's real estate development has a balanced mix of portfolio in terms of residential and commercial area as also property for sale and property on lease rental. We also like the fact that AIDPL, recognizing its lack of experience in the real estate industry, has roped in partners through offering equity stake in various projects to capitalize on their expertise. AIDPL has entered into various tie-ups with known names in the real estate arena including Saumya Constructions and Marathon Group. AIDPL has already invested Rs23bn towards land acquisition. Of the total available land, 21m sq. ft will get developed in the first phase.

Exhibit 39: AEL's real estate presence

Project	City	Partner	AIDPL's	Saleable area	Commercial	Residential
			stake (%)	(msf)	(%)	(%)
Shantigram	Ahmedabad	Saumya Constructions (25%)	75	41.0	30	70
Bandra-Kurla Complex	Mumbai		100	1.5	100	
Khatau Mills	Mumbai- Borivali	Marathon Group (40%)	60	1.25	15	85
Khatau Mills	Mumbai- Byculla	Marathon Group (40%)	60	0.75	-	100
Mundra	Mundra	NA	100	3.2	-	100

Source: IDFC - SSKI Research, Company

☐ Bandra-Kurla Complex – highest value contributor

1.5msf of commercial development in one of the most lucrative commercial hubs Under a slum rehabilitation project, ADPL (Adani Developers Private Limited) has acquired development rights for a property at BKC from HDIL at a pre-negotiated price of Rs11.9bn for 1.5m sq. ft of developable area. ADPL has already completed possession of 17,700 sq. m of the total 23,300 sq. m land. Given the catchment, which was one of the first planned commercial hubs in Mumbai, this would be a complete commercial project with a lease model. As BKC is one of the most lucrative commercial hubs in Mumbai, ADPL is well placed to earn Rs300 per sq. ft per month of lease rental in this property. AIDPL now owns 100% in BKC project. The project is expected to be completed by March 2012 and the total project cost is

estimated at Rs18bn. ADPL has also issued compulsorily convertible debt to the tune of Rs11bn.

## ☐ Shantigram – an integrated township project spanning 578 acres

Shantigram is a 578 acres (over 41msf of saleable area) integrated township project being developed by AIDPL. Located on the Sarkhej-Gandhinagar Highway, very close to Ahmedabad, the township is being developed (land and FSI cost of Rs.7.2bn). The project is attractive given the demographics of Ahmedabad city (third highest per capita income in India), location (distance from Gandhinagar – capital of Gujarat) as also upcoming projects like Finance City in the near vicinity. Of the planned 41msf of property development, 70% of the area has been assigned to residential and 30% to commercial and retail property development. AIDPL has roped in Saumya Constructions as its project partner and offered it a 25% equity stake. Work has commenced on the project with landscaping being underway. While the project would be developed in a phased manner, the first phase of 14.4msf will be executed by FY13.

## ☐ Mundra mass housing and integrated township

With Mundra becoming the largest and busiest port in India, planned SEZ by Mundra Port and SEZ (a group company) and upcoming power plants by Adani Power and Tata Power, there is ample demand for housing in Mundra given the increasing executive work force. AIDPL plans to develop a mass housing project in Mundra spread over 3.2msf. AIDPL has developed 720 flats (0.8m sq. ft.) and intends to develop additional 2.4msf of residential apartments over the next four years. The integrated township project would also include development of schools, colleges, hospital and recreation facilities.

#### ☐ Khatau mill land – Byculla and Borivali

Having acquired Khatau Mills under BIFR for Rs2.5bn, AIDPL has got access to Khatau Mills' two mill properties in Byculla and Borivali. AIDPL has partnered with the Marathon Group (40% stake by Marathon Group) to develop these properties with a total saleable area of 1.25msf at Borivali and 0.75msf at Byculla.

#### **□** Valuations

While we believe that real estate is an opportunistic and unrelated extension to AEL's business operations, existing plans of developing 21msf of property over the next four years and the remaining 34msf would be developed post that. 26msf of area under Shantigram is expected to commence from FY13 onwards. The BKC project would be the largest value creator on AIDPL's books and we have arrived at an NAV of Rs22bn for BKC projects. We are valuing the 34msf of saleable area not under development currently at Rs400psf. Our NAV for all the real estate projects put together comes to Rs29bn (Rs119 per share) for AEL's stake in the business.

An intergrated township panning 41msf'; 14.4msf to be developed in first phase

Mass housing project to capitalize upon increasing commercial activities in Mundra

BKC project to contribute 70% of the total value of real estate business

## IDFC - SSKI INDIA

Exhibit 40: Real estate project details

Segment	Location	Project size	Expected	Expected	Realizations	Construction	Share
		(msf)	start	completion		cost	(%)
Office space - lease	Bandra Kurla Complex	1.50	Apr-09	Dec-11	300	3,500	100
Residential Apts	Byculla	0.75	Apr-09	Mar-13	15,000	3,000	60
Residential Apts	Borivali	1.25	Apr-10	Mar-14	4,000	1,750	60
Residential Apts	Ahmedabad	10.2	Apr-09	Mar-14	1,800	1,150	75
Office space - lease	Ahmedabad	4.2	Apr-09	Mar-14	25	1,350	75
Residential Apts	Mundra	3.00	Apr-08	Mar-14	1,750	950	100

Source: IDFC - SSKI Research

Exhibit 41: SoTP Value of Rs119 in AEL's books

Project	Property	Area (msf)	Adani's share (Rs m)
Bandra Kurla Complex	Office	1.50	22,132
Khatau Byculla	Residential	0.75	2,555
Khatau Borivali	Residential and Office	ce 1.25	454
Shantigram	Integrated township	14.4	2,517
Mundra	Mass Housing	3.20	809
NAV of projects under development			28,467
NAV of balance projects - 34msf			13,586
Less: Debt			(11,194)
NAV			30,860
Number of Shares - mn			247
NAV (Rs per share)			125
NAV for 95% stake in AIDPL			119

Source: IDFC - SSKI Research

## **TRADING: CHANGING MIX**

AEL started its journey as a Star Trading House and is one of the largest trading companies in India with trading revenues of over Rs220bn+ as of FY09. AEL's trading portfolio spans power, coal, agri, precious metals and scrap metal. However, going forward, the focus would be to scale up only power and coal trading given the synergies with power generation business. We expect the overall trading business to scale up to Rs239bn by FY12 (2% CAGR) and EBITDA of Rs10.4bn. Valuing the trading operations at 3x FY10E EV/ EBITDA, we have arrived at a per share value of Rs102 for this business.

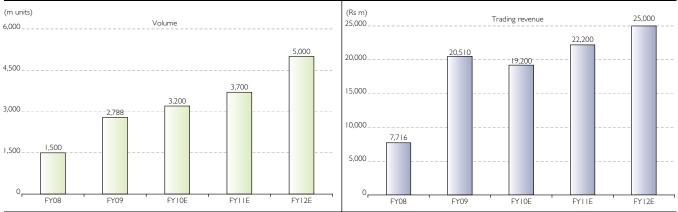
## ☐ Power trading – AEL is third largest in India

India faces a major power shortage across states. With installed capacity of ~145,000MW as of March 2008, peak shortage of power stands at 18.6%. Also, capacity is typically located in clusters in the east and north-eastern parts, as these regions have either coal reserves or are closer to water resources. Thus, while these states have huge power capacities, other regions face acute shortage. This gives rise to the need for power trading, and hence a humongous opportunity. The scope of the opportunity can be gauged by the fact that ~20bn units of power were traded in FY09. With government promoting 15% of the power produced to be traded outside the scope of PPAs, we see significant opportunity in the merchant power space.

At 2.8bn units, AEL accounts for 14% of the Indian power trading market As a first step in the infrastructure space, AEL entered this business in 2003 and has acquired the highest category 'F' license (Category 1 license) for merchant power. Within six years, AEL has emerged as the third largest player (market share of ~14%; 2.8bn units) in the power trading space only after PTC and NTPC. AEL expects to double the volumes by FY12 to 5bn units, led by the growing overall opportunity as also scope to trade power generated from own power plants in Mundra and Tiroda. Around 30% of the 6,600MW of capacities at these two plants is not covered under PPAs and will be available for sale in the open market. While we anticipate increase in volumes we are building in drop in power trading tariffs from Rs6 in FY10 to Rs5 in FY12, Rs4 in FY13 and Rs3 thereafter. With a fixed contribution of Re0.04 per unit, power trading would generate steady EBITDA of Rs150m in FY12E. Though power trading forms a small portion of AEL's overall profits, this business marks its entry in the infrastructure space.







Source: IDFC - SSKI Research

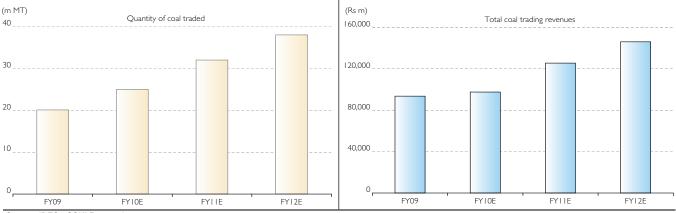
India's largest player with 50% market share of coal imports

#### ☐ Coal trading – largest importer in India

India imported nearly 40m tonnes of coal in FY09 and the scale of opportunity is growing rapidly. While the government is promoting coal mining within India, demand for coal is growing at a much faster pace. From ~500m tonnes currently, coal demand is expected to increase to 2bn tonnes over the next two decades. Given the huge gap between demand and the domestic supply, substantial portion of the incremental demand will have to be imported (up to 50m tonnes only for power sector by 2015 from 2m tonnes in 2010). With 20m tonnes of coal volumes imported in FY09, AEL is the largest private player in the space accounting for almost 50% of the coal imported. Given its long-term exclusive coal supply arrangement with the largest Indonesian mines, strong relationships with miners in Indonesia and China, we see AEL well placed to step up its coal trading operations. We expect AEL to double its volumes by FY12 and garner revenues of Rs146bn and EBITDA of Rs8bn in the year. Given its presence in power as well as coal mining, we are positive on AEL's ability to scale up this business.

Exhibit 43: Coal trading business volume growth...





Source: IDFC - SSKI Research

Reducing focus on trading activity, in line with the new business model

## ☐ Other trading activities – agri, precious metals and scrap metals

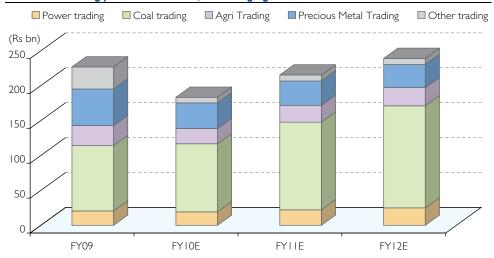
AEL commenced its business operations with trading of precious metals. Almost 20% of AEL's revenues currently come from gold and diamond exports. However, AEL has come a long way since then and is transitioning from being a trader to an asset-focused conglomerate. In the newly defined business model of the company, AEL would be shifting its focus away from trading. AEL has also been a leading agri produce exporter – 1.1m tonnes of agri produce including the entire range of food grains, pulses, castor, etc were exported in FY09. AEL has strong customer relationships in Europe, Japan, Korea, China, USA, Canada, Australia, Middle East, South East Asia, etc. However, this business is highly lumpy on account of price volatility, exchange rate fluctuations. Besides this, AEL also dabbles in trading in scrap metal through its office in Dubai. In FY09, AEL traded scrap metal aggregating 0.6m tonnes and generated revenues of ~Rs10bn. AEL is also expected to reduce focus on this business.

#### Valued at 3x FY10E EV/ EBITDA

#### □ Valued at Rs102/ share

We expect 2% CAGR in AEL's overall traded portfolio over FY09-12 to Rs239bn, with a higher share of power and coal trading (72% of total revenues) by then. We like the fact that AEL is diluting focus on the non-core lumpy trading business as it is exposed to high price volatility risk. Traded portfolio is expected to generate EBITDA of Rs10.4bn by FY12. Attaching a valuation of 3x FY10E EV/ EBITDA, in line with any commodity trading businesses, we have valued this business at Rs25bn – Rs102 per share.

Exhibit 44: Trading portfolio - on track, but changing mix



Source: IDFC - SSKI Research

## **AGRI: REAPING BENEFITS**

AEL's agri portfolio includes the edible oil business in a 50:50 JV with Wilmar, grain silos business under Agri Logistics, and fruits and vegetable storage operations under Agri Fresh. With Rs60bn of annual revenues from edible oil operations, Adani Wilmar is the second largest edible oil company in India and owns Fortune – the largest edible oil brand. We also like Agri Logistics and Agri Fresh as the businesses are aligned to the emerging opportunity in India driven by increased investments in agriculture-related infrastructure. We expect 13% CAGR in AEL's agri business over FY09-12 to Rs44.6bn and EBITDA of Rs2.6bn (accounting for only 50% share in Adani Wilmar) in FY12. Attributing 8x EV/EBITDA on FY10E earnings, we have valued the agri portfolio at Rs30 per share of AEL.

#### ☐ Adani Wilmar – expansion ahead

In 1999, AEL ventured into the edible oil space in a 50:50 JV with the Singapore-based Wilmar Holdings Pte. Within a decade of operations, Adani Wilmar (AWL) has emerged as the second largest edible oil player in India, next only to Ruchi Soya. AWL has revenues of Rs58bn, soya and mustard crushing capacity of 4,100tpd and refining capacity of 3,090tpd. AWL is one of the largest players in the soya oil space and owns *Fortune* – India's largest Refined Oil in Consumer Packs (ROCP) brand. *Fortune* accounts for ~11% of the total refined oil in consumer packs market. AWL has manufacturing facilities across nine locations. The facilities are strategically located in either port areas or the soya crushing belt of Madhya Pradesh and Maharashtra. AWL has lined up capex of Rs3bn to increase the capacity to 5,675tpd of crushing facilities, 3,430tpd of refining and 975tpd for vanaspati.

In line with the industry scenario, we believe AWL would also have seen sharp margin contraction in FY09, given the steep drop in edible oil prices. However, we expect AWL to return to the earlier robust growth trajectory as it capitalizes on the improving edible oil prices with a strong brand in its kitty. We expect the business to generate Rs1.5bn of EBITDA for AEL's 50% stake in the JV.

Exhibit 45: A well diversified port based and inland capacities

Plant	Crushing Capacity (tpd)	Refining capacity (tpd)	Vanaspati capacity (tpd)
Mantralayam	450	180	
Bundi	400	150	
Nagpur	1000		
Shujalpur	400	100	
Neemuch	1500		
Chhindwada	350	50	
Mundra		1950	325
Haldia		600	200
Kadi		60	
Total	4100	3090	525
Proposed scale	up 5675	3430	975

Source: IDFC - SSKI Research

AWL has revenues of Rs58bn, soya and mustard crushing capacity of 4,100tpd and refining capacity of 3,090tpd

Base depot capacity of 400,000 tonnes and distribution depot capacity of 150,000 tonnes

> Integrated controlledatmosphere storage facilities aggregating 18,000 tonnes

#### ☐ Agri Logistics (AAL)

Food grain loss during storage has been the biggest problem faced by Food Corporation of India (FCI). Around 1m tonnes of food grains have been damaged in the past one year – attributable largely to inefficient and inadequate storage facilities with the FCI. This has prompted FCI to up its ante on food storage and to invite private participation to invest in food grain silos. AAL has set up grain silos facilities with base depot capacity of 400,000 tonnes and distribution depot capacity of 150,000 tonnes. AAL has entered into an agreement with FCI to manage these facilities, in lieu of which it would earn a fixed Rs2,415 per tonne of capacity created. Besides being an annuity model, AAL is a highly profitable business (EBITDA margins of 80%+) and is expected to add over Rs929m to the consolidated operating profits by FY12. Further scalability in the business would be driven by AAL's ability to invest into creating more such capacities.

### ☐ Agri Fresh (AAFL)

India is world's largest cultivator of fruits and the second largest producer of vegetables. However, when it comes to the food processing market, only 2% of the produce is processed. In a sad state of affairs, around half of the fruit and vegetable produce gets wasted during transit and storage. Thereby, India annually losses Rs330bn on account of fruits and vegetable wastage due to inadequate storage facilities. This, we believe, calls for significant private investments in storage, cold storage and integrated controlled-atmosphere storage facilities across the country.

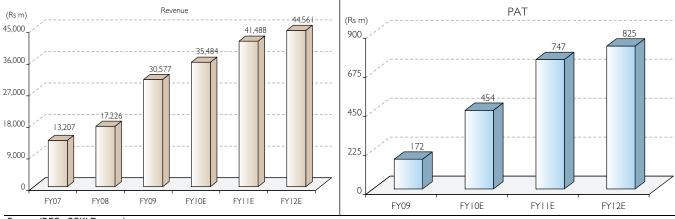
With a view to tap this market, AAFL has developed integrated controlled-atmosphere storage facilities aggregating 18,000 tonnes at three different locations (Rohru, Sainj and Rampur) in vicinity of apple orchards in Himachal Pradesh. The capacities offer storage facilities and are involved in trading of fruits like apples, grapes, etc. AAFL procures the fruits from local growers and supplies the produce to organized retailers like Reliance Fresh, AV Birla (More), etc. While AAFL has not lined up any capacity expansion, growth would be driven by increasing the churn. Currently, apple forms over 90% of the sales for AAFL. We expect AAFL to increase its presence in other seasonal and non-seasonal fruits to help improve the churn, and thereby the throughput. AAFL handled 23,400 tonnes of fresh fruits and vegetables in FY09 and is planning to scale up the business to 31,500 tonnes by FY12.

#### ☐ Financial analysis and valuations

We expect 13% CAGR in AEL's agri portfolio over FY09-12 to Rs44.6bn. Operating margin in the business would improve gradually with increasing share of high-margin agri logistics business in the overall portfolio. We expect 24% CAGR in EBITDA to Rs2.6bn by FY12 and 69% PAT CAGR.

Exhibit 46: Agri business – 15% revenue CAGR...

#### ...69% PAT growth



Source: IDFC - SSKI Research

AEL's edible oil business, under AWL, is best comparable to Ruchi Soya. While Ruchi is 2x the size of AWL, AWL owns a stronger brand in *Fortune*. Given this, we have attached a value of 8x FY10E EV/ EBITDA to AWL – similar to that of Ruchi Soya. AAFL and AAL business is also valued on similar lines. Using this methodology, we have arrived at agri business valuation of Rs30 per share.

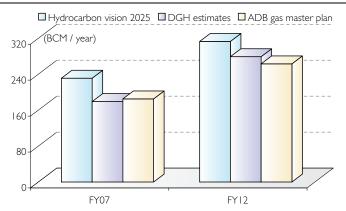
## OIL & GAS: THE WILD CARD

In a move to extend its presence within the energy portfolio, AEL has forayed into city gas distribution (CGD). Given the increasing shift from other forms of fuel to natural gas, we envisage natural gas demand in India to increase from 170mmscmd in FY08 to 280mmscmd by FY12. This opens up a vast opportunity for gas supply (gas exploration) as well as gas distribution businesses. With a planned grid network of 498km (305km currently) and envisaged 2.4mmscmd of volumes in the next two years, we expect AEL to emerge as one of the top four players in the CGD space. With planned incremental capex of Rs5bn, we expect AEL's CGD business to scale up to Rs14bn by FY12. Moving backward in the value chain, AEL (in a 65:35 JV with Welspun Group) has also ventured into Oil & Gas exploration. The JV has been awarded two onshore blocks in India, two in Thailand, one block at Mumbai Offshore and one in Egypt. However, the operations are yet in the early stage.

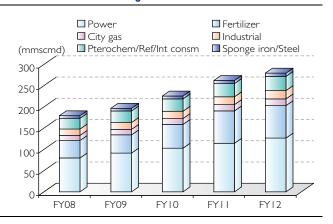
## ☐ India's natural gas demand – 14% CAGR over FY08-12E

Demand for natural gas constrained only by supply shortage Natural gas forms a key component of India's energy basket, and meets ~10% of its total energy requirement. The natural gas market in India currently stands at 95-100mmscmd, which is catered to by a combination of domestic supplies (~70mmscmd) and imports as LNG (~30mmscmd). Demand for natural gas is actually much higher, at ~170mmscmd, and is constrained only by supply shortage. At present, power and fertilizer sectors dominate the consumption mix of gas with ~70% share and gas demand in these two sectors is expected to register a CAGR of 12% and 18% respectively over FY08-12. However, the scope of natural gas usage in the country has been increasing over the last decade or so. Gas is now progressively being used as a fuel in transportation (CNG) and homes (cooking gas in the form of piped natural gas or PNG). Many cities have already made it mandatory for public transportation vehicles to move to CNG.

Exhibit 47: Growth in natural gas demand



... sector-wise demand growth



Source: IDFC-SSKI Research

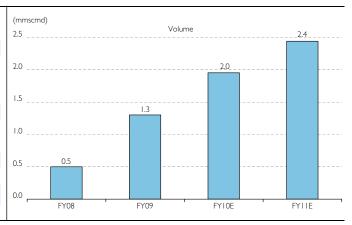
AEL into distribution of PNG and CNG for commercial, industrial, residential and institutional use

#### ☐ AEL's city gas distribution business – in scale-up mode

With a view to tap the opportunity created by the increasing shift of natural gas consumption for domestic use and transportation, AEL, through its subsidiary Adani Energy, has ventured into distribution of piped natural gas (PNG) and compressed natural gas (CNG) for commercial, industrial, residential and institutional use. Having established its presence in the gas distribution markets of Ahmedabad, Baroda and Faridabad, AEL is soon commencing commercial operations in Noida, Khurja and Lucknow. Construction of steel grid network has also been started in Jaipur and Udaipur. AEL's gas distribution business reaches out to 55 CNG stations, 45,000 domestic households, 300 industrial units and 300 commercial connections. With Rs8bn of capex lined up, AEL plans to increase its steel grid network from 305km to 498km in the next couple of years and achieve scale of 2.4mmscmd by then. (Gujarat Gas, the largest listed player in the space, does volume of 2.1mmscmd currently.) AEL has tied up with suppliers like Gujarat State Petroleum Corporation (GSPC) and is in talks with GAIL for gas supply.

Exhibit 48: AEL's city gas distribution - in a scale up mode

Current network	305km
Cities present in	Ahmedabad, Baroda, Faridabad
Distribution reach	55 CNG stations, 45,000
	households, 300 industrial
	units, 300 commercial
Current scale - FY09	0.5mmscmd
New cities operational by FY12	Lucknow, Noida, Khurja, Udaipur,
	Jaipur
Proposed network expansion	498km
Proposed scale	2.4mmscmd
Gas supply tie up	GSPC, talks with GAIL



Source: IDFC - SSKI Research

Six blocks awarded – in Gujarat, Assam, Mumbai Offshore with two in Thailand and one in Egypt

## ☐ Oil & Gas exploration – early days

AEL has entered into a 65:35 JV (Adani Welspun Exploration) with Welspun Group to foray into Oil & Gas exploration. AWEL has been awarded two onshore blocks under NELP VI – 75 sq. km of block in Palej, Gujarat and 95 sq. km in Marghreita, Assam. Besides this, AWEL has also been awarded two onshore blocks by the Government of Thailand – each block of over 3,900 sq. km. AWEL has also identified an 1,191 sq. km block in Mumbai Offshore with water depth less than 50m. One block has been awarded at the Gulf of Suez, Egypt, wherein AEL has partnered with GSPC (60:40). AWEL is still in early stages of block evaluation and is yet to reach the discovery stage. Discovery of Oil & Gas would be critical, as it would further redefine the scale of operations for AEL.

Exhibit 49: Oil & Gas exploration - in its early days

	, ,	
Location	Area awarded	Status
India Onshore		
Palej, Gujarat	75 sq. km	3D seismic completed
Marghreita, Assam	95 sq. km.	2D seismic completed
Thailand Onshore		
Nakhon Ratchasima	3900 sq. km	Data packages evaluated
Greater Khorat	3950sq. Km	Data packages evaluated
Offshore		
Mumbai Offshore	1191 sq. km, <50mt depth	
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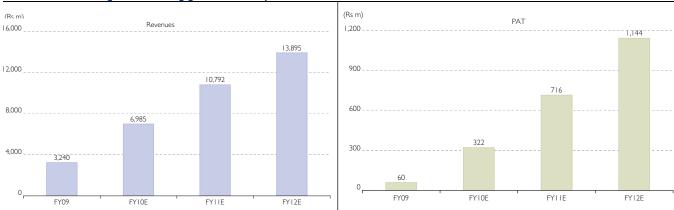
Source: IDFC - SSKI Research, COmpany

## ☐ City Gas distribution - valued at EV of Rs7.4bn

CGD - per share value of Rs9

As Oil & Gas exploration is in the early phase and AWEL is yet to reach the discovery stage, we have not assigned any value to this business and not factored it in financial projections. As AEL's CGD business extends to newer cities as also gas supply increases in the existing cities, we expect it to scale up to 2.4mmscmd by FY12 and generate revenues of Rs14bn. With incremental capex of Rs5bn on the cards, AEL's gross block in the business would increase to Rs11bn. We have valued the CGD business at 6x FY10E EV/EBITDA (similar to that of Gujarat Gas) and assigned a value of Rs9 per share of AEL.





Source: IDFC - SSKI Research



## OTHER VENTURES: BUNKERING AND SHIPPING

## ☐ Bunkering – JV with Chemoil

We have valued AEL's 50% share in the bunkering business at Rs1bn

AEL operates in ship fuelling business through a 50:50 JV (Chemoil Adani Pte Ltd) with Chemoil Energy Limited of Singapore. By virtue of operating from Singapore, world's busiest port, Chemoil is one of the largest players in the bunkering space. AEL operates through its two barges (capacity of 3,000 tonnes) at Mundra Port and partnering with Chemoil gives AEL access to the latter's global clientele. Within two months of operations in FY09, Chemoil Adani Pte generated Rs2.5bn in revenues. With traffic in excess of 3,000 vessels at Mundra Port, the JV can capitalize upon AEL's infrastructure and Chemoil's client base. The business is expected to generate revenues of Rs12.5bn in the current year (volume of ~0.75m tonnes) and EBITDA of Rs400m+ with steady 3-4% of margins. AEL also intends to extend its footprint to other ports in India. We have valued AEL's 50% share in the bunkering business at Rs1bn (5x EV/ EBITDA).

## ☐ Shipping – for captive consumption

We have valued this business at capital employed of USD32m Foray into shipping business is mainly linked to increasing international trade within AEL's portfolio. By FY13, AEL would be importing ~9.5m tonnes of coal from Indonesia for its Mundra plant, ~45m tonnes of coal trading, and another 2m tonnes of agri and scrap metal trade. This would require an extensive shipping service. With a view to service its own 50m tonnes+ of coal transportation requirement annually, AEL has placed orders for two Capesize vessels with Hanjin Heavy Industries for USD158m. With total volume handling capacity of 4.2m tonnes per annum, AEL would earn revenues of Rs1.3bn and EBITDA of Rs1bn annually. We do not expect AEL to extend its presence in the shipping space beyond its captive needs given the complexity in the business and the expertise required to manage this cyclical business. We have valued this business at capital employed. AEL has paid USD32m of the total USD158m of committed capex, which works out to Rs6 per share.

#### Income statement

Year to Mar 31 (Rs m)	FY08	FY09	FY10E	FY11E	FY12E
Net sales	196,097	262,583	250,091	322,596	420,688
% growth	15.7	33.9	(4.8)	29.0	30.4
Operating expenses	188,941	252,563	226,811	277,085	328,956
EBITDA	7,157	10,020	23,279	45,510	91,733
% change	52.2	40.0	132.3	95.5	101.6
Other income	390	146	775	25	176
Net interest	(2,770)	(3,488)	(6,373)	(9,996)	(18,646)
Depreciation	448	822	2,040	4,337	10,850
Pre-tax profit	4,329	5,856	15,642	31,203	62,413
Deferred tax	50	110	0	0	0
Current tax	523	675	1,365	4,731	7,705
Profit after tax	3,756	5,072	14,277	26,472	54,708
Preference dividend	0	0	0	0	0
Minorities	(63)	(8)	(1,491)	(3,119)	(8,689)
Non-recurring items	0	-17	0	0	0
Net profit after					
non-recurring items	3,694	5,047	12,786	23,353	46,019
% change	113.0	36.6	153.4	82.6	97.1

#### **Balance sheet**

As on Mar 31 (Rs m)	FY08	FY09	FY10E	FY11E	FY12E
Paid-up capital	247	247	247	247	265
Preference share capital	0	0	0	0	0
Reserves & surplus	21,003	29,943	42,285	64,296	117,425
Total shareholders' equity	24,680	34,719	44,525	69,655	131,491
Total current liabilities	36,760	45,128	40,213	44,572	48,199
Total debt	62,112	120,842	209,453	272,662	324,656
Deferred tax liabilities	394	522	522	522	522
Total liabilities	99,265	166,492	250,188	317,756	373,377
Total equity & liabilities	123,945	201,212	294,713	387,411	504,868
Net fixed assets	40,940	88,704	213,308	290,637	383,005
Investments	3,303	4,647	4,647	4,647	4,647
Total current assets	79,703	107,860	76,758	92,127	117,216
Working capital	42,943	62,733	36,546	47,554	69,017
Total assets	123,945	201,212	294,713	387,411	504,868

#### **Cash flow statement**

Year to Mar 31 (Rs m)	FY08	FY09	FY10E	FY11E	FY12E
Pre-tax profit	4,329	5,856	15,642	31,203	62,413
Depreciation	448	822	2,040	4,337	10,850
Chg in working capital	(2,204)	(11,037)	1,185	(5,986)	2,404
Total tax paid	(523)	(675)	(1,365)	(4,731)	(7,705)
Operating cash inflow	2,050	(5,033)	17,503	24,823	67,961
Capital expenditure	(27,770)	(48,732)	(126,644)	(81,665)	(103,217)
Free cash flow (a+b)	(25,720)	(53,765)	(109,141)	(56,843)	(35,256)
Chg in investments	(3,175)	(1,344)	-	-	-
Debt raised/ (repaid)	18,582	58,731	88,611	63,208	51,994
Capital raised/ (repaid)	6,321	(1,679)	-	-	9,774
Dividend (incl. tax)	(148)	(246)	(384)	(1,168)	(2,301)
Misc	3,399	1,258	(4,027)	-	-
Net chg in cash	(742)	2,954	(24,941)	5,198	24,211

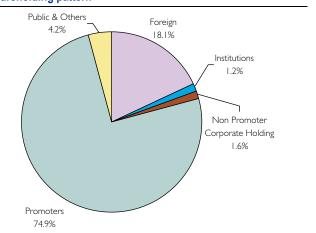
## **Key ratios**

Year to Mar 31	FY08	FY09	FY10E	FY11E	FY12E
EBITDA margin (%)	3.6	3.8	9.3	14.1	21.8
EBIT margin (%)	3.4	3.5	8.5	12.8	19.2
PAT margin (%)	1.9	1.9	5.1	7.2	10.9
RoE (%)	20.4	17.0	32.3	40.9	45.8
RoCE (%)	9.4	7.6	10.3	13.8	20.2
Gearing (x)	2.5	3.5	4.7	3.9	2.5

## **Valuations**

Year to Mar 31	FY08	FY09	FY10E	FY11E	FY12E
Reported EPS (Rs)	15.0	20.5	51.9	94.7	173.9
Adj. EPS (Rs)	15.0	20.5	51.9	94.7	173.9
PE (x)	45.9	33.5	13.3	7.3	4.0
Price/ Book (x)	6.9	4.9	3.8	2.4	1.4
EV/ Net sales (x)	1.1	1.0	1.5	1.4	1.2
EV/ EBITDA (x)	30.6	26.9	16.3	9.7	5.4
EV/ CE (x)	2.5	1.7	1.5	1.3	1.1

## **Shareholding pattern**



As of March 09

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