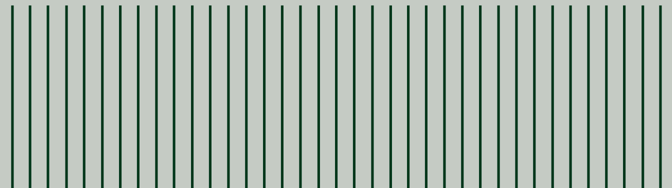
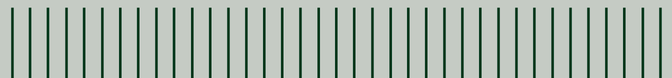
NATURAL GAS SECTOR:

City Gas Distribution



COMPANIES COVERED

- **Gujarat Gas** — **HOLD** — **Price target - Rs1222**
- **Indraprastha Gas** — **BUY** — **Price target - Rs127**



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City gas distribution

Building block for a greener and cleaner India

The natural gas sector in the country is set for some interesting time, with a significant amount of indigenous gas set to flow by the end of this decade.

Based on our observation of the transformation in the natural gas sector in countries which have exhibited similar characteristics as India, we believe, a key area in the distribution space to watch out would be **City Gas Distribution (CGD)**, with players like GAIL, Reliance and GSPC formulating ambitious plans to have a significant presence in this space.

Our bullishness on the sector, and on CGD per se, stems from the structural change that we foresee in the natural gas landscape, which we think would take place on account of:

- Significant natural gas discoveries
- Government thrust on natural gas use to supplement traditional auto/domestic fuel
- Economics of CNG usage
- Huge pent up demand both on domestic and commercial units
- A need for greener and cleaner environment

We believe these structural changes would positively impact natural gas distribution companies, particularly the new players, like Reliance and GSPC, and help them scale up the value and volume chain.

Comparison of NG production in 2010 with other countries

Country	Reserve (tcf)	Prodn. mmscmd
Russia	26.8	2,080
United States	18.6	1,444
Middle East	14.2	1,102
Africa	8.7	675
Canada	6.1	473
India	**2.5**	**197**
China	2.4	186
Australia/New Zealand	2.3	179
Mexico	1.7	132
Brazil	0.6	47

Source: EIA, Ambit Capital Research

Existing city gas players - comparison

Parameters	Indraprastha Gas	Mahanagar Gas	Gujarat Gas
Operating since	1995	1995	1988
Place	New Delhi	Mumbai	Gujarat
No of CNG vehicles	127780	72984	42500
No of outlets	152	124	20
Compression capacity (Lac kgs / day)	19.76	14.74	2.8
Piplines (Kms)	680	2049	2000
Customers			
Commercial/ domestic	61250	262458	365000
Industrial & bulk	50	42	670
Volume mix – breakup (%)			
CNG	91.5	56.0	6.0
PNG (inc industrial & bulk)	8.5	44.0	94.0

Source: Company, Ambit Capital Research

We initiate coverage on **Gujarat Gas (HOLD)** and **Indraprastha Gas (BUY)**, with a 12-month price target of Rs1,222 and Rs127 respectively.

Key financials

Gujarat Gas

(Rs mn)	CY06	CY07E	CY08E	CY09E
Total income	9,685	11,902	14,164	15,999
Gross profit	1,492	1,672	1,971	2,290
Net profit	875	941	1,112	1,293
EPS (Rs)	68.2	73.4	86.7	100.8
EBIDTA margin(%)	15.4	14.0	13.9	14.3
EV/EBIDTA	9.9	8.9	7.5	6.5
P/E (x)	19.1	17.7	15.0	12.9
RoE (%)	20.9	19.0	19.2	19.0
RoCE (%)	21.9	21.4	22.9	23.8

Indraprastha Gas

(Rs mn)	FY06	FY07E	FY08E	FY09E
Total income	5,208	6,284	7,099	8,071
Gross profit	2,137	2,575	2,917	3,271
Net profit	1,062	1,303	1,412	1,502
EPS (Rs)	7.6	9.3	10.1	10.78
EBIDTA margin(%)	41.0	41.0	41.1	40.5
EV/EBIDTA	6.1	5.3	4.2	3.7
P/E (x)	12.8	10.5	9.6	9.1
RoE (%)	28.0	27.8	24.8	22.1
RoCE (%)	41.5	41.0	36.6	32.7

Source: Ambit Capital Research

New players to drive growth

Given that new players, namely GSPC and Reliance, would have significant gas supplies by themselves, we reckon that they would play a pivotal role in the development of the city gas market in India. This would mean that the other city gas players like Indraprastha Gas, Gujarat Gas, and Mahanagar Gas etc would have a limited role to play as far as covering new geographical areas are concerned.

New players will have a pivotal role

However GAIL, the largest domestic natural gas company, has set ambitious plans to roll out city gas distribution throughout the country, starting off with 28 cities in its first phase of expansion, some of which are already in operation.

GAIL CGD plans

As with earlier city gas ventures, GAIL would be forming JV's with other interested players to expand its reach and capture a significant share of the CGD market in the country. In order to support its expansion plan, the company is aggressively ramping up its gas infrastructure. The Dahej Uran Pipeline (DUPL) & Dabhol Panvel Pipeline (DPPL) and Jagoti-Pithampur pipelines will be commissioned shortly. It also has plans to lay new pipelines from Jagdishpur to Haldia, Kochi to Kanjirkkod to Mangalore, Dadri to Nangal, Chainsa to Hissar and Dabhol to Bangalore.

GAIL's ambitious CGD plans

Agra	Bareilly
Lucknow	Jhansi
Kanpur	Mathura
Varanasi	Noida
Pune	Navi Mumbai
Faridabad	Gwalior
Patna	Indore
Ahmedabad	Ujjain
Sholapur	Rajamundry
Hyderabad	Vijayawada
Bangalore	Rajkot
Kolkata	Surendranagar
Chennai	Kota
Allahabad	Vadodara

Source: GAIL

GAIL existing JV's

	JV partner	Location
Mahanagar Gas	British Gas	Mumbai
Indraprastha Gas	BPCL	Delhi
Aavantika Gas	HPCL	Madhya Pradesh
Central U.P Gas	BPCL	Kanpur, Bareily
Bhagyanagar Gas	HPCL	Andhra Pradesh
Maharashtra Natural Gas	BPCL	Pune

Source: Industry, Ambit Capital Research

GSPC Gas CGD plans

GSPC Gas, the city gas distribution arm of GSPC group, currently caters to the CNG and PNG requirement in Gandhinagar and areas surrounding Hazira. Going forward, with the augmentation of GSPC gas by 2010, it plans to expand in a phased manner in the following cities.

GSPC future plans - Predominently Gujarat

South Gujarat	Saurashtra	Central Gujarat	North Gujarat
Vapi	Morbi	Anand	Himmatnagar
Valsad	Wankaner	Nadiad	Mehsana
Bilimora	Thanghadh	Khambhat	Gandhinagar
Navasari	Rajkot		

Source: Company

Reliance CGD plans

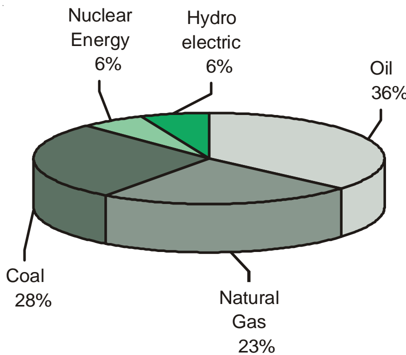
Reliance, by far has been the most aggressive in its plans to enter the city gas distribution business once its KG basin gas becomes commercially available. If regulation makes it possible, it has targeted over 200 cities for the implementation of this project. For this purpose it has committed over $2bn for the construction of trunk pipelines that would connect various parts of the country.

We are of the opinion that, given the experience of Reliance in completing projects efficiently, its role in the city gas distribution space would be quite significant.

Reliance to invest over $2bn to develop infrastructure for CGD

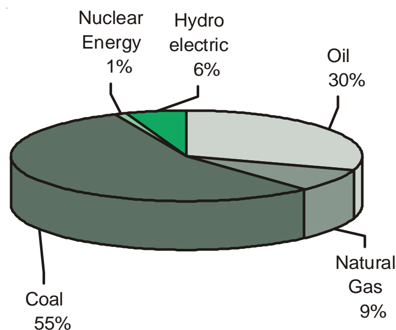
Drawing parallels from key emerging city gas markets globally (Bolivia, Colombia etc), we expect India's emergence as a key natural gas player in the global landscape to benefit all entities within the value chain. We believe that this benefit would accrue to the end user in the form of economical and efficient city gas, which would emerge as the third largest consumer of incremental natural gas, next only to power and fertiliser companies.

World energy pie



Source: BP statistical review, 2006

India energy pie



Source: BP statistical review, 2006

Comparison of global pipeline infrastructure

	Kms	Gas pipeline density (kms/ mmscmd)
Russia	156,285	141
USA	548,665	316
India	7,000	70
China	22,664	176
Australia/ New Zealand	33,016	411

Source: CIA, Ambit Capital Research

Total CGD demand (2012)

	mmscmd
CNG	6.6
PNG	12.0
Industrial	18.6
Total	**37.3**
Total consumption	**250**

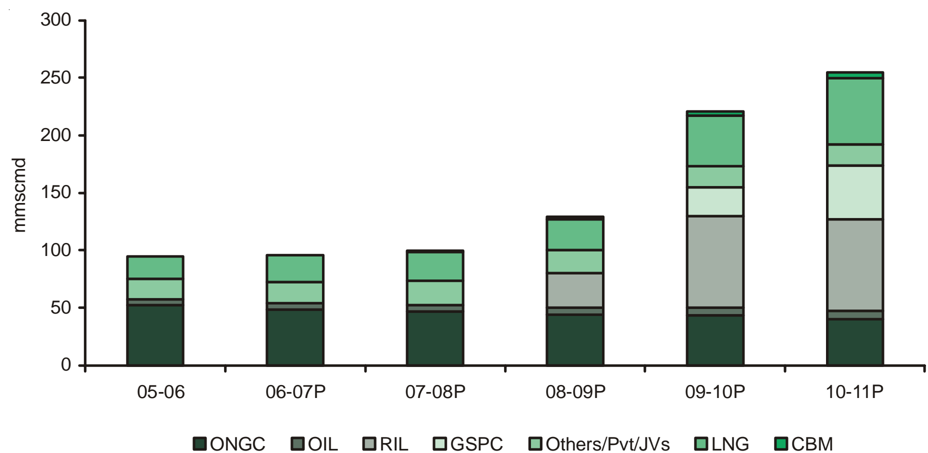
Source: Industry, Ambit Cap ital Research

India – an evolving natural gas player

The share of natural gas as an energy source, which globally averages around 25% of the energy usage pie, is abysmally low at 9% in India. Years of regulation and under-investment in the upstream petroleum sector, has not only seen India's dependence on crude imports jump from 40% in 1990-91 to over 75% in 2004-05, but has also led to under-exploration of the domestic hydrocarbon reserves. The government, having realized the importance of energy security for the economy, introduced the New Exploration License Program (NELP) program to encourage private participation in the domestic Oil & Gas sector. A testimony to the success of this program has been the huge gas reserves that have been discovered by companies like Reliance and GSPC, and has catapulted India to being an important hydrocarbon destination for global oil majors.

Historically, since India's hydrocarbon requirements were met only by imported crude oil, with indigenous natural gas forming a very small proportion, the infrastructure required to harness the latter energy source was next to non-existent. This is clearly visible in India's gas pipeline density, which at 70 km / mmscmd, is one of the lowest in the world.

Expected supply of NG in 2010

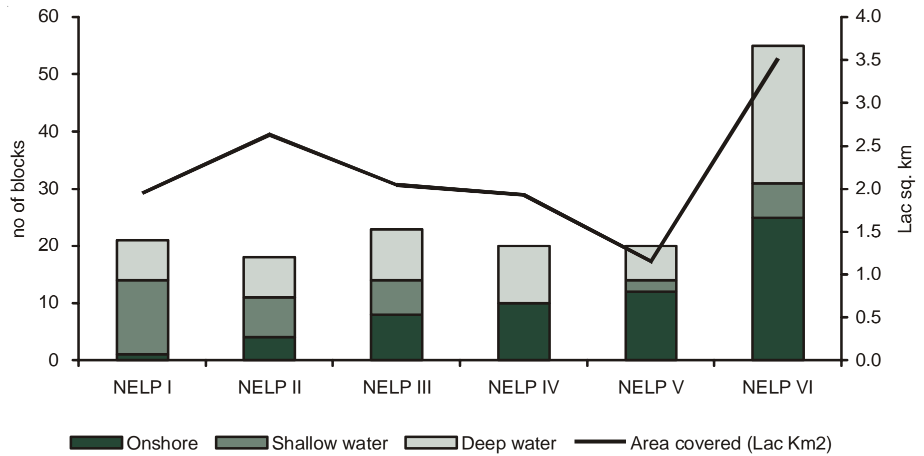


Source: Crisinfac, Ambit Capital Research

India's emergence as a significant natural gas player to reduce supply constraint fear

Recent gas finds in India have provided a fillip to the domestic exploration activity, with global oil & gas majors, like British Gas, Niko and Cairn Energy, contributing significantly to the incremental oil & gas production in the country. Even the recent offering under the NELP-VI program had attracted 35 foreign bids for the 55 oil blocks, a testimony of India's significance on the world energy map.

Block offered under NELP



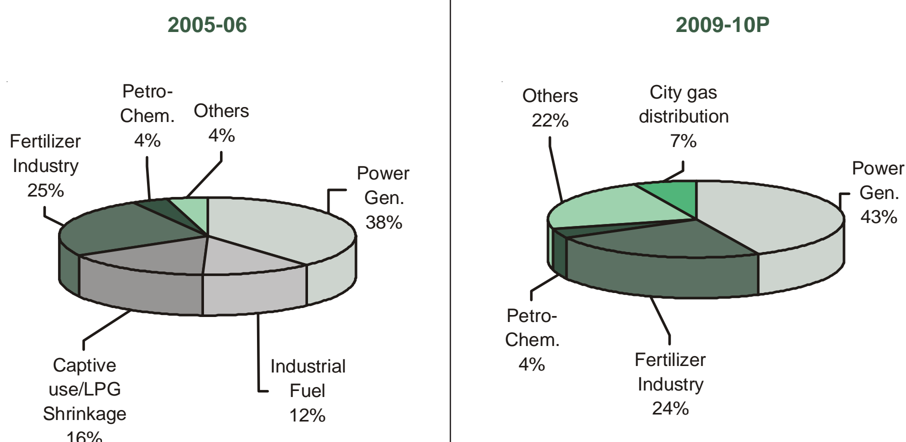
Source: MoP, NG

Natural gas sector at an inflation point, as ~160 mmscmd of gas to be commercially available by 2010

On the demand side the major consumers of natural gas have been the power and fertilizer companies, where this energy source is the primary fuel in the production process. Given the fact that these companies come under "priority" sector segment, indigenous natural gas is first allocated to them. The gas left over, if any, after the allocation, would then be made available to others. This skewed consumption pattern, we believe, is one of the main reasons for under-development of domestic natural gas infrastructure, and in essence the cause for its inefficient use.

However supply of gas in the foreseeable future is expected to match demand, considering ~160mmscmd of incremental gas coming onstream by 2010E, and setting up of infrastructure to import Regassified-LNG (R-LNG). All this boils down to our central premise that the natural gas sector is at an inflection point, and would be witnessing structural changes in the demand and supply equation, transforming our coal/crude oil powered economy to natural gas fired one.

% share of power and fertilizer in NG consumption



Source: Cris Infac

CGD gas consumption to increase from 7.5 mmscmd to 37 mmscmd by 2012

Going forward, we believe that these structural changes will create new demand centres, with city gas distribution being the prominent one. We expect CGD to be a marginal consumer of the incremental gas initially. However, we anticipate that its contribution would significantly increase from ~7.5 mmscmd in 2006-07 to over 37 mmscmd in 2011-12. To put our estimates in perspective, Independent studies (BG City gas presentation) have projected that the total potential of CGD in India stands at 85 mmscmd, a current penetration of just 9% of the future market size.

Market potential – City gas distribution

Existing network	Region	mmscmd
Indraprastha Gas	New Capital Region	1.5
Gujarat Gas	Surat, Bharuch, Ankheshwar	4.0
Mahanagar gas	Mumbai	1.5
Adani Group	Ahmedabad, Vadodara	0.5
Central UP Gas Ltd	Allahabad, Barielly, Jhansi	0.1
Total		**7.6**
Market potential (2012E)		**37.3**
Current market penetration (%)		**20.4**

Source: Ambit Capital Research estimates

CGD to be developed by PPP model. Initial investment to the tune of $2bn

This demand pattern is expected on the assumption of timely set-up of the infrastructure for the distribution of the gas; which among other things would be the key challenge for the success of this sector. Since setting up of this infrastructure entails huge investments, the government has indicated of a public private partnership (PPP) model for the development of City gas operations in the country, envisaging an initial investment of ~$2bn by the end of the 11th five-year plan.

Government to play a key role

The government has also been doing its bit to promote CNG as the fuel of choice. A close scrutiny of the recommendations of the committee on Auto fuel policy, 2002 released by the Govt. of India clearly makes a case for increased use of CNG for powering motor vehicles, by laying emphasis on reduction in the emissions and improving air quality. Some of its salient features include:

- Reduction in emissions from all sectors to improve air quality.
- Meeting of the proposed road map of Euro III in 2005 and Euro IV in 2010
- Development of new technologies for alternate auto fuels – CNG and PNG

Government thrust on clean fuel to drive CGD growth

With the success of Indraprastha Gas (JV between GAIL and BPCL) and Mahanagar Gas (JV between GAIL and British Gas) in New Delhi and Mumbai respectively, the government has selected a few cities for the further implementation of the CGD network, based primarily on their pollution intensity. They are:

Cities selected for CGD network

Agra	Bareilly	Lucknow	Jhansi
Kanpur	Mathura	Varanasi	Noida
Pune	Navi Mumbai	Faridabad	Gwalior
Patna	Indore	Ahmedabad	Ujjain
Sholapur	Rajamundry	Hyderabad	Vijayawada
Bangalore	Rajkot	Kolkata	Surendranagar
Chennai	Kota	Allahabad	Vadodara

Source: Industry data

Higher incentives for the players

At the risk of sounding repetitive, we believe that risk of non-availability of natural gas to this sector, and in turn to its growth, would not be a concern going forward. Firstly, high margins (and incidentally high volumes as well) in the retail segment (CGD) viz a viz the "large industrial" segment, would provide incentive to future key players to aggressively expand. Incidentally, since these players would also be backward integrated, supply would not be an issue. Secondly, the government too is keen in developing this segment, as it would not only reduce pollution, but also partially remove the evils of inefficient allocation of petroleum products.

Government thrust on Natural Gas

Supplementing traditional auto/domestic fuel with natural gas

Pricing of petroleum products, being a politically sensitive issue has haunted the domestic oil and gas industry for a long time now. With prices of Kerosene and LPG being frozen since March 2002 and November 2004 respectively, the under-recoveries in the current financial year is estimated at over Rs500bn. This has prompted the government, in order to provide relief to the Oil Marketing Companies (OMCs), to issue oil bonds to the tune of Rs280bn in FY07. This in turn would put pressure on government finances going forward, and is just a short term solution to a long standing problem.

Under recoveries to the tune of Rs500bn in FY07

With the government single-mindedly focusing on reining in inflation, we believe that any relief on account of upward price revision in petroleum product is ruled out.

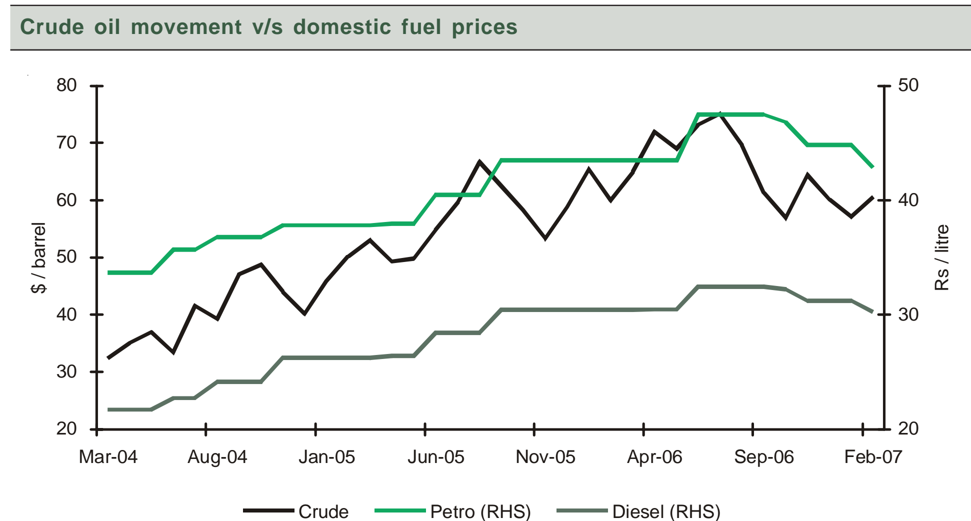
Upward price revision on petroleum products ruled out due to inflationary pressures.

Under-recoveries in the sector

Under-recoveries (Rs bn)	2004-05	2005-06	Apr-Dec '06
Domestic LPG	84	102	77
PDS Kerosene	95	144	141
Diesel	22	126	173
Petrol	2	27	21
Total	**201**	**400**	**412**

Source: PPAC

Crude oil movement v/s domestic fuel prices



Note: Retail prices of petrol and diesel in Delhi
Source: Bloomberg

Difficulty in providing selective subsidy on LPG to be resolved by CGD implementation

There have been arguments made by the industry to remove the subsidies on Domestic LPG, with connections estimated at over 50 million (census India 2001). One of them includes the fact that, since most of these LPG connections are being utilized by families well above the poverty line, it is quite futile to subsidise the costs of such families. This problem of providing selective subsidies, we believe, could be resolved by the implementation of CGD in the cities.

Currently ~520,000 households use piped natural gas (PNG) for their domestic cooking needs, which is a paltry 1% of the total LPG connections in the country. As domestic LPG is being sold at a subsidised rate of around Rs 300 per cylinder (cost is around Rs450),

the shift of these customers to PNG has saved under-recoveries for the Oil Marketing Companies (OMCs) to the tune of Rs927mn. This 1% saving on the total under-recovery on LPG, though might seem insignificant, would translate into a saving of ~Rs36bn, considering the 20 million households that the government has set as target for PNG connection over the next five years.

Reduction in under-recovery by Rs36bn on subsidied LPG by 2012

This saving, in itself provides incentive to the government to go aggressive on the implementation of the PNG network, which would set the stage for robust growth in this segment.

PNG - reducing under-recoveries

Current status	No of household connections (mn)	No of cylinders (mn/year)	Saving (Rs mn/year)
Indraprastha Gas	0.06	0.74	111
Gujarat Gas	0.20	2.34	351
Mahanagar gas	0.26	3.10	465
Adani Group	n.a	n.a	n.a
Central UP Gas Ltd	n.a	n.a	n.a
Total existing	0.52	6.2	927
Existing household penetration (%)			**2.6**
Future potential	20	240	36,000

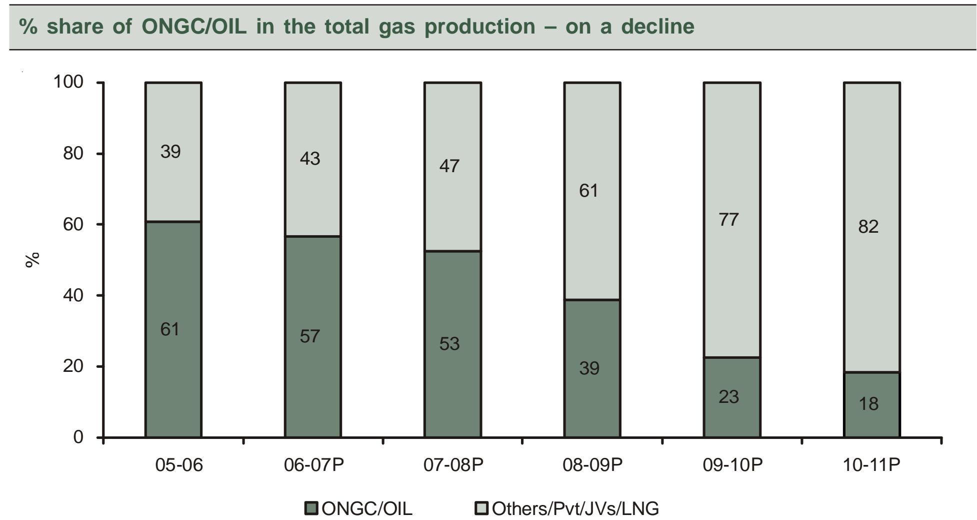
Source: Ambit Capital Research

One of the key factors to the success of the PNG would be the setting up of the infrastructure, and given the current constraints in the implementation process, regulatory hurdles for example, we believe that the government's target of 20 million households in three years would be a bit far fetched. However, given the fact that companies like Reliance, GSPC etc, on the back of its gas finds, are going very aggressive on the infrastructure build up, the target of 20 million households and beyond in the next 5 years cannot be ruled out.

Gas pricing: setting the market for competitive times ahead

Power and fertilizer companies, both energy intensive and politically sensitive, are the dominant users of natural gas, buying gas at the APM rates. With almost 71% of the gas is being sold at the APM rates, this skewness is mainly on account of the fact that the major producer of this indigenous gas, ONGC, is a state owned enterprise. Though the government has consciously been trying to reduce this percentage, political will seems to be over-riding economic considerations.

% share of ONGC/OIL in the total gas production – on a decline



Source: Cris Infac, Ambit Capital Research

Gas production by Reliance and GSPC to be outside APM net

However, we believe that the gas pricing scenario too is set to change, with the incremental gas, coming on stream by 2010, to be outside the APM net. This would cause upward pressure on those gas distribution companies who have been procuring gas at the APM prices, which currently stand at Rs3800 per standard cubic metre ($2.1 mmbtu). In contrast, the current gas prices are ruling in the range of $7-$8 mmbtu, with recent R-LNG cargoes being contracted for over $10 mmbtu!

Considering the fact that natural gas constitutes over 70% of the costs for most distribution companies, such increase would put enormous pressure on the bottom line of these companies, as passing on the increase in costs would leave CNG uncompetitive against other fuels

Raw material costs for different companies

(% of sales)	FY05	FY06	FY07E	FY08E
Gujarat Gas*	67.0	72.3	70.4	71.0
Indraprastha Gas	42.1	43.3	46.6	46.6

** calender year*
Source: Company, Ambit Capital Research

Economics of CNG usage

One of the major reasons for the success of CNG as an auto fuel, apart from being environment friendly, has been its cost competitiveness in relation to other liquid fuels, namely petrol and diesel. The government too, has further provided support by making it mandatory for buses and Light Motor Vehicles (Goods) in certain cities like New Delhi, Ahmedabad etc to convert to CNG. Notwithstanding the mandatory conversion, even the running cost per km of CNG is considerably lower and more than offsets the initial cost of the conversion from liquid to gas.

CNG cheaper by more than 35% compared to petrol and diesel

At the current retail petro product (Petrol, Diesel) prices in Delhi, vehicles running on CNG cost ~50% and 35% cheaper than petrol and diesel respectively. Considering the attractive payback on the initial cost incurred during conversion, especially in the three-wheeler segment, we believe that the transport segment vehicles would be the target market for initial implementation of CGD network across the country.

Attractive payback period to drive conversion

We expect the kit cost itself to decline substantially

CNG - Breakeven analysis

		Mileage (km/litre/kg)	Kms run per day	Litre/Kgs required	Cost (Rs)
4-wheeler: Bus					
Diesel (Rs, Litre)	30.3	4	150	37.5	1,136
CNG (Rs, kg)	19.5	4		37.5	731
CNG Kit cost (Rs)	(500,000)				
Saving (Rs / month)	12,150				
Break-even (months)	**41.2**				
3-wheeler: Auto					
Petrol (Rs, Litre)	43.5	32	100	3.1	136
CNG (Rs, kg)	19.5	30		3.3	65
CNG Kit cost (Rs)	(25,000)				
Saving (Rs / month)	2,128				
Break-even (months)	**11.7**				

Source: Ambit Capital Research

Comparative fuel prices (without duties/taxes)

	(Rs/litre)
Petrol	21.7
Diesel	23.5
Kerosene	24.2
CNG	23.2

Note: Assuming crude cost of $57/ bbl & natural gas cost of $6mmbtu
Source: Ambit Capital Research

Emission from different fuels

Pollutant (gm/km)	Petrol	CNG	% Reduction
CO	5.19	0.018	99
HC	0.34	0.16	52
NOx	1.19	0.764	36
SOx	0.44	Negligible	100
Particulates	0.05	Negligible	100

Source: Bhagyanagar Gas

Prima facie, it seems that CNG has a natural advantage over other competing auto fuels on the cost front. But it is not so. The government, by way of low taxes, has subsidized it. Also, by including the transport sector in the "priority category", it has made available cheap APM gas, which is at a 65% discount to the spot gas rates.

APM gas (as a % of total gas sourced)

	%
Indraprastha Gas	97.0
Gujarat Gas	2.5
Mahanagar Gas	98.0

Source: Company

The sourcing of gas at subsidized rate as against market determined price remains one of the major risks to existing city gas distribution players, especially the ones having a high CNG revenue mix. This is because, since APM gas has been allocated for use as CNG, government's move towards scrapping APM would put pressure on their margins of these companies.

Having said that, though concern on the cost front is valid, we are of the opinion that they are slightly exaggerated. With the government committed to use of CNG as an auto fuel and the existing quantity involved (around 3.5 mmscmd) quite low, we do not see much of a price risk to the existing players on continuing to get APM gas for the contracted quantity. However, we believe that any new quantity contracted by these players in the foreseeable future would be at a market determined rates as the gas would come from private players. This would increase their blended natural gas costs to that extent.

Huge pent up demand

With a current domestic customer base of 520,000 in the PNG segment, we believe that the scope for growth is enormous. Compare this to the future potential market at 20 million connections, the existing penetration level of just 2.6% suggests that we have barely scratched the surface.

Taking it further, even if we reach the target of 20 million domestic PNG connections by 2012-13, it would be less than half of the existing LPG connections, which again suggests that this would be a high growth segment for a long time to come. Our estimates suggest that PNG segment would command a market size of $1bn by 2012-13. This we believe is a conservative estimate, as we have assumed a monthly consumption of just 18 scm per connection which is in the lower range of average usage per household of over 25 scm per month.

PNG - current status

	No of household connections (mn)
Indraprastha Gas	0.06
Gujarat Gas	0.20
Mahanagar gas	0.26
Adani Group	n.a
Central UP Gas Ltd	n.a
Total (existing)	0.52
Future potential	20
Existing penetration (%)	**2.6**

Source: Company, Ambit Capital Research

PNG – market potential

	2010-11P	2012-13P
No of household connections (mn)	10	20
Average daily consumption (scm / household)	0.7	0.6
Total consumption (mmscmd)	6.7	12.0
Market size (Rs bn)	24.0	43.2
Penetration (%)	20.0	40.0

Source: Ambit Capital Research

Market penetration - CNG

Total registered vehicles - *Transport*	
LMV (Goods)	1,235,388
Buses	1,105,446
Taxis	825,638
LMV (Passenger) - Autos	4,206,556
Total	**7,373,028**
Penetration	
Indraprastha Gas	106,000
Gujarat Gas	40,000
Mahanagar gas	172,984
Adani Group	50,000
Central UP gas ltd	n.a
Total CNG Vehicles	**368,984**
CNG vehicle penetration (%) - Overall	**5.0**
CNG vehicle penetration (%) – excluding virgin markets	**21.6**

Source: MoRT&H, Ambit Capital Research

Estimating CNG potential

	CNG penetration (2010)			CNG penetration (2012)		
	Bear case	Base case	Bull case	Bear case	Base case	Bull case
Existing markets (%)	22	25	30	25	30	35
New markets (%)	2	5	7	10	15	20
Existing markets (nos)	375,703	426,935	512,322	426,935	512,322	597,709
New markets (nos)	50,637	126,592	177,228	253,184	379,775	506,367
Total CNG vehicles	426,340	553,527	689,551	680,119	892,098	1,104,076
Potential demand						
Volume (mmscmd)	**3.2**	**4.1**	**5.1**	**5.1**	**6.6**	**8.2**

** Demand estimate assumes only transport vehicle segment*
Source: Ambit Capital Research

Based on our base case scenario, we expect a little less than 1 million vehicles in the transportations segment to be CNG driven, thereby generating a total demand of 6.6 mmscmd of CNG by 2012. We have only assumed vehicles used in transportation segment to estimate the potential demand, because given the history of vehicle conversion, we believe that transport segment would be the initiator in the new regions as well, compelled by mandatory conversion laws. Conversion on the private vehicle side would only add to the demand in the foreseeable future.

We anticipate Southern-India to offer a very attractive market for the CGD, particularly in the CNG segment, as it remains virtually un-penetrated. Historically, this can be traced to the unavailability of gas in the region and also of inadequate infrastructure. But the recent gas finds in the KG basin would transform this region into a natural gas fired one. Reliance, looking at harnessing the potential of the region, is laying pipelines connecting Kakinada-Bharuch (passing through AP and Maharashtra), Kakinada-Chennai.

South India offers the most attractive CGD market

South offers the most attractive CGD market

Transport segment	LMV (goods)	Buses	Taxis	LMV (passenger) auto	Total
Maharashtra	228,157	51,785	94,920	463,550	838,412
Gujarat	188,510	44,250	36,917	275,740	545,417
Kerala	**122,393**	**62,075**	**108,503**	**276,244**	**569,215**
Tamil Nadu	**195,069**	**71,111**	**110,080**	**147,087**	**523,347**
Andhra Pradesh	**58,198**	**14,130**	**66,200**	**245,935**	**384,463**
Karnataka	**87,365**	**29,239**	**36,939**	**187,262**	**340,805**
Uttar Pradesh	50,433	25,357	29,522	74,692	180,004
Rajasthan	10,644	53,036	27,989	59,125	150,794
Madhya Pradesh	27,421	23,895	54,949	43,055	149,320
West Bengal	n.a	35,226	63,390	42,362	140,978
Haryana	49,160	8,091	12,752	33,258	103,261
Punjab	31,767	17,601	11,180	34,442	94,990
Orissa	25,391	14,734	14,870	19,667	74,662
Uttaranchal	8,584	4,392	4,265	12,486	29,727

Source: MoRT&H

Potential pipeline network of India

Source: Company, Ambit Capital Research

Total CGD demand (2012)	
	mmscmd
CNG	6.6
PNG	12.0
Industrial*	18.6
Total	**37.3**

*Assumed at 50% of total demand
Source: Ambit Capital Research

We estimate that the CGD segment would consume 37 mmscmd by 2012, a CAGR of ~37% over the next 5 years. Growth would be driven by all the three segments, namely CNG, PNG and Industrial retail, as a huge untapped market exists. This growth potential is well captured by the existing market penetration, which is at 20% of the demand expected by 2012.

With a robust growth environment envisaged in the foreseeable future, we are of the opinion that the new players entering this space, namely Reliance, Gujarat State Corporation Ltd (GSPC) would be the best horses to bet on. This view of our finds root in basically two factors, namely

- Reliance. & GSPC are backward integrated and therefore supply risk, a determining factor in success of CGD business, does not exist.
- The incremental demand and growth would be coming from new centres, and would call for huge gas consumption; hence these companies would be in the best position to expand rapidly.

We therefore believe that, given the strategic advantages that these new players (particularly Reliance and GSPC) would hold over the existing ones, expanding into new markets would be a difficult task for the existing players, who inturn would now concentrate on protecting their market share in their region itself. Also a deterrent to the growth of the existing payers would be the financial muscle of new players like Reliance, who would have the capacity to make large investments, and set up a distribution network in a short span of time.

New players to benefit the most. Regulator protect interest of existing players

Having said that, we think that the bigger picture for the existing players would continue to be stable, since the regulator would ensure that their interests are protected.

Environment analysis

Companies	Supply risk	Growth potential existing area of operation	Regulatory risk	Profit margin risk	Recom
GAIL	High	High	Moderate	Low	Not rated
Indraprastha Gas	Moderate	Low	Low	High	BUY
Gujarat Gas	High	Moderate	Moderate	Low	HOLD

Source: Ambit Capital Research

Financial comparison of companies entering CGD

	FY07E			FY08E		
	P/E	EV/EBIDTA	RoE (%)	P/E	EV/EBIDTA	RoE (%)
Gujarat Gas#	17.7	8.9	19.0	14.9	7.5	19.2
Indraprastha Gas	10.6	5.3	27.8	9.6	4.2	24.8
GSPL	31.6	13.3	9.2	36.5	9.3	7.4
GAIL*	9.7	6.2	21.1	9.4	5.8	19.2
Reliance Ind.*	17.5	11.8	25.0	17.8	11.4	19.3

*Bloomberg estimates
#calendar year (ended December)
Source: Company, Ambit Capital Research estimates

Regulation

Transition from regulated to competitive model to open up opportunities

All this while, India has been following the model in the natural gas space, with all the three levels namely, Exploration & production (E&P), Transportation and Distribution being heavily regulated, leading to monopolies being created.

However, over the last few years, various measures have been undertaken that have helped in opening up the E&P segment. The consequences of such initiatives have already been encouraging, with major gas finds by private companies. Additionally, the efficiency of these private players has put pressure on the state owned enterprises to move up the efficiency curve. The positive outcome of this reform process we believe, would encourage the government to adopt an aggressive stance regarding de-regulation of the other two segments, namely transportation and distribution of natural gas.

Reforms undated in key areas like gas transportation

In the Transportation segment, the government has already started the first stage of reforms, by recommending open access and unbundling of the transportation and marketing activity of natural gas companies. This unbundling ensures that the monopoly power of the company reduces and ensures better discovery of prices. Going forward, we are of the opinion that though transmission prices would be regulated, measures like third party open access would make the transportation segment competitive, with various consumers bidding for the unused capacity. The **"infrastructure status"** for companies operating in cross-countries pipelines would lead to substantial investment, with a part of it transferred to the end users (distribution companies, power & fertilizer companies).

"Right of way/use" and "market exclusivity" to cap expansion plans of existing players

As far as the distribution segment is concerned, which operates the **city gas distribution** network, high sunk costs coupled with difficulty in obtaining the "right-of-use/right-of-way" in the already stretched infrastructure of Indian cities, would act as a natural entry barrier for other players competing in this space. Going forward, though this would also mean that the opportunity in this space is huge, the existing players stand to gain only marginally, as "marketing exclusivity" clause would cap its expansion plans outside its area of operation.

Characterstics of gas markets

	Monopolistic	Competitive
Exploration & production	• Fully regulated production based on strategic and non-strategic reasons	• Many private firms exist, with no player a market leader • De-regulation of well-head prices • Incentive to reduce cost and increase efficiency
Transportation	• Controlled by a single player, bundled with gas supply	• Open third party access • Full separation of transporta tion and gas supply segments • Freedom to transfer transport rights
Distribution	• Single enterprise owns the distribution network in a geographical area and holds a franchise for supplying and distributing gas to all the consumers in that area • The difference between the city-gate price and the consumer prices, as called the "Distribution margin" would provide a fair rate of return to the company	• Open access to the distribution network • Regulation to prevent price discrimination

Source: Ambit Capital Research

Draft pipeline policy recommendations

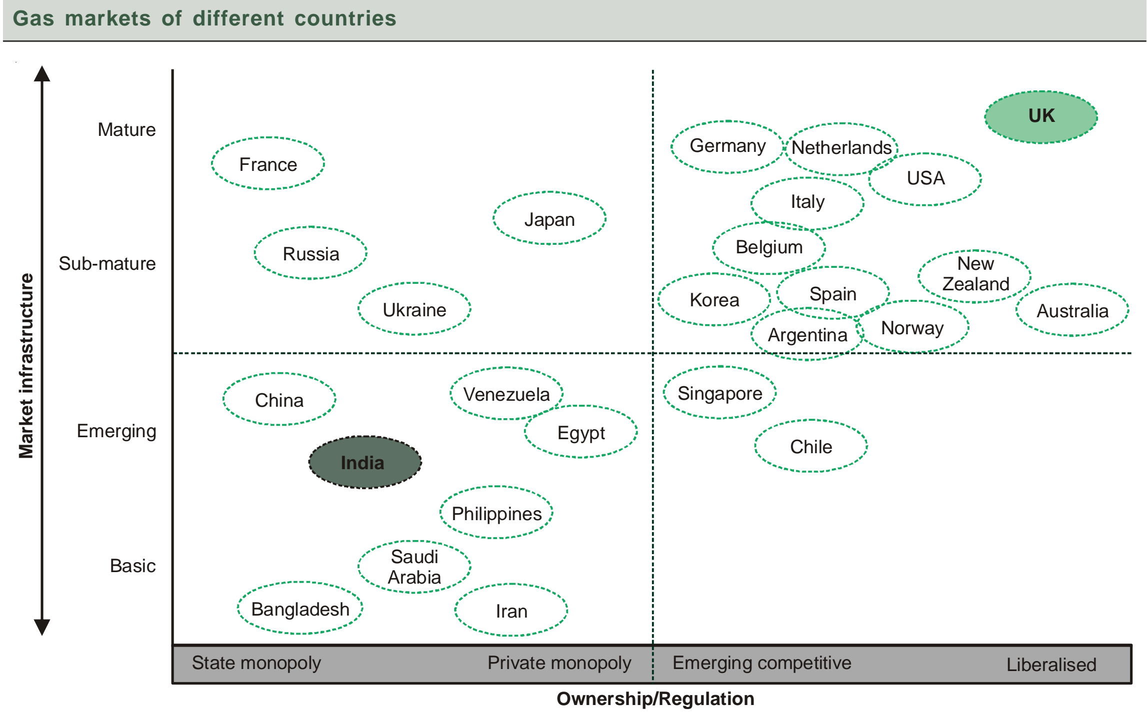
	Key guidelines	Companies impacted
Transportation	• Open third party access • Additional capacity of 33% mandatory for new pipeline construction • Unbundling of transportation & marketing activities	• GAIL, GSPL, Reliance Ind.
Distribution	• "Marketing exclusivity" rights in area of operation for a certain time frame • Following marketing service obligation as may be prescribed by the board • Board to monitor and ensure timely commissioning of city gas distribution • Right of Use (RoU) to be granted taking into account various considerations	• Gujarat Gas, Indraprastha Gas, GAIL, Reliance Ind., GSPC, Adani Group

Source: Industry, Ambit Capital Research

Competition in CGD to open up opportunity in derivative sectors too

Global experiences from countries like UK, Australia etc, suggests that moving from a regulated environment to a competitive one opens up a number of opportunities not only in the sector but in derivative segment (pipelines, oil services etc) as well. This is driven primarily by increase in output and improved price realisations, which intensifies the need for an infrastructure in place to leverage the environment.

Gas markets of different countries



Source: E&Y

Having said that, though competition would reduces the need for regulation, the high entry barriers even in a free environment would lead to formation of monopolies. Thus, we reckon that the regulation in the Indian CGD sector would play an important role initially to ensure a fair return to every entity involved in the entire value chain. However, going forward, with the maturing of the market we believe that the role of the regulator would shrink to being just an observer, while free market economics taking care of the rest of the issues.

Watch out for the city gas space, it promises exciting times ahead.

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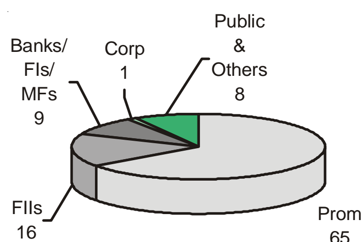
Gujarat Gas

Initiating coverage — Hold

Price (Rs)	1301
Target price, downside	1222/(6%)
52 week range (Rs)	1421/920
Shares o/s (mn)	12.83
Market cap (Rs mn)	16,694
Market cap (US$ mn)	387.9
Avg daily vol (3m avg)	4,678
Reuters	GGAS.BO
Bloomberg	GGAS IN

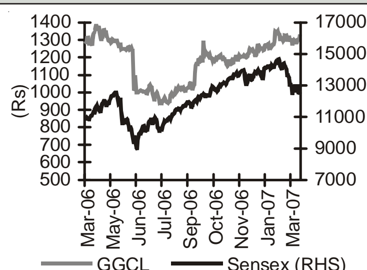
Source: Bloomberg

Shareholding pattern (%)



Source: Capitaline

Price performance



Source: Capitaline

Performance (%)

	1M	3M	12M	YTD
Absolute	0.0	2.7	(6.3)	6.8
Rel. to sensex	0.8	11.5	(14.7)	15.2

Source: Bloomberg

Key financials

YE Dec (Rs mn)	CY06A	CY07E	CY08E	CY09E
Total income	9,685	11,902	14,164	15,999
Gross profit	1,492	1,672	1,971	2,290
Net profit	875	941	1,112	1,293
EPS (Rs)	68.2	73.4	86.7	100.8
EBIDTA margin(%)	15.4	14.0	13.9	14.3
EV/EBIDTA	9.9	8.9	7.5	6.5
P/E (x)	19.1	17.7	15.0	12.9
RoE (%)	20.9	19.0	19.2	19.0
RoCE (%)	21.9	21.4	22.9	23.8

Source: Company, Ambit Capital Research estimates

Been there, done that

Gujarat Gas (GGCL), a niche player in city gas distribution, has reaped the benefits of a quantum jump in natural gas usage in Gujarat, driven by rapid industrialisation over the last few years. It operates in the highly remunerative region of Gujarat, namely Surat, Ankleshwar and Bharuch, which account for ~70% of the total gas consumption in the state. Being a pure distribution company with current sales of 4 mmscmd, GGCL sources its gas from varied producers including Gujarat State Petroleum Corp. (GSPC), British Gas-Reliance-ONGC consortium etc. Over 15% of its existing supply contracts up for renewal in the current year, and this coupled with price risks on account of higher spot purchases and entry of competition in the foreseeable future, would put pressure on its earnings.

We initiate coverage on Gujarat Gas with a **"HOLD"** recommendation and a 12-month target price of Rs1222.

Investment rationale

Presence in the most lucrative natural gas market – Gujarat

GGCL operates in one of the most industrialised states of India, Gujarat, which accounts for ~ 35% of the total natural gas consumed in the country. The demand in Gujarat is expected to jump from 54.1 mmscmd in 2005 to 94.5 mmscmd in 2010, a CAGR of 11.8%, with Surat, Vapi region within Gujarat to be the major demand centres. This augers well for GGCL as it has a strong foothold in Surat, Bharuch and Ankleshwar. The company is also expanding into the industrial belt of Vapi-GIDC, Jhagadia which would further strengthen its presence in Gujarat.

Demand not a concern, but gas supply risks to cap volume growth

Over the last 5 years GGCL has grown its volume sales from 480 mmscm in CY02 to 1088 in CY06, a CAGR of 22.7%. One of the key risks to this growth momentum, we believe, is the assured gas supply to meet the demand of the customers. The company, in the past has ramped up and diversified its supplies (sourcing from multiple producers), from 1.33 mmscmd in CY02 to 4 mmscmd currently. Expecting robust demand, the company has recently tied up 1.65 mmscmd from the Panna-Mukta-Tapti (PMT) fields, which is expected to flow from Q3CY07. However, gas supply risks exists, given the fact that 15% of its gas procurement contract with GSPC is up for renewal, some of which may not be renewed on account of decline in the production of the field. Since this renewal come in well before Q3CY07, temporary gas supply risks exist.

We expect 14% CAGR volume growth, from 1233 mmscm in CY07 to 1600 mmscm in CY09E.

Margins to remain flat

The company for the year-ended CY06 reported flat net profit growth Y-o-Y, though volume growth was a healthy 28% Y-o-Y. This is mainly on account of the fact that its natural gas cost (as a % of sales) increased by 130bps y-o-y coupled with loss in transmission revenues, compressing the EBIDTA and net profit margins by 470 and 410 bps respectively.

In the last financial year, the company inorder to tide over the temporary shortage of gas on account of floods has sourced gas on spot basis, which it did not pass on to the final consumer. Though it has affected a 10% price increase in the current quarter, we believe going forward, margins would continue to remain under pressure on account of high spot purchases. Having said that, since the company enjoys significant pricing power, especially in the retail segment, we reckon, any increase in raw material costs would be passed on to the final consumer. This would ensure protection of their margins on the downside.

Business environment attractive, but valuation factors in the potential regulatory and supply risks

We estimate that the CGD segment, currently consuming roughly 7 mmscmd would reach 37 mmscmd by 2012, a CAGR of 37%. This growth would mainly be driven by new demand centres which would open up once gas from the KG basin begins flowing by 2010. Though the gas market of Gujarat would continue to grow and expand, the stepping in of competition, coupled with establishment of a regulator is likely to restrict the growth prospects of the company geographically.

Therefore, given the growth constraints that exist, we believe that the current valuations captures the future prospects of the company.

We initiate coverage on the stock with a **"HOLD"** recommendation and a 12-month target price of Rs1222.

Risks and concerns to the valuation

Availability of gas from players like Reliance and GSPC, to mitigate the supply risk to a considerable extent.

Decision by GGCL to expand to other markets, without facing regulatory obstacles, to be value accretive to the company.

Foreign exchange risks exist as the company purchases most of the gas in US dollars.

Key financials

Balance sheet

Year to Dec (Rs mn)	CY05	CY06	CY07E	CY08E	CY09E
Cash & equivalents	167	50	97	325	1,568
Debtors	449	584	717	854	964
Inventory	98	100	126	150	169
Investments	1,951	1,951	1,951	1,951	1,951
Fixed Assets	3,663	4,694	5,452	6,149	6,153
Other assets	704	753	783	831	876
Total assets	**7,030**	**8,132**	**9,126**	**10,260**	**11,680**
Interest bearing debt	530	400	200	0	0
Other liabilities	6,500	7,732	8,926	10,260	11,680
Total liabilities	**7,030**	**8,132**	**9,126**	**10,260**	**11,680**
Shareholders' equity	128	128	128	128	128
Preference shares	0	144	144	144	144
Reserves & surpluses	3,640	4,320	5,064	5,977	7,071
Total networth	**3,768**	**4,593**	**5,336**	**6,249**	**7,343**
Net working capital	(723)	(991)	(1,173)	(1,139)	(37)
Net debt/ (cash)	(1,587)	(1,600)	(1,847)	(2,276)	(3,519)

Income statement

Year to Dec (Rs mn)	CY05	CY06	CY07E	CY08E	CY09E
Net sales	7,469	9,685	11,902	14,164	15,999
% growth		29.7	22.9	19.0	13.0
Operating expenses	5,968	8,193	10,230	12,193	13,709
Operating profit	**1,501**	**1,492**	**1,672**	**1,971**	**2,290**
% growth		(0.6)	12.0	17.9	16.2
EBIDTA margin (%)	**20.1**	**15.4**	**14.0**	**13.9**	**14.3**
Depreciation/ amortization	274	319	392	453	497
EBIT	1,227	1,174	1,280	1,518	1,794
EBIT margin (%)	16.4	12.1	10.8	10.7	11.2
Net interest	29	22	21	0	0
Non-operating/ exceptional items	251	155	167	166	165
Pre-tax profit	1,450	1,306	1,426	1,684	1,958
Tax	467	431	485	572	666
Net profit	**982**	**875**	**941**	**1,112**	**1,293**
% growth		(10.9)	7.6	18.1	16.3
Net profit margin (%)	**13.1**	**9.0**	**7.9**	**7.8**	**8.1**

Cash flow

Year to Dec (Rs mn)	CY05	CY06	CY07E	CY08E	CY09E
EBIT	1,227	1,174	1,280	1,518	1,794
Other Income	283	161	176	176	176
Depreciation/ amortization	274	319	392	453	497
Interest paid	(29)	(22)	(21)	(0)	(0)
Tax paid	(523)	(395)	(485)	(572)	(666)
Net working capital	110	151	229	195	141
Others	(0)	25	25	8	0
Operating cash flow	**1,342**	**1,413**	**1,595**	**1,777**	**1,941**
Capital expenditure	(1,588)	(1,350)	(1,150)	(1,150)	(500)
Investments	(158)	0	0	0	0
Investing cash flows	**(1,746)**	**(1,350)**	**(1,150)**	**(1,150)**	**(500)**
Increase/ (decrease) in borrowings	529	(130)	(200)	(200)	0
Issuance of preference shares	0	144	0	0	0
Dividend paid	(157)	(195)	(198)	(198)	(198)
Others (deposit from customers)	92	1	0	0	0
Financing cash flow	**463**	**(180)**	**(398)**	**(398)**	**(198)**
Net change in cash	60	(117)	47	229	1,243
Closing cash balance	**166**	**50**	**97**	**325**	**1,568**

Ratio analysis

(%)	CY05	CY06	CY07E	CY08E	CY09E
EBIDTA margin	20.1	15.4	14.0	13.9	14.3
Net profit margin	13.1	9.0	7.9	7.8	8.1
Return on equity	29.3	20.9	19.0	19.2	19.0
RoCE	28.7	21.9	21.4	22.9	23.8
Debt to equity	0.1	0.1	0.0	0.0	0.0
Current ratio (x)	1.8	1.5	1.3	1.3	1.6

Valuation parameters

	CY05	CY06	CY07E	CY08E	CY09E
EPS (Rs)	76.6	68.2	73.4	86.7	100.8
Diluted EPS (Rs)	76.6	68.2	73.4	86.7	100.8
CEPS (Rs)	97.9	93.1	104.0	122.0	139.5
P/E (x)	17.0	19.1	17.7	15.0	12.9
P/CEPS (x)	13.3	14.0	12.5	10.7	9.3
EV/ EBIDTA (x)	9.9	9.9	8.9	7.5	6.5

Source: Company, Ambit Capital Research estimates

Leader in the lucrative gas market of India

With a current consumption of 35 mmscmd, constituting ~35% of the total gas consumed in the country, Gujarat is one of the largest producer and consumer of natural gas in the country. Additionally, out of the total 7.5 mmscmd used for City Gas Distribution in the country, nearly 4.5 mmscmd is distributed in Gujarat itself.

Significant CGD market share in Gujarat

GGCL, a 65% subsidiary of British Gas (BG), runs a gas distribution network in Surat, Ankleshwar and Bharuch (SAB) region. With 4 mmscmd of gas sales in the state, it commands a 90% and 54% CGD market share in Gujarat and India respectively. As gas distribution is a very capital intensive business, a first mover advantage ensures that its assets are put to heavy use, which in turn reduces its fixed cost per unit and help it increase its return on investment. It also acts as a natural entry barrier for new players planning to enter the market.

GGCL, with such a first mover advantage in this highly lucrative market, is currently reaping the benefits of its extensive distribution network, built over the last decade.

Compressed natural gas (CNG) – making its presence felt

On account of being a pure retail gas distributor, GGCL derives over ~70% of its revenues from the retail segment (CNG – 5%, PNG – 5% & Industrial retail-60%), with the rest coming from the bulk category. Retail gas sales is typically a low volume high margin business compared to the bulk segment, primarily because the advantage of economies of scale that are more prevalent in the latter category. But given the fact that gas penetration as auto/domestic/industrial (small) fuel is at a very nascent stage, and set to grow exponentially in the foreseeable future, we believe that its only retail segment would see a quantum jump in its volume off take.

Though industrial retail would continue to be the dominant consumer, initiatives on the part of the Gujarat government to rein in pollution in major cities would provide a huge fillip to the CNG business in the region. Some of these incentives include:

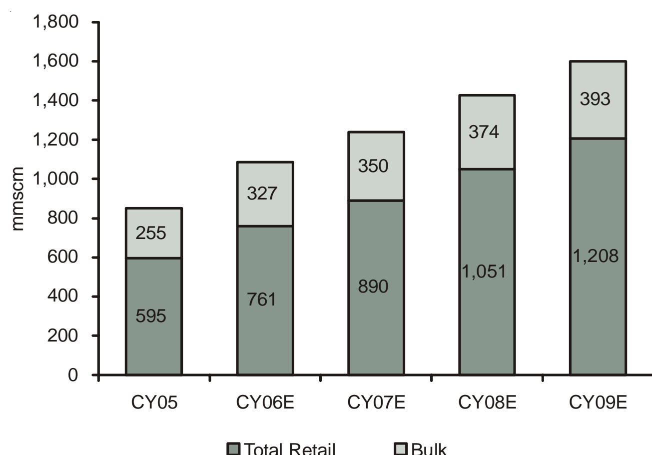
Government initiative to drive CNG growth

- Mandatory conversion of transport vehicles, especially 3-wheelers in key cities in Gujarat
- Adding fleet of CNG buses for state transportation purposes.

Volume contribution of CNG to increase from 4.5% to 6.5%

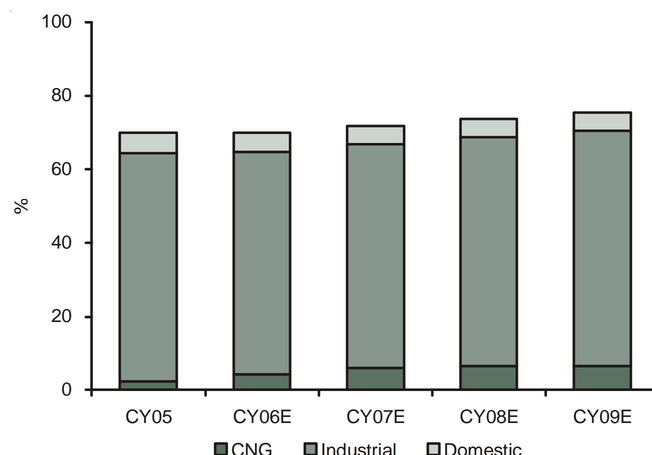
After the mandatory conversion of auto-rickshaws, the government has also initiated the process of converting transport buses in Surat to CNG. GGCL has ramped up its CNG infrastructure to take advantage of the benign environment. From just 2 CNG stations in CY02, it currently stands at 20, and plans to add another 8 stations in the current financial year. This would inturn increase its compression capacity from 20,000 kgs/ day to 280,000 kgs/day, CAGR of 70% over CY02-CY07E. CNG sales on the other hand would increase from 47 mmscm in CY05 to ~100 mmscm in CY09E, thereby contributing close to 7% to the total volume sales mix by CY09E.

Volume mix



Source: Company, Ambit Capital Research

Sales mix



Source: Company, Ambit Capital Research

Industrial retail gas – dominant growth driver

Industrial retail gas (customers with volumes of more than 0.2 mmscmd), constituting over 60% to the total sales mix of the company, would continue to be one of its main drivers of growth. Given the bening environment, we estimate that industrial gas volumes would increase from 657mmscmd to 9897mmscmd in FY06 and FY09E respectively.

We reckon that structural changes in the fuel consumption pattern of the region which had led to high demand from small and medium enterprises like Gems & Jewellery, Ceramic manufacturers etc would continue on account of the following reasons.

- Manufacturing units shifting from naphtha/fuel oil to natural gas, on account of the saving in energy costs. Back of the enevlope calculation suggest that natural gas would hold a competitive advantage over other fuels upto $6/mmbtu.
- Gas grid of 1100kms in place, with another 1000kms to be added over the next few years, thereby making natural gas accessible to even the small players.
- Quantum jump in the flow of natural gas expected in the state on account of gas finds by Reliance and GSPC.

Expected gas demand (mmscmd)

Location	2005	2010 E
Ahmedabad	2.40	3.40
Vadodara	6.40	7.60
Bharuch	12.60	18.10
Mehsana	1.60	2.00
Surat	21.00	46.30
Ankleshwar	0.70	0.80
Anand	2.70	3.50

Source: Ambit Capital Research

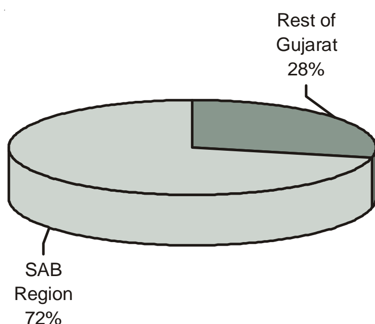
Gujarat: Gas demand

Industries (mmscmd)	2003-04	2004-05 P	2005-06 P
Power, Fertilizer, Steel, Petrochemicals	22.0	22.6	23.4
City Gas Distribution (including CNG)	5.0	5.0	6.0
Existing industries plus industrial clusters	6.0	12.0	14.0

Source:Ambit Capital Research

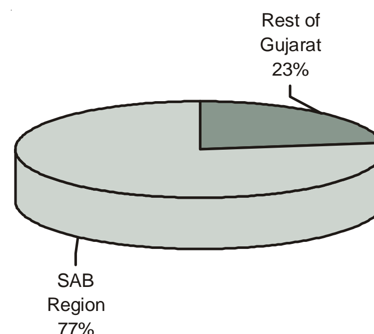
As the pie itself enlarges, GGCL would be a key beneficiary of this trend, as the regions in which it operates, namely Surat (home to the biggest diamond cutting industry in the world) and Bharuch constitute 70% of the total gas demanded in Gujarat.

Market share (%) - 2005



Source: Cris Infac

Market share (%) - 2010P



Source: Cris Infac

The company's expansion into Jhagadia, Vapi-GIDC, we reckon would further drive their growth in the industrial retail segment. With the complete distribution network in place and expected demand of 2mmscmd in the foreseeable future, these regions would be highly value accretive for GGCL.

Demand supply scenario

Demand not a concern, but gas supply risks to cap volume growth

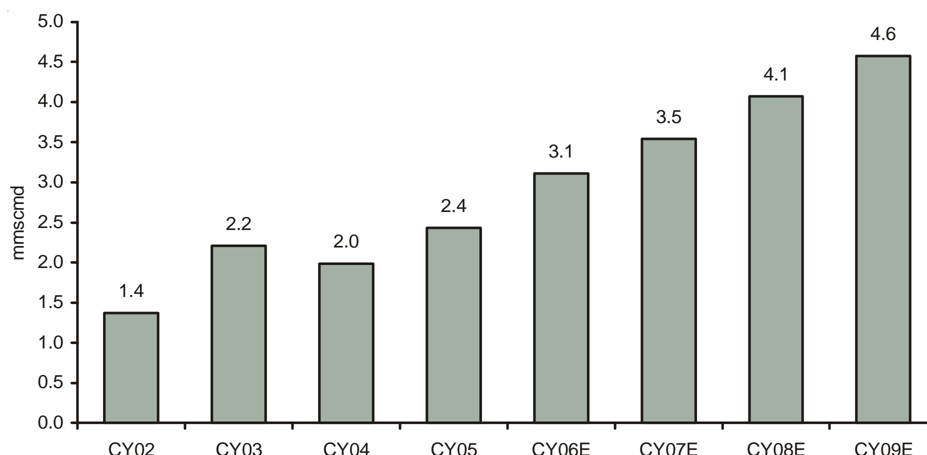
GGCL, being a pure gas distribution company, sources gas from multiple providers, inorder to de-risk its gas supplies. Historically, since India has been a gas deficient country, one of the biggest challenges for a gas distribution company has been the assurance of supplies, though demand has never been a concern.

GGCL strategically located to key gas sourcing points

Fortunately for GGCL, since it operates in a location which is strategically located to the key gas sourcing points, namely Panna-Mukta-Tapti fields, Cambay basin etc, and has an efficient gas infrastructure in place (HBJ pipeline origination point, LNG terminal), the company has been able to contract supplies when required. What helped was also the fact that the company's gas requirement were low, which inturn lowered the supply risk.

However, the company's gas requirement has increased from 1.3 mmscmd in CY02 to 4mmscmd currently, propelled by the benign demand scenario. The company, on its part has been proactive in sourcing gas, as and when the requirement arose. Having said that, whenever the company has faced supply crunch, its cost of procurement has invariably increased (buying of gas from the spot market), which has put enormous pressure on its distribution margin.

Gas sales



Source: Company, Ambit Capital Research estimates

Natural gas cost

($ mmbtu)	Price	CY07E	CY08E
PMT-I	4.8	0.9	0.7
PMT-II	5.0	1.5	2.5
GAIL (APM)	3.0	0.1	0.1
GSPC	3.9	0.4	0.0
Cairn	4.6	1.2	0.9
Niko	3.9	0.3	0.2
R-LNG (Spot)	6.5	0.3	0.4
Average cost		**4.68**	**4.86**

Source: Company, Ambit Capital Research estimates

These supply concerns however are mitigated to a certain extent by the strong parentage that the company enjoys. British Gas (BG), the 30% partner in the PMT fields, along with its other partners is looking at increasing the production from the fields from the current 11 mmscmd to 17 mmscmd. Out of the incremental 1.8 mmscmd which would accrue as BG's share, 1.65 mmscmd has been contracted to Gujarat Gas, with commencement expected in 3QCY07. To put this in perspective, out of the total contracted supply of 4.3 mmscmd in CY08E, BG's contribution to the aggregate supply mix would be approximately 65%.

Additionally, Gujarat Trading Company Ltd (GTCL), the fully owned trading arm of GGCL, has also separately executed an agreement with the CB JV (comprising of the Cairn group of Companies, Oil and Natural Gas Corporation Ltd and Tata Petrodyne Ltd) for the Ambe Gas field ("Agreement") which is to be developed by the CB JV. Under the Agreement,

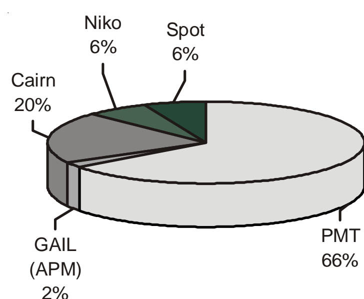
the CB JV has given GTCL the first right to purchase 37.4% of the natural gas produced from the Ambe field whenever the same becomes available, on the terms and conditions offered by the CB JV at that time.

Supply risks exists in CY07 as 15% of contracted supply up for renewal

These initiatives provide company a cushion and help them adopt an aggressive approach in their expansion plans, unpredictability of supply from the gas producers (declining production from gas fields), would pose potential risk to the earnings of the company. This risk would be all too visible in the current year itself when, when over 12% of its existing contracts, i.e. GSPC contract of 0.7 mmscmd gas would come up for renewal. Our belief is, given the fact that the production from the fields is decreasing, the renewals of this contracts is uncertain. We have also factored in 20% decline in supply from Cairn on account of its contract renewal earlier this year. This decline in our opinion would induce the company to procure gas from the spot market, increasing from 0.1mmscmd in CY06 to 0.3 mmscmd by CY08E, thereby increasing this procurement cost proportionally.

GSPC contract of 0.7 mmscmd unlikely to be renewed

Supply source mix (CY08)



Source: Company, Ambit Capital Research

Supply source: Contracted

(mmscmd)	CY04	CY05	CY06E	Existing	CY07E	CY08E
PMT-I	0.00	0.52	0.70	0.70	0.70	0.70
PMT-II	0.00	0.00	0.00	0.70	1.11	2.35
GAIL (APM)	0.23	0.17	0.10	0.10	0.10	0.10
GSPC	0.60	0.55	0.70	0.70	0.35	0.00
Cairn	0.79	0.84	1.20	1.20	0.96	0.96
Niko	0.15	0.32	0.50	0.30	0.30	0.30
R-LNG (Spot)	0.36	0.07	0.10	0.30	0.20	0.30
Total	**2.13**	**2.48**	**3.30**	**4.00**	**3.72**	**4.71**

Source: Company, Ambit Capital Research

Margins to remain flat

Though the company is the only serious player in the city gas distribution market in the state of Gujarat, it margins have been modest. Reason for this we believe are two fold:

- Purchase over a majority of gas at market determined price, with the sales skewed towards the industrial retail customers, where the margins are lower than in PNG and CNG.
- Conscious effort on part of the company to pass on the benefits of economies of scale to its customers. Thus, by keeping its margins modest it has kept government intervention at bay.

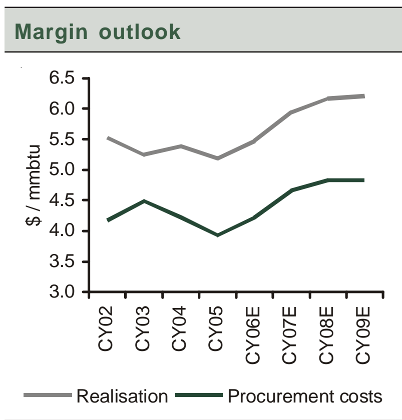
Gas procurement cost to be in $4-5 mmbtu range, with upward bias

Also, the share of APM gas, which it draws from GAIL, as a percentage of its total gas supply mix has been reducing over the years. This has resulted in the share of the market determined gas going up substantially, the increase having been passed on to the consumer to a large degree. However, given the fact that "take-or-pay" contracts/supply disruptions (because of declining fields) are generally the norm at gas producers end, it is not so when it comes to the final consumer. This creates price mismatch when there are demand-supply aberrations. The company found itself in a similar situation in 2HCY06, with sudden disruptions in supply led the company to source gas from the spot market. This led to flat margins for CY06, though gross realisations increased by ~5% Y-o-Y.

GGCL has communicated that, in the current quarter, the company has affected a 10% increase in the gas prices across the consumer segments, barring bulk category. This, we estimate, would increase the distribution margin by 6% for CY07E Y-o-Y.

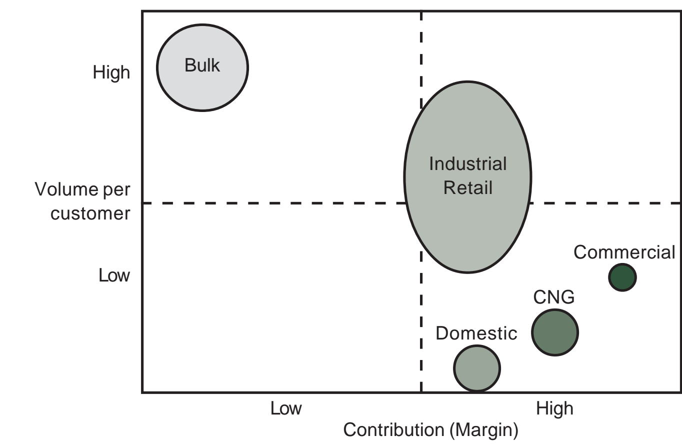
Going forward, we believe that the company would procure gas in the $4-$5 per mmbtu range, with a bias towards the upper range, on account of higher purchases from the spot market to compensate for the drop in supply/ increase in price from key players on account of re-negotiations in this calendar year. Also higher volume sales would keep the margins in check, though we believe that the share of CNG would increase from the current 4.5% to 6.5%, on account of the expansion that the company is undertaking in the CNG segment.

Margin outlook



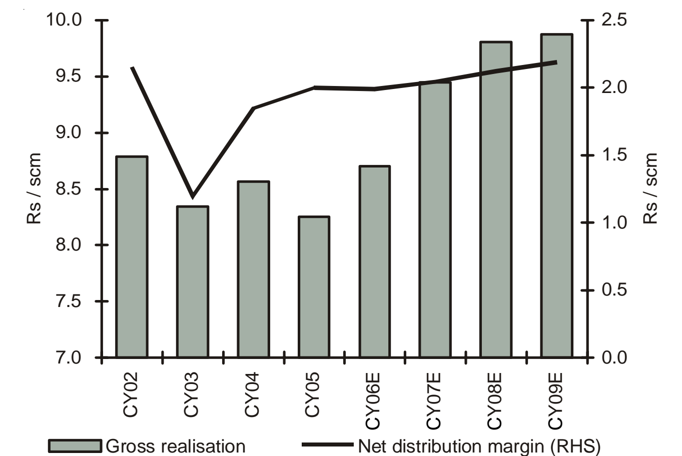
Source: Company

Segmental size and profitability



** Size of the circle indicates market size (graph indicative and not to scale)*
Source: Gujarat Gas

Distribution margin progression over the years



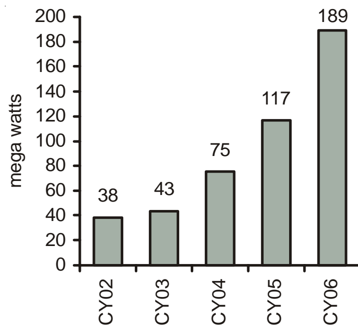
Source: Company, Ambit Capital Research estimates

New business segments to add value

CHP/Cogen leasing business to add value

GGCL has steadily been generating a significant part of its Industrial retail revenues from Cogeneration or Combined Heat & Power (CHP), providing thermal efficiency of over 80%, is the simultaneous production of electricity and heat using a single fuel (mostly natural gas). The heat that is produced during the generation of electricity is captured and utilized to produce steam, which in turn is used in steam turbines of combined cycle plants (CCP) to further generate electricity. Cogen units are more efficient due to of the fact that it harnesses this heat energy, which would have otherwise been wasted.

Power generation by CHP segment

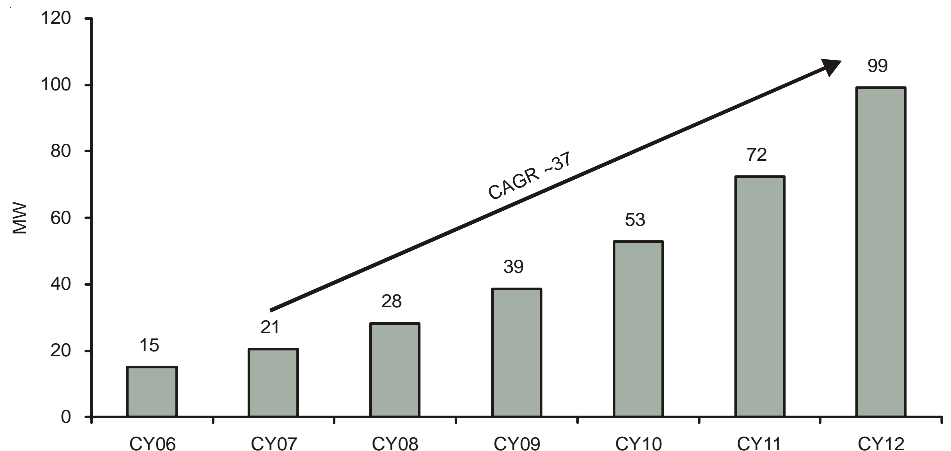


Source: Company

On account of these inherent advantages, GGCL has witnessed steady growth in this segment, with over 189 MW added by CY06.

Its Cogeneration business division, providing financing and maintenance services to industrial units engaged in converting their captive naphtha powered power plants to combined heat and power (CHP) plants using natural gas as the fuel, has also added 15MW in CY06. With each MW consuming ~5000 standard cubic metres (scm) of gas everyday, it expects to achieve a target of 100MW by 2012, a CAGR of ~37% over the period.

Power capacity addition: Cogen business (financing)



Source: Company

Revenues - Cogen business

	CY06E	CY07E	CY08E	CY09E
MW capacity	15	21	28	39
Revenues (Rs mn / MW)	20	20	20	20
IRR (%)	15.0	15.0	15.0	15.0
Income (Rs mn)	**45**	**62**	**84**	**116**

Source: Ambit Capital Research estimates

Financial analysis

The revenue growth of the company, on the back of robust growth in volumes, has been impressive over the years. From Rs4.5bn in CY02 it has more than doubled to Rs9.7bn in CY06, a CAGR of 21%. This is against the backdrop of a volume growth of 22% over the same period. However, a net profit for the same period has been quite muted, having grown at a CAGR of 9%. This is mainly on account of the fact that the sales mix of the company in the initial years were skewed towards the bulk customers which is a low margin high volume segment in the value chain.

Going forward we estimate that, with a volume CAGR of 14% over CY07-09E, the net profits of the company would grow at 14% CAGR over the same period.

Capex to increase share of CNG in volume mix

GGCL to add 8 CNG stations in CY07

The company has been aggressively ramping up its CNG business, expanding its CNG infrastructure from just 2 stations in CY02 to 20 stations in CY06. In the current financial year, it is expected to add 8 more stations to take the total tally to 28 by CY08. For this expansion, the company has earmarked Rs600mn, and another Rs500mn for Cogen business, a total investment of Rs1150mn for CY07. Going forward the company plans to incur an additional capex of Rs1150mn for CY08 as well, the financing of which would financed by internal accruals.

We believe that this expansion in the CNG segment would increase its share in the volume mix from the current 4.5% to 6.5% by CY08E.

Capex

	(Rsmn)
CY06	1350
CY07E	1150
CY08E	1150

Source: Company

CNG infrastructure

CNG	CY04	CY05	CY06E	CY07E	CY08E	CY09E
CNG Stations	7	12	20	28	28	28
CNG Vehicles	3688	25308	35000	42500	45000	47500
Compresssion Capacity ('000 kg / day)	70.00	120.00	200.00	280.00	280.00	280.00
Actual Dispensed ('000 kgs / day)	7.29	46.40	103.84	163.41	203.36	224.00

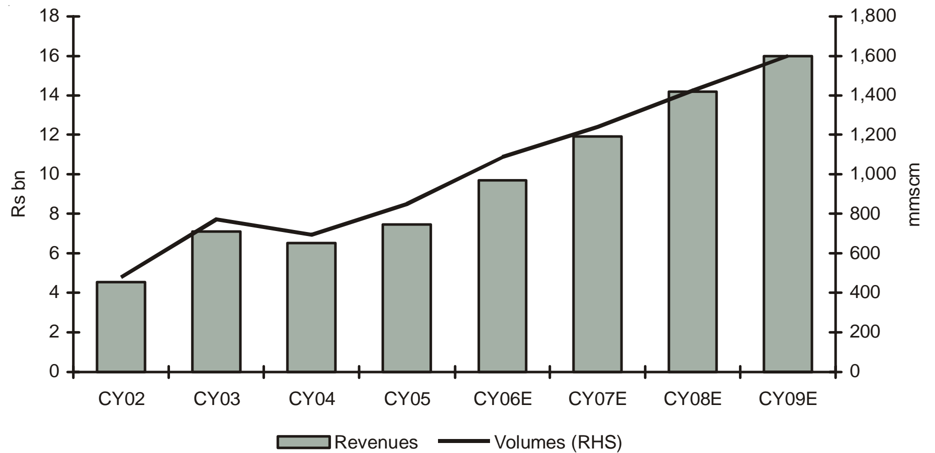
Source: Company, Ambit Capital Research estimates

Revenues driven by growth in volumes

Gas transmission business is declining and keeping pressure on revenue growth

With the company ramping up on its CNG and new businesses (Cogen), we estimate that gas volumes distributed would increase from 1,088 mmscm to 1,601 mmscm in CY06 and CY09E respectively. The revenues of the company, on the other hand, would grow from Rs9.7bn in CY06 to Rs16.0bn in CY09E, a CAGR of 18%. This is in contrast to 21% CAGR growth witnessed over CY02-CY06. The fall is mainly attributable to the loss of revenues contribution from the gas transmission business, which has fallen from Rs478mn in CY03 to just over Rs100mn in CY06. Going forward, with Gujarat State Petronet (GSPL) having built a competing Hazira-Ankleshwar pipeline, we believe that the revenues from this segment would fall down to Rs50-60mn every year, the amount given by GSPL as part of its contract, which would expire by 2011.

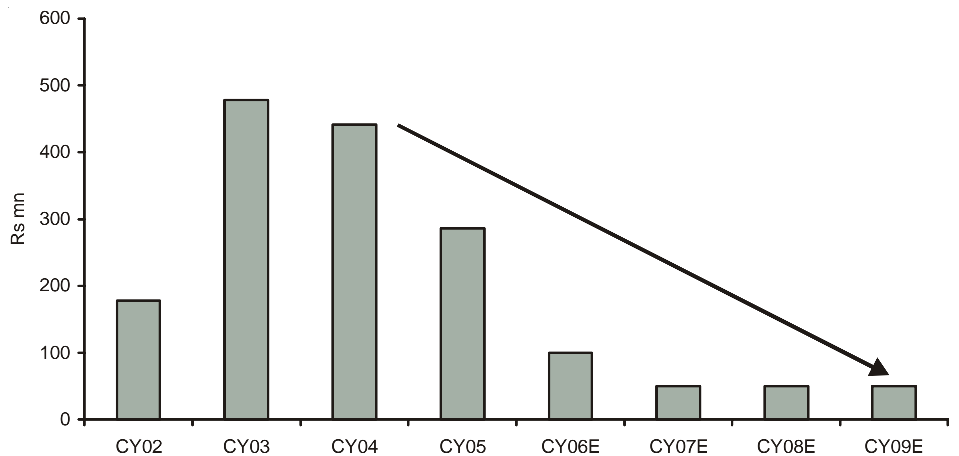
Volume & revenues growth



Source: Company, Ambit Capital Research

Gas transmission revenues - on a decline

Gas transmission revenues hit on account of competing pipeline by GSPL



Source: Company, Ambit Capital Research

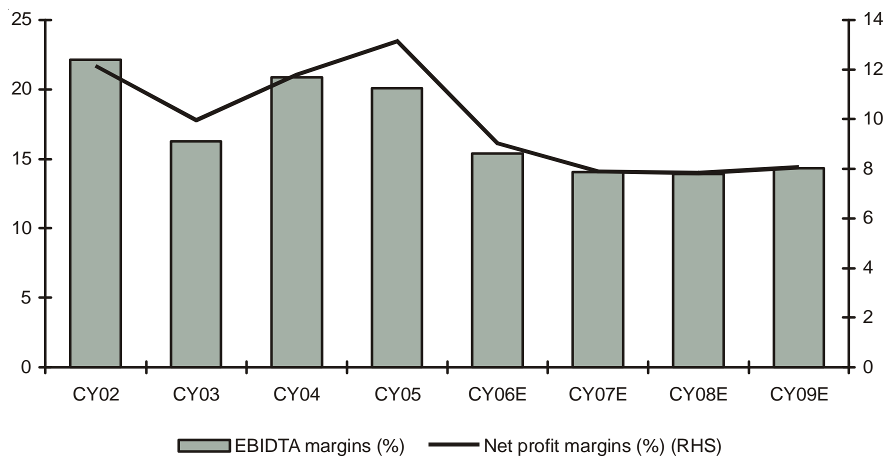
Margins under pressure in CY06

Margins to remain under pressure due to rising procurement cost

The EBIDTA margins of the company, having remained stable over CY02-CY05 (with a dip in CY03), declined by 470 basis points (bps) Y-o-Y in CY06. Increase in the procurement cost of natural gas by 100bps Y-o-Y, was the one factor which led to pressure on the margins. This in turn led to a fall in the net profit margin by 86bps Y-o-Y to 7.8%. The company in the current quarter has affected an increase in gross realization by 10% across segments (excluding bulk). Going forward, we expect an EBIDTA and net profit margin contraction of 130bps and 110bps respectively from the current levels, considering a 10% increase in its procurement costs in CY07E.

Net profit margins to stabilise at 8%

EBIDTA margin vs net profit margin



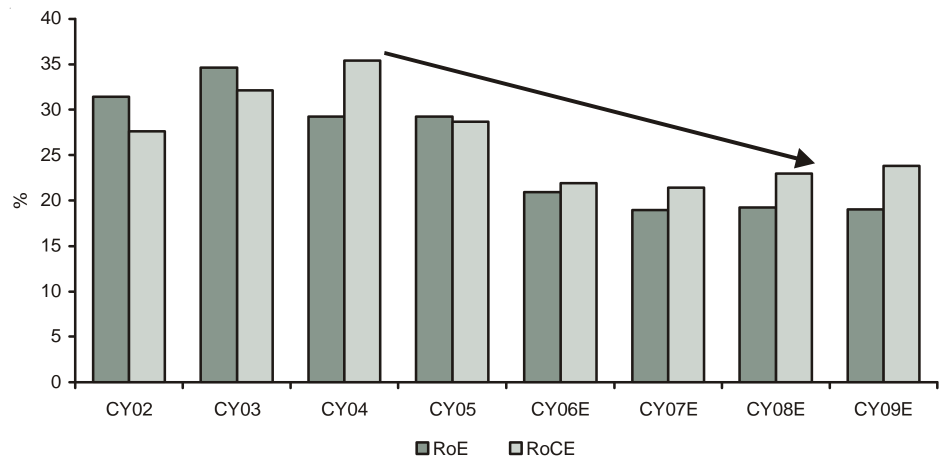
Source: Company, Ambit Capital Research

Return ratios: pressure on margins visible

The most visible signs of pressure on margins has been the declining trend in the return ratios, namely RoE and RoCE. From 31% in CY02 the RoE has declined to 21% in CY06. RoCE, on the other hand, has reduced from 28% to 22% in CY02 and CY06 respectively. With margins to remain under pressure in the foreseeable future, we expect the return ratios to be subdued as well.

Return ratios under pressure on account of margins contraction

RoE vs RoCE



Source: Company, Ambit Capital Research

Valuation

Business environment attractive, but valuation factors in the potential risks

Given flat margins expected in the foreseeable future, we estimate that net profits of the company would grow at a CAGR of 14% over CY06-CY09E. Also, the return ratios would be subdued on account of this reason.

At the current market price of Rs1,300, the stock is currently trading at a multiple of 15x P/E and 7.5x EV/EBIDTA for CY08E earning. This, we believe is at the fair range of its valuation multiple and expect it to trade at the current levels, given the growth outlook in the foreseeable future.

We initiate coverage on Gujarat Gas with a **"HOLD"** recommendation and a 12-month target price of Rs1,220.

Valuation parameters

	CY05	CY06	CY07E	CY08E	CY09E
EPS (Rs)	76.6	68.2	73.4	86.7	100.8
Cash earnings per share (Rs)	97.9	93.1	104.0	122.0	139.5
P/E (x)	17.0	19.1	17.7	15.0	12.9
P/CEPS (x)	13.3	14.0	12.5	10.7	9.3
EV/ EBIDTA (x)	9.9	9.9	8.9	7.5	6.5
Dividend per share (Rs)	10.0	12.5	12.5	12.5	12.5
Dividend payout (%)	13.1	18.3	17.0	14.4	12.4

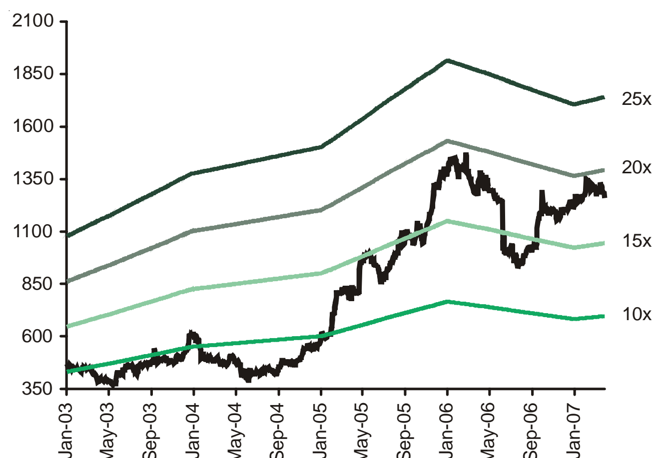
Source: Ambit Capital Research estimates

Peer set comparison

	FY07E			FY08E		
	P/E	EV/EBIDTA	RoE (%)	P/E	EV/EBIDTA	RoE (%)
Gujarat Gas#	17.7	8.9	19.0	14.9	7.5	19.2
Indraprastha Gas	10.6	5.3	27.8	9.6	4.2	24.8
GSPL	31.6	13.3	9.2	36.5	9.3	7.4
GAIL*	9.7	6.2	21.1	9.4	5.8	19.2
Reliance Ind.*	17.5	11.8	25.0	17.8	11.4	19.3

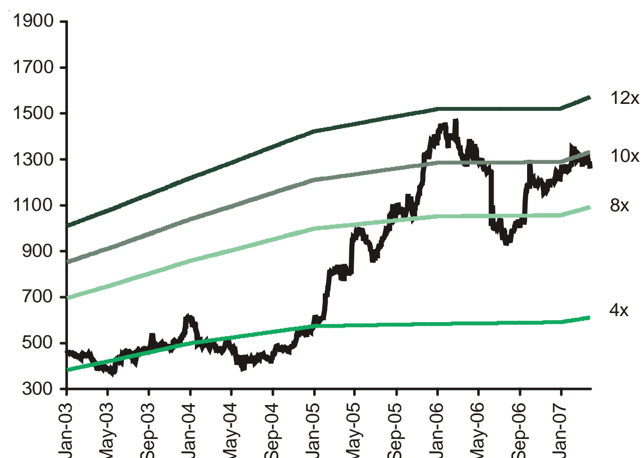
**Bloomberg estimates*
#calendar year (ended December)
Source: Company, Ambit Capital Research estimates

PE band



Source: Capitaline, Ambit Capital Research

EV/EBIDTA band



Source: Capitaline, Ambit Capital Research

DCF

Given the utility nature of the business and strong free cash flows, we believe that DCF best captures value of the company. Our DCF valuation is based on the following assumptions:

- EBIT growth of the company is assumed at 10% for CY10-CY12
- Terminal growth of 2%, which we believe is fair considering the fact that it's a utility business
- WACC of 12.3%

DCF

DCF valuation

	2007E	2008E	2009E	2010E
EBIT (1-t)	**845**	**1,002**	**1,184**	**1,302**
Depreciation	392	453	497	0
+ / - W.C Changes	229	195	141	0
Capex	(1,150)	(1,150)	(500)	0
Free cash flow	**315**	**500**	**1,322**	**1,302**
Discounted value	289	408	960	842

Source: Ambit Capital Research estimates

Calculations & assumptions

DCF Calculations		Assumptions (%)	
Explicit period	FY07-09	Risk free rate	8.0
Transition phase	FY10-12	Risk premium	6.0
Terminal phase	Beyond FY13	Adjusted beta	8.0
Disc value till FY12	4,131	Cost of equity (%)	12.4
Terminal value	7,978	Cost of debt (%)	6.9
Total value	12,109	WACC	12.3
Net debt/ (cash)	(1,847)	Explicit period growth rate (%)	13.1
Total shareholders' value	13,957	Transition period growth rate (%)	10.0
Number of shares, crs	12.8	Terminal growth rate (%)	2.0
Value per share, Rs	1,088		
One year forward value, Rs	1,222		
Upside (%)	(6.0)		

Source: Ambit Capital Research estimates

Sensitivity analysis

Transition growth (%)	Terminal growth 2	3	4
8%	1,177	1,255	1,352
10%	1,222	1,305	1,407
12%	1,269	1,356	1,464

Source: Company, Ambit Capital Research estimates

Based on our DCF valuation, we arrive at a fair value of Rs1222, which, we believe, the stock would start factoring over the next 12-month period.

Risks and Concerns to the valuation

Availability of gas from players like Reliance and GSPC, to mitigate the supply risk to a considerable extent.

Decision by GGCL to expand to other markets, without facing regulatory obstacles, to be value accretive to the company.

Foreign exchange risks exist as the company purchases most of the gas in US dollars.

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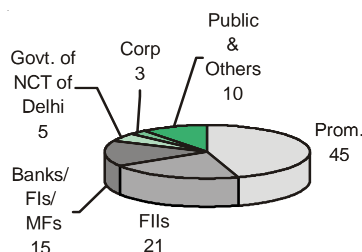
Indraprastha Gas

Initiating coverage — Buy

Price (Rs)	97
Target price, upside	127/31%
52 week range (Rs)	154/86
Shares o/s (mn)	140.0
Market cap (Rs mn)	13,622.0
Market cap (US$ mn)	316.5
Avg daily vol (no of shares)	106,932
Reuters	IGAS.BO
Bloomberg	IGL IN

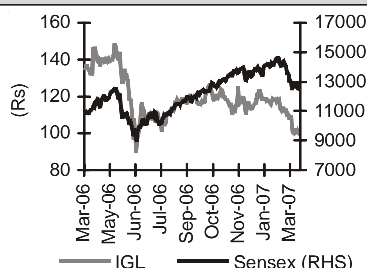
Source: Bloomberg

Shareholding pattern (%)



Source: Capitaline

Price performance



Source: Capitaline

Performance (%)

	1M	3M	12M	YTD
Absolute	(11.3)	(20.8)	(32.4)	(16.0)
Rel. to sensex	(10.6)	(14.1)	(38.4)	(9.5)

Source: Bloomberg

Key financials

YE Mar(Rs mn)	FY06	FY07E	FY08E	FY09E
Total income	5,208	6,284	7,099	8,071
Gross profit	2,137	2,575	2,917	3,271
Net profit	1,062	1,303	1,412	1,502
EPS (Rs)	7.6	9.3	10.1	10.7
EBIDTA margin(%)	41.0	41.0	41.1	40.5
EV/EBIDTA	6.1	5.3	4.2	3.7
P/E (x)	12.8	10.5	9.6	9.1
RoE (%)	28.0	27.8	24.8	22.1
RoCE (%)	41.5	41.0	36.6	32.7

Source: Company, Ambit Capital Research estimates

Indraprastha Gas, having reaped the benefits of increased CNG conversion of public transport vehicles in the National Capital region (NCR), is now concentrating on geographical diversification and private vehicle conversion (~2500 per month) to drive growth.

The stock, over the last year, has come down considerably, even though the company on an operational level continues to show healthy growth. The fears on the procurement cost front coupled with competition emerging, seems to have had a heavy overhang on the stock. We reckon these fears, though valid, have been exaggerated and may not have material impact in IGL's robust business model.

We initiate coverage on the stock with a "**BUY**" recommendation and a 12-month target price of Rs127.

Compressed Natural Gas (CNG) market – private vehicle conversion to drive growth

Delhi government has made it mandatory for all the light goods vehicle registered after July 1st, 2006 to be on CNG only. This is besides buses and three-wheelers, which are now on CNG. Further increased private vehicle conversion, at around 2500 vehicles per month, would provide a shot in the arm for growth of the company going forward.

We estimate that, volumes would grow from 419 million standard cubic metres (mmscm) in FY06 to 566 mmscm in FY09E; driven by ~13% CAGR increase in CNG powered vehicles over the same period.

Company in expansion mode

IGL had chalked plans for expanding into Greater Noida, Ghaziabad, Panipat and Sonipat with these areas promising to be the growth drivers for the future The company, having received land and regulatory approval in Greater Noida, is in the process of setting up 3 CNG stations, the commissioning of which would begin by Q2FY08E. Business operations in Panipat and Sonipat would take another couple of years till the infrastructure is developed by GAIL.

Keeping in mind the geographical expansion the company plans to invest Rs4bn over the next three years.

Piped Natural Gas (PNG) business – growth driver for the future

Having made a significant presence in the CNG segment, IGL is looking at increasing the share of PNG business in the revenue pie. Along with domestic households, the focus, we believe, would be on small & large industrial customers in and around the NCR. With domestic/commercial connections of over 61,000, we envisage an annual growth of over 40% in the customer base over CY06-CY09E.

These initiatives, we estimate, would increase the share of PNG from just 7% in FY06 to 13% by FY09E.

Supply cushion in CNG present, not so for PNG

With a current gas allocation of 2 mmscmd (1.9 for CNG and 0.1 for PNG), IGL in the current financial year is expected to distribute 1.28 mmscmd to the CNG segment, thereby

leaving a supply cushion of nearly 45%. This would be well utilized when IGL begins operation in other regions without looking out for additional gas. However, with the company having exhausted its allocation of 0.1 mmscmd in the PNG segment, it currently sources 25,000 scmd of Re-gasified Liquid Natural Gas (R-LNG) from BPCL. This, we estimate, would increase to over 100,000 scmd by FY09E, given the growth in the PNG business over the same period.

Uniqueness

Since gas distribution is a high capex business which involves regulatory approvals, they act as natural entry barriers for other players to make their presence felt. We reckon that IGL enjoys such benefits. Also, high cash profit coupled with low working capital requirements auger well for the company leaving it in a sweet spot to continue its capex funded by internal accruals.

Valuation

Driven by revenue growth of 13% CAGR over FY06-FY09E, we estimate an EPS of Rs 10.1 and Rs10.7 for FY08E and FY09E respectively. At the current price of Rs97, the stock is trading at 9x earnings and 3.7 EV/EBIDTA for FY09E.

We believe, given the utility and cash generating nature of business, DCF is the most appropriate valuation technique to value the stock. We initiate coverage on the stock with a one-year price target of Rs127, representing an upside of 31% from the current levels.

Risks & concerns

One of the key risks, in our opinion is the steps the regulator might take in terms of APM pricing, which could prove detrimental to the growth of the company. Opaqueness on future pricing and competition, in our view, dominates these concerns.

Key financials

Balance sheet

Year to Mar (Rs mn)	FY05	FY06	FY07E	FY08E	FY09E
Cash & equivalents	678	110	1,325	1,582	1,761
Debtors	118	204	194	220	250
Inventory	180	184	220	247	285
Investments	0	425	425	425	425
Fixed Assets	3,436	3,655	3,403	4,176	5,130
Other assets	506	590	569	583	598
Total assets	**4,919**	**5,168**	**6,136**	**7,233**	**8,448**
Interest bearing debt	515	43	35	35	35
Other liabilities	1,279	1,338	1,410	1,494	1,606
Total liabilities	**1,794**	**1,381**	**1,445**	**1,529**	**1,641**
Shareholders' equity	1,400	1,400	1,400	1,400	1,400
Reserves & surpluses	1,725	2,387	3,291	4,304	5,407
Total networth	**3,125**	**3,787**	**4,691**	**5,704**	**6,807**
Net working capital	276	(197)	940	1,180	1,329
Net debt/ (cash)	(587)	(493)	(1,715)	(1,972)	(1,725)

Income statement

Year to Mar (Rs mn)	FY05	FY06	FY07E	FY08E	FY09E
Net sales	4500	5208	6284	7099	8071
% growth	7	16	21	13	14
Operating expenses	2653	3072	3708	4182	4800
Operating profit	**1848**	**2137**	**2575**	**2917**	**3271**
% growth	9	16	21	13	12
EBIDTA margin (%)	**41**	**41**	**41**	**41**	**41**
EBIT	1368	1572	1923	2090	2225
EBIT margin (%)	30	30	31	29	28
Net interest	35	22	0	0	0
Non-operating/ exceptional items	79	51	50	50	50
Pre-tax profit	1412	1602	1973	2140	2275
Tax	484	540	671	727	773
Net profit	**928**	**1062**	**1303**	**1412**	**1502**
% growth	13	14	23	8	6
Net profit margin (%)	**21**	**20**	**21**	**20**	**19**

Cash flow

Year to Mar (Rs mn)	FY05	FY06	FY07E	FY08E	FY09E
EBIT	1,368	1,572	1,923	2,090	2,225
Other Income	78	53	50	50	50
Depreciation/ amortization	480	565	652	827	1,046
Interest paid	(35)	(22)	0	0	0
Tax paid	(471)	(571)	(671)	(727)	(773)
Net working capital	93	(94)	78	16	30
Operating cash flow	**1,514**	**1,503**	**2,033**	**2,256**	**2,577**
Capital expenditure	(458)	(772)	(411)	(1,600)	(2,000)
Investments	0	(425)	0	0	0
Investing cash flows	**(458)**	**(1,197)**	**(411)**	**(1,600)**	**(2,000)**
Increase/ (decrease) in borrowings	(106)	(474)	(8)	0	0
Dividend paid	(320)	(399)	(399)	(399)	(399)
Financing cash flow	**(426)**	**(873)**	**(407)**	**(399)**	**(399)**
Net change in cash	630	(567)	1,215	257	178
Closing cash balance	**677**	**110**	**1,325**	**1,582**	**1,761**

Ratio analysis

(%)	FY05	FY06	FY07E	FY08E	FY09E
EBIDTA margin	41.1	41.0	41.0	41.1	40.5
Net profit margin	20.6	20.4	20.7	19.9	18.6
Return on equity	29.7	28.0	27.8	24.8	22.1
RoCE	38.0	41.5	41.0	36.6	32.7
Debt to equity	0.2	0.0	0.0	0.0	0.0
Current ratio (x)	1.3	0.8	1.9	2.0	2.1

Valuation parameters

	FY05	FY06	FY07E	FY08E	FY09E
EPS (Rs)	6.6	7.6	9.3	10.1	10.7
Diluted EPS (Rs)	6.6	7.6	9.3	10.1	10.7
CEPS (Rs)	10.1	11.6	14.0	16.0	18.2
P/E (x)	14.7	12.8	10.5	9.6	9.1
P/CEPS (Rs)	9.7	8.4	7.0	6.1	5.3
EV/ EBIDTA (x)	7.3	6.1	5.3	4.2	3.7

Source: Company, Ambit Capital Research estimates

CNG market

Private vehicle conversion to drive growth

Since the directive given by the Supreme Court on July 28 1998, requiring buses, autos and taxis to ply only on CNG in National Capital Territory (NCT) of Delhi, CNG vehicles have grown at a CAGR of 32% over FY01-06. This growth has been accentuated by the fact that during the same period crude prices have more than tripled, thereby favouring conversion of vehicles to CNG for deriving cost benefit. This cost advantage is also encouraging owners of private vehicles to convert to CNG.

In a recent notification, the Delhi Government has made it mandatory for all Light Goods Vehicle (LGVs) registered in Delhi after 1st July 2006 to be on CNG only. It is estimated that roughly 4000 LGVs are registered every year. Coupled with private vehicle conversions, this notification would provide a shot in the arm for volume growth of IGL.

Commonwealth Games – significant increase in consumption

The commonwealth games 2010 to be held in Delhi would also prove a trigger for increase in the average CNG consumption of vehicles, mainly in account of the significant arrival of tourists in the region during that period. With 1 million tourists expected in the capital during that period, the need for public transport would increase manifold. The government too is strengthening the transport infrastructure by introducing thousands of radio taxis and high capacity buses, which would run on CNG. IGL being the sole provider of CNG to the public transport sector in the region would greatly benefit from this additional demand.

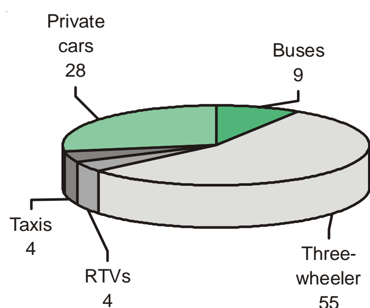
We estimate that, given the benign environment, CNG vehicles would grow from 106,000 vehicles in FY06 to 150,000 in FY09E, a 13% CAGR. This would, in turn, increase the CNG volume off take from the present 419 mmscm to 566 mmscm in FY06 and FY09E respectively.

Market potential of CNG: NCR

	CNG vehicles	Total vehicles	Penetration level (%)
Buses	11,535	25,705	44.9
3-wheeler	70,159	74,183	94.6
RTVs	5,368	n.a	n.a
Taxis	5,686	20,973	27.1
Private cars	35,229	3,105,892	1.1
Total	**127,977**	**3,226,753**	**4.0**

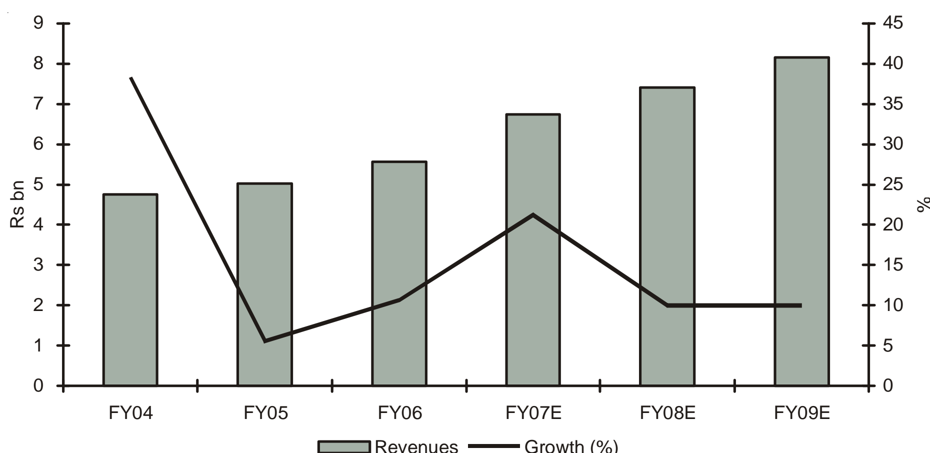
Source: Transport Department, Govt. of NCT of Delhi, Ambit Capital Research estimates

CNG vehicle distribution (%)



Source: Company

CNG growth



Source: Company, Ambit Capital Research

Expansion into virgin markets

IGL, looking at the potential in its surrounding areas, had chalked out plans for expanding into Greater Noida and Ghaziabad. The company, having received land and regulatory approval in Greater Noida, is in the process of setting up 3 CNG stations, the commissioning of which would begin by Q2FY08E. As far as Ghaziabad is concerned, the company is yet to receive land and government permission to assume business operations.

The company has also received government approval to expand to Panipat and Sonipat in Haryana. In a recent press release it has been suggested that in a decade's time, areas surrounding the Rs 1,800-crore Kundli-Manesar-Palwal expressway would be transformed into industrial centres. Since Panipat & Sonipat falls under this belt, there is a strong case for the company to adopt an aggressive stance in this region. These plans would however take shape only by FY10 (by which time GAIL pipeline would also be ready) because of non availability of infrastructure to distribute gas in the region.

Infrastructure built up

Year	FY04	FY05	FY06	FY07E	FY08E	FY09E
CNG stations	120	134	146	158	158	158
CNG vehicles	90,590	94,246	106,483	127,780	140,558	154,613
PNG customers (All)	15,363	25,277	46,989	65,785	92,098	128,938
Compresssion capacity (lacs kg / day)	16.1	16.9	19.1	20.5	20.6	20.6
Actual dispensed (lacs kgs / day)	8.1	8.6	9.2	10.3	11.3	12.5
Capacity utilisation (%)	50.0	50.9	48.4	50.2	55.1	60.6

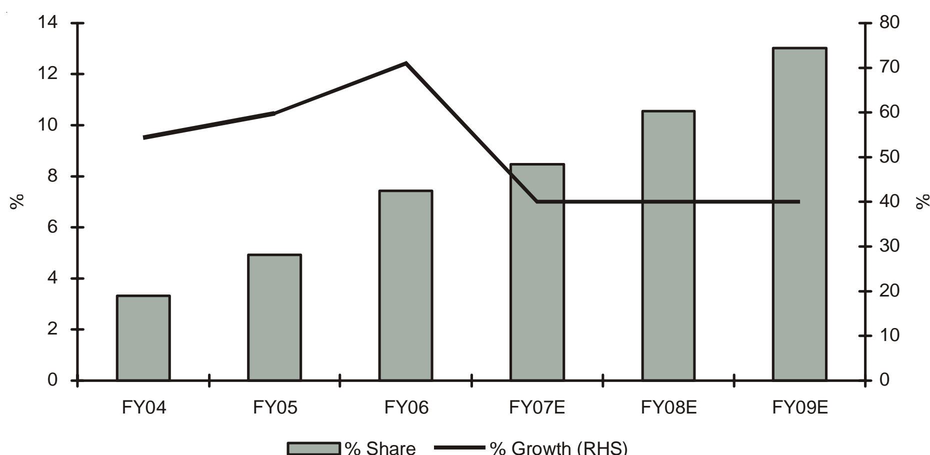
Source: Company, Ambit Capital research

PNG market

PNG business – Growth driver for the future

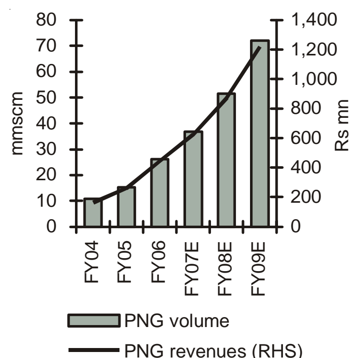
The PNG business, which provides gas to domestic and commercial undertakings, has been on a high growth trajectory. From just over 3% contribution in FY03 it currently contributes just over 7% to the total revenues generated by the company. Going forward, we estimate that the volume distributed in the PNG segment would increase from 26 mmscm in FY06 to 72 mmscm in FY09E, a CAGR of 40%, thereby increasing its share in the revenue mix from 7% to 13% in FY06 and FY09E respectively.

% share and growth of PNG in revenue mix



Source: Company, Ambit Capital Research

PNG growth



Source: Company

With an allocation of 0.1 mmscmd for distribution in the PNG segment already exhausted, the company has been sourcing 25,000 scmd of R-LNG from BPCL to distribute to the small and large commercial undertakings. This additional quantity is being sourced at market price, unlike the allocated 2 mmscmd which is procured under Administered Price Mechanism (APM). At the current market price of Rs8.5-9.0 per scm for R-LNG, APM gas works out is cheaper by ~40%. The increase in the share of PNG would increase the procurement cost, thereby putting pressure on margins. Having said that, we believe that this margin contraction would be more than offset by the increase in the volume off take that would be witnessed on account of the customer base expansion. Also, a part of the higher cost can easily be passed on to the customer.

Distribution of PNG customers

	FY04	FY05	FY06	FY07
Large commercial	18	34	47	50
Small commercial	100	140	215	250
Domestic consumers	15,245	25,103	46,727	61,000
Total	**15,363**	**25,277**	**46,989**	**61,300**

Source: Company, Ambit Capital Research

PNG penetration level

PNG potential	nos
Household with LPG connection	3,000,000
PNG customers	61,000
Penetration (%)	**2.0**

Source: Company, Ambit Capital Research

Another point to be noted is that, a deliberate effort has been made by the company to keep the price of PNG at 10% below the cost of LPG, to domestic customers, who account for 10 % of PNG sales. This would provide an incentive to domestic households to convert to PNG. With the current LPG connection in excess of 3 million in the region, and PNG penetration of just 2%, a robust growth in this segment is expected.

We have not factored in any realisation increase from this segment as we do not expect increase in LPG prices in the foreseeable future. However, given the fact that the commercial undertakings have been buying gas at market rates, we believe that increase in the cost of R-LNG would be a pass through, thereby maintaining the margins in this segment.

Subsidy on LPG fuel is to the extent of Rs150 per 14kg cylinder. Given that the subsidy is critically reviewed for its efficacy to real needy class, any reduction in LPG subsidy augers well for PNG business of IGL.

Supply cushion in CNG present, not so for PNG

With a total firm allocation of 2 mmscmd by GAIL, allocation to CNG and PNG is 1.9 mmscmd and 0.1 mmscmd respectively. Given the fact that CNG currently uses 1.2 mmscmd of gas, it leaves a supply cushion of over 45%, to cater to any increase in the demand in this segment. We estimate that distribution of gas in the CNG segment to touch 1.5 mmscmd by FY09E, well within its allocated 1.9 mmscmd, thereby leaving enough room for scaling up during the Commonwealth games in 2010. This leaves IGL in a sweet spot, considering the fact that procurement of gas remains one of the biggest challenges in city gas distribution business.

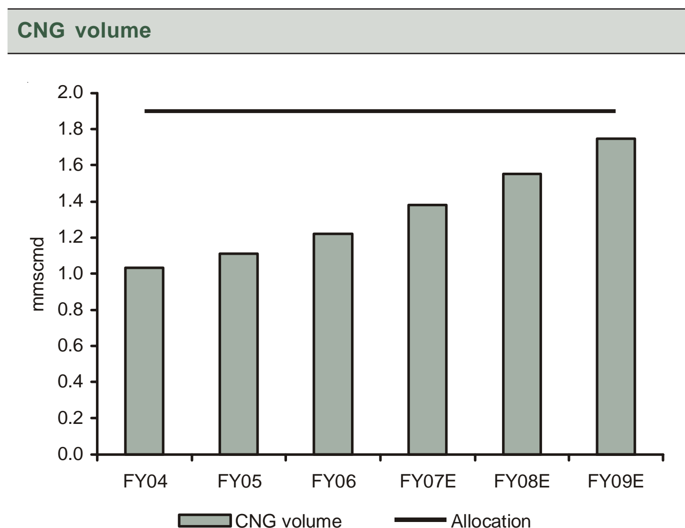
The supply situation in the PNG segment though is a cause of concern. With an allocation of just 0.1 mmscmd, it is currently sourcing the expensive R-LNG from BPCL at 25,000 scmd to meet additional demand from industrial units in and around NCR. With 72 mmscm of PNG gas to be distributed by FY09E, we estimate that the company would have to source 0.1 mmscmd by way of R-LNG. This would inturn put an additional burden on the procurement cost, which we believe would increase by 2.5% CAGR over FY06-FY09E.

PNG distribution (APM vs non-APM)

	FY04	FY05	FY06	FY07E	FY08E	FY09E
Total PNG	10.9	15.2	26.3	36.8	51.5	72.1
Piped Natural gas (allowed upto 0.1mmscmd)	10.9	15.2	26.3	36.5	36.5	36.5
Piped Natural gas (> 0.1mmscmd)	*0.0*	*0.0*	*0.0*	*0.3*	*15.0*	*35.6*

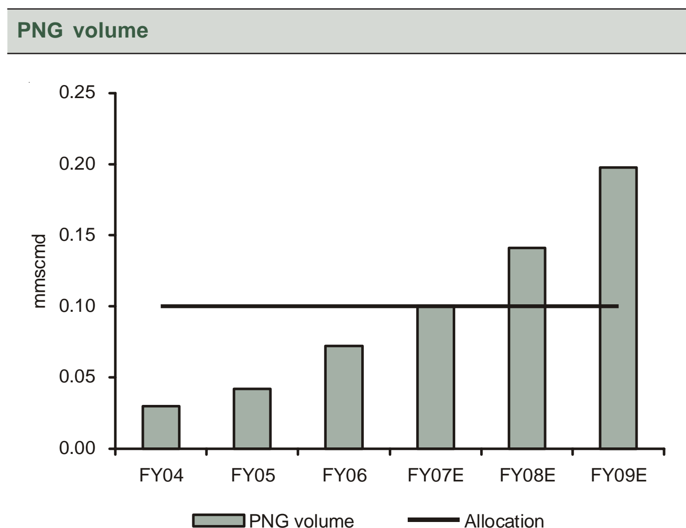
Source: Company, Ambit Capital Research

CNG volume



Source: Company

PNG volume



Source: Company

Regulatory and margin risks exist ...

... but fears seem over played

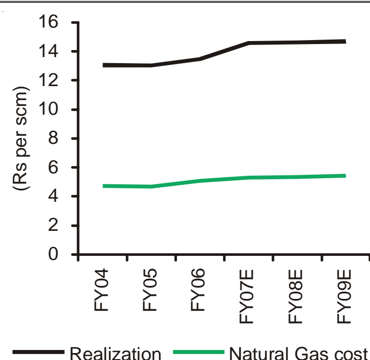
Since IGL procures almost all its gas at an average APM price of Rs5.4 per scm, as against the market price which is the range of Rs8.5-9.0 per scm, which it sells at market rates, it enjoys high operating margins at over 40%. With over 160 mmscmd of indigenous gas to be available by 2010 onwards, a regulator may soon be set-up to monitor the natural gas sector, including city gas distribution One of the concerns on this front is that, with the contract of 2 mmscmd with GAIL coming to an end by 2010, the regulator may remove the allocation of gas to IGL at APM rates. The second concern is that, with the opening up of this sector, competition is likely to erode the market share also.

We, however, are of the view that these concerns, though genuine, have been over played by the market

- Given the fact that the government is very committed to improving the pollution standards in the Capital city, IGL would continue to get its gas at APM rates, though a gradual phasing out cannot be ruled out. Also, we envisage a situation where IGL would be able to renew its old firm commitment at the APM rate, but would be paying market price if any additional quantity is contracted during the renewal. GAIL, as an equity partner in the company stands to benefit as well.
- As far as competition is concerned, we believe that the stretched infrastructure of the city would create a natural entry barrier for new entities to set up shop, as “right-of-way” (i.e. using land to set up gas pipelines) would be difficult to get. Also taking into account the fact that IGL has invested substantially in setting up the infrastructure, it might ask for “market exclusivity” period of 3-5 years, by which time it would be economically unviable for another player to set up its own infrastructure.

Also, understanding of the demand scenario in the NCR suggests that, IGL would source an additional 1mmscmd of gas on the renewal of its contract with GAIL, on account of its expansion into the PNG segment, which is expected to see robust growth in the foreseeable future.

Gross margins to be stable



Source: Company

Worst case scenario reveals a DCF value of Rs87

We estimate IGL’s cost of gas procurement to double if APM gas is no longer available on renewal of its contract with GAIL, thereby squeezing its EBIDTA and net profit margins to 16% and 3% respectively in FY11E.

Given the increase in cost by over 100%, we have factored in 18% and 5% increase in realisation in FY11 and FY12 respectively. We are confident that the company would be able to pass on these costs, as the spread between CNG and diesel, even after the hikes, would still leave CNG at a considerable discount. The net margins, on the back of these increases, would however improve by FY12 to 6.2%.

Scenario analysis: Buying gas at market price - Margin contraction				
	FY09E	FY10E	FY11E	FY12E
(Rs/scm)				
Net Realisation	12.6	12.6	15.0	15.8
Cost	5.4	5.4	10.2	10.2
(Rs/mn)				
Sales	8,071	8,555	10,768	12,015
EBIDTA	3,271	3,467	1,680	2,282
Net profit	1,502	1,592	377	740
EBIDTA margin (%)	40.5	40.5	15.6	19.0
Net profit margin (%)	**18.6**	**18.6**	**3.5**	**6.2**

Source: Ambit Capital Research

Given this scenario, we arrive at a DCF value of **Rs87** per share, a discount of 10% to the current market price, thereby leaving limited downside from the current levels.

Locomotives – the surprise factor

One of the new initiatives of IGL has been the experiment of running of locomotive engines on CNG. The pilot project has been a success and holds promise for future growth. But the management is skeptical regarding its impact on its bottomline as R & D on the project is still going on and the company is yet to hear anything from the government on this issue. Though, at present, there is gas offtake by the Railways, there is no clear indication from the government regarding licenses. The management feels that, though a promising area of growth, revenues from locomotive CNG sale would take sometime to materialise as conversion of those engines would be a constraining factor.

Financial analysis

The revenues of the company, on the back of robust growth in CNG vehicles, have increased from Rs1.2bn in FY02 to Rs5.2bn in FY06, a CAGR of 45%. This has been backed up by a net profit CAGR growth of ~100% over the same period. Though volumes have gone up significantly, EBIDTA margins have consistently improved from 39% in FY02 to 41% in FY06.

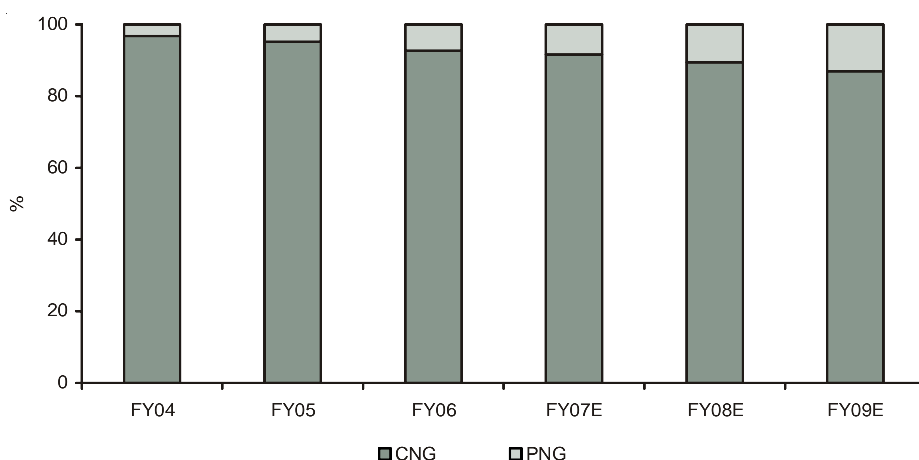
Going forward, we estimate that the revenues of the company would grow at a CAGR of 16% over FY06-FY09E. However, the growth in net profit would be slightly subdued at 12%, mainly on account of increase in the procurement cost of natural gas and higher depreciation costs.

Growth in revenues to be driven by CNG; PNG making its presence felt

From the current 148 CNG stations, the company expects to add another 3 stations over the next financial years. Coupled with a 20% addition in the CNG vehicle fleet in the current financial year, we expect the CNG volumes to increase from 419 mmscm to 566 mmscm, growth of 10.5% CAGR over FY06-FY09E. Revenues would inturn grow from Rs5.2bn in FY06 to Rs8.1bn in FY09, CAGR of 16% over the same period.

Historically CNG has been the main stay of the company, with PNG forming an insignificant part of the volume and revenue mix. However, with huge latent commercial / industrial demand around the NCR, the company has been laying an emphasis on the PNG segment. We anticipate that the share of PNG would increase from 7% in FY06 to 13% by FY09E, driven primarily by the expected addition of ~80,000 new domestic/commercial connections over FY06-FY09E, a CAGR of 40%.

Volume mix

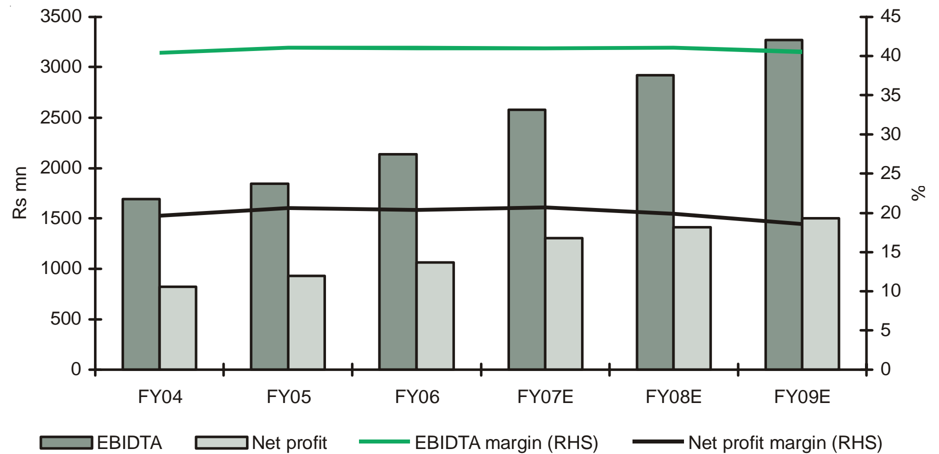


Source: Company, Ambit Capital Research

Margins to face slight pressure on account of increased R-LNG purchases

With the increased purchase of R-LNG gas, current price of which is around $8-$9 mmbtu, we estimate that the blended cost of natural gas for the company would increase from Rs5,060 per '000 scm to Rs5,440 per '000 scm, a CAGR of 2.5% over FY06-FY09E. This would inturn compress the EBIDTA margins by 50 basis points (bps), from 41% in FY06 to 40.5% in FY09E.

Stable margins



Source: Company, Ambit Capital Research

Aggressive Capex plans – creating value for the future

The company has been quite aggressive in its capex plans, investing Rs 4400 mn since FY02. Keeping in mind the geographical expansion the company plans to invest Rs 4bn over FY06-FY09E. This amount is to be invested on its expansion into new geographical areas like Greater Noida, Ghaziabad etc, and also to strengthen its CNG and PNG infrastructure in Delhi.

Capex plans

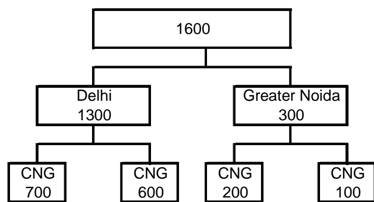
	Amount (Rs mn)
FY07E	400
FY08E	1600
FY09E	2000

Source: Company, Ambit Capital Research

Return ratios under pressure

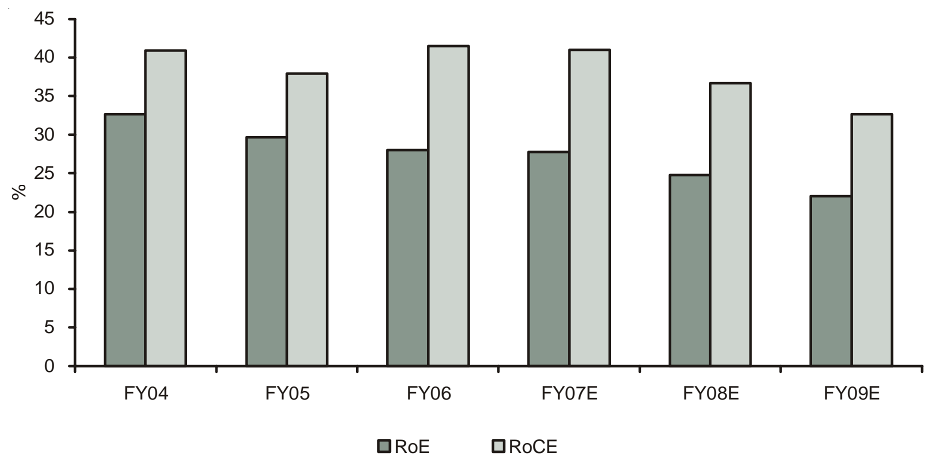
On account of the company's aggressive capex plans of over Rs4bn, the earnings of the company would be under pressure in FY09E, driven primarily by increase in the depreciation costs. Coupled with net margin contraction over FY06-FY09E by 100 bps, the RoE and RoCE would come down by 600 and 900 bps respectively. However, with the benefits of the capex bearing fruit by FY10 onwards, we expect the return ratios to stabilise at the FY09E levels.

Capex - FY08 (Rs mn)



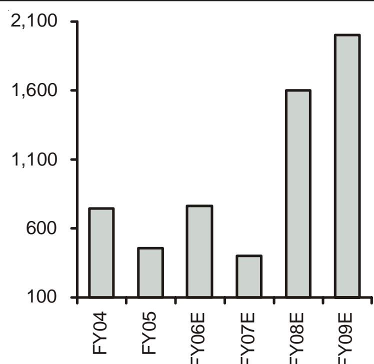
Source: Company

RoE & RoCE - getting hit due to high capex plans



Source: Company, Ambit Capital Research

Gross block progression (Rs mn)



Source: Company

Valuation

We believe that the recent fall in the stock price of ~20% over the last year, is primarily due to concerns relating to margins risk and growth prospects, both of which we think has been over played. The NCR is set to see a huge amount of tourist flows which would increase the demand for CNG powered transportation during the commonwealth games in 2010. Additionally, with the geographical expansion that it is undertaking, we believe that its benefits would start accruing in the next couple of years

At the current market price of Rs99, the stock is currently trading at a multiple of 9.6x P/E and 4.2x EV/EBIDTA FY08E earning.

We initiate coverage on the stock with a **"BUY"** recommendation and a 12-month target price of Rs127.

Valuation summary

Valuation parameters	FY05	FY06	FY07E	FY08E	FY09E
EPS (Rs)	6.6	7.6	9.3	10.1	10.7
Diluted EPS (Rs)	6.6	7.6	9.3	10.1	10.7
CEPS (Rs)	10.1	11.6	14.0	16.0	18.2
P/E (x)	14.7	12.8	10.5	9.6	9.1
P/CEPS (Rs)	9.7	8.4	7.0	6.1	5.3
EV/ EBIDTA (x)	7.3	6.1	5.3	4.2	3.7
Dividend per share (Rs)	2.0	2.5	2.5	2.5	2.5
Dividend yield (%)	2.1	2.6	2.6	2.6	2.6

Source: Company, Ambit Capital Research estimates

P/E band

Source: Capitaline, Ambit Capital Research

EV/EBIDTA

Source: Capitaline, Ambit Capital Research

DCF

Given the utility nature of the business and strong free cash flows, we believe that DCF best captures value of the company. Our DCF valuation is based on the following assumptions:

- EBIT growth of the company is assumed at 6% for FY10-FY12
- Terminal growth of 2%, considering the fact that its utility business, restricted to a few location.
- WACC of 12%

Based on our DCF valuation, we arrive at a fair value of Rs135, which, we believe, the stock will start factoring over the next 12-month period.

DCF calculation

	2007E	2008E	2009E	2010E
EBIT*(1-t)	1,270	1,379	1,469	1,557
Depreciation	652	827	1,046	0
+ / - W.C Changes	78	16	30	0
Capex	(400)	(1,600)	(2,000)	0
Free cash flow	1,600	623	544	1,557
Discounted value	1,600	550	424	1,070

Source: Company, Ambit Capital Research estimates

Calculations & assumptions

DCF Calculations		Assumptions (%)	
Explicit period	FY07-09	Risk free rate	8.0
Transition phase	FY10-12	Risk premium	6.0
Terminal phase	Beyond FY13	Adjusted beta	0.9
Disc value till FY12	55,808	Cost of equity (%)	13.3
Terminal value	84,390	Cost of debt (%)	0.0
Total value	140,198	WACC	13.3
Net debt/ (cash)	(17,153)	Explicit period growth rate (%)	12.3
Total shareholders' value	157,351	Transition period growth rate (%)	6.0
Number of shares, mn	1400.0	Terminal growth rate (%)	2.0
Value per share, Rs	112		
One year forward value, Rs	127		
Upside (%)	31.0		

Source: Company, Ambit Capital Research estimates

Sensitivity analysis

Transition period (%)	Terminal growth 2	3	4
5	125.0	132.1	140.8
6	127.4	134.7	143.7
8	132.2	140.0	149.4

Source: Company, Ambit Capital Research estimates

Risks & Concerns

One of the key risks, in our opinion is the steps the regulator might take in terms of pricing, which could prove detrimental to the growth of the company. Opaqueness on future pricing and competition, in our view, dominates these concerns.

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