

Oil&Gas and
Petrochemicals

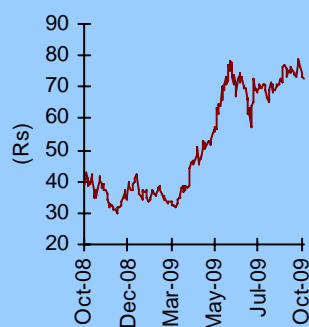
Target price Rs87

Shareholding pattern

	Dec '08	Mar '09	Jun '09
Promoters	50.0	50.0	50.0
Institutional investors	11.3	11.4	12.1
MFs and UTI	1.4	1.5	1.6
FIs, Banks, Insurance Cos.	0.5	0.5	0.5
FIIIs	9.5	9.4	10.0
Others	38.7	38.6	37.9

Source: NSE

Price chart



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INDIA

Petronet LNG

BUY

Steady going

Rs73

Reason for report: Initiating coverage

With domestic gas markets facing scarcity, we expect strong spot volumes for Petronet LNG (PLL) to support its earnings. Also, management guidance of ~10% cut in regasification margins (I-Sec: 25%) could potentially lead to 31-33% higher earnings versus our estimates. Though the Street is concerned on long-term viability of LNG provided sufficient supply of cheaper domestic gas, the offtake risk for PLL's long-term LNG supplies lies with GAIL, Indian Oil Corporation (IOC) and Bharat Petroleum (BPCL). Moreover, we believe domestic markets would remain gas deficient, at least till '14. Though regasification margins may come under the purview of the regulator, our recent interaction with ministry officials suggest that in the short term, PLL can set its own regasification margins. We initiate coverage on PLL with BUY and fair value of Rs87/share.

- **Earnings estimates conservative, PLL could surprise.** Conservatively, we have assumed a 25% cut in regasification margins from CY10. However, if the management cuts margins only 10% as per the guidance, FY11E-12E earnings would be 31-33% higher vis-à-vis our estimates. This could be a significant trigger for the stock in the short term.
- **Short-term spot volumes to remain robust.** Due to gas deficient domestic market and soft global LNG prices, spot LNG volumes would remain high over FY10-12, leading to additional marketing margins. However, by '17, there will hardly be any spot LNG offtakers as additional domestic supplies from KG Basin and Mahanadi Basin would be sufficient to take care of domestic supplies.
- **Regulatory risk on regasification margins.** If regasification margins for Dahej terminal are regulated at RoCE of 16%, PLL would be valued at Rs70/share, which implies a 5% downside from the current levels. However, as of now, there is no such plan by the regulator and this could imply significant short-term upside to PLL's earnings, valuations.
- **Blue sky valuation of Rs104-124/share.** If regasification margins are not regulated, and PLL just undertakes a 10% cut in margins in CY10, despite no spot volumes beyond '17, the stock would be valued at Rs124/share. Even with a 25% cut, fair value would be significantly higher at Rs104/share.

Market Cap	Rs54.8bn/US\$1.2bn
Reuters/Bloomberg	PLNG.BO/PLNG IN
Shares Outstanding (mn)	750
52-week Range (Rs)	79/30
Free Float (%)	50.0
FII (%)	10.0
Daily Volume (US\$/'000)	7,300
Absolute Return 3m (%)	15.6
Absolute Return 12m (%)	91.0
Sensex Return 3m (%)	22.4
Sensex Return 12m (%)	60.0

Year to March	2009	2010E	2011E	2012E
Revenue (Rs mn)	84,287	116,599	150,470	168,105
Net Income (Rs mn)	5,184	5,814	5,122	4,763
EPS (Rs)	6.9	7.8	6.8	6.4
% Chg YoY	9.2	12.1	(11.9)	(7.0)
P/E (x)	10.6	9.4	10.7	11.5
CEPS (Rs)	8.3	9.7	9.3	10.2
EV/E (x)	7.6	6.8	7.8	8.1
Dividend Yield (%)	2.4	2.7	2.3	2.2
RoCE (%)	17.4	15.7	11.2	8.8
RoE (%)	28.8	26.6	19.9	16.3

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Investment rationale

Bull-case fair value of Rs104/share

Under bull-case, we have assumed a 25% cut in Dahej regasification margin from CY10E due to higher capacity of the terminal. We continue to build in a 5% YoY increase thereafter, in line with the current trend. The implied RoCE over the remaining life of Dahej terminal under our bull-case is 23%. However, if the management stays true to its guidance and only cuts regasification margins 10%, fair value would still be higher at Rs124/share.

Bear-case fair value of Rs70/share

Under bear-case, in order to factor in the possibility of regulations in regasification margins, we assume further correction in CY13 Dahej terminal regasification so that the implied RoCE for the remaining life of terminal would be 16%. Under such a scenario, we value the stock at Rs70/share, a marginal 5% downside from current levels.

Fair value at Rs87/share implies 19% upside

We value PLL at Rs87/share using an average of our bear-case and bull-case valuations of Rs104/share and Rs70/share respectively. This implies 19% upside to current valuations.

Post '17, we have not assumed any marketing margins for the company due to overabundance of domestic gas from KG fields by that time.

Domestic gas demand to post 11% CAGR over FY10E-14E

Going forward, from FY10, increased domestic gas supplies would encourage many industries (power, fertilisers, captive power) to shift from costly naphtha/fuel oil to cheaper natural gas. Also, higher gas supplies would facilitate new CGD investments and improve plant load factor (PLF) for existing gas-based power plants. Considering possible gas supplies and accounting for the upcoming/announced projects in user industries along with existing capacities, we expect domestic gas supply demand scenario to still be gas deficit in the next five years on the back of significant demand growth in power and CGD at 12.6% and 22.5% respectively over FY10E-14E, leading to continued dependence on imported LNG (Table 3).

Spot volumes to peak in short term...

Given the under-supplied domestic gas market and soft global LNG prices, we expect PLL's spot volumes (providing marketing margins to PLL) to peak in the next two years, supporting superior earnings growth in the next two years.

...but PLL to approach nil spot volumes by '17

However, on the back of new finds in KG-Basin, Mahanadi-Basin and CBM field development, we expect domestic supplies to meet demand; we expect significant difficulties for LNG importers post '17. Though for PLL, long-term contracts are

guaranteed by offtakers – GAIL, IOC and BPCL – we believe there might not be any takers for spot volumes, implying insignificant marketing margins beyond '17. We build in nil spot volumes post '17E in our estimates.

Regulatory risk on regasification margins is the key...

Though regasification margin for imported LNG is not regulated at present, we believe in the long term, margins may come under the purview of the regulator, which might significantly affect PLL's financials. Earlier, the Tariff Commission had studied the regasification margins for PLL and had made recommendations to the Government assuming a long-term RoCE of 12%. However, PLL was allowed to calculate its own tariffs based on 16% RoCE. With the capacity now increasing to 10mntpa and higher capacity utilisation, to achieve a similar RoCE, the tariffs should come down 40%.

...though it may not be material in the next two years

However, as per our latest interaction with ministry officials in October, at present there is no proposal to regulate regasification margins and hence, PLL may be given a free hand to set its regasification margins. But, considering the regulated RoCE requirement of 12-14% on gas transmission and distribution companies, we cannot rule out the possibility of similar regulations on regasification margins. The PLL management has indicated a 10% correction in the regasification margins from CY10, which we believe is lower. We factor in a 25% cut in regasification margins.

Expansion plans on track

PLL has already completed the Dahej terminal capacity expansion from 6.5mntpa to 11.5mntpa and is in the process of implementing new 5mntpa terminal in Kochi, which is expected to be commissioned by end-FY12.

Global liquefaction capacity addition to allow new long-term contract

In the next 5-6 years, global LNG liquefaction capacity is expected to increase 96% to 344mntpa. It offers a good opportunity for PLL to enter into new long-term contracts for its recently expended Dahej terminal (to 10mntpa from 5mntpa) and the upcoming Kochi terminal.

PLL – Overview

Company background

PLL was formed by the Indian Government in April 1998 as India's premier infrastructure company in the hydrocarbon sector to meet the increasing demand of natural gas in the country by importing LNG. It is a joint venture (JV) among GAIL, ONGC, IOC and BPCL. Each company has an equity stake of 12.5%. PLL has commissioned the nation's first LNG regasification terminal in April '04 with 5mmtpa initial LNG regasification capacity that has been recently expanded to 10mmtpa.

The company plans to set up an LNG regasification terminal at Kochi (Kerala) for 2.5mmtpa capacity with provision of expansion up to 5mmtpa. The Kochi Port Trust has allocated 40 hectares land at Puthu Vypeen island for the development of LNG terminal.

The company is setting up a solid cargo port in Dahej, for which Gujarat Maritime Board has given PLL the right to develop a port.

Business model

PLL has an agreement for marketing regasified LNG (R-LNG) from Dahej terminal with GAIL (60%), IOC (30%) and BPCL (10%). It signed a long-term sale and purchase agreement (SPA) with RasGas, Qatar in July 1999 to import 7.5mmtpa LNG for 25 years for the Dahej and Kochi LNG terminals. As per contract, supply of 5mmtpa LNG commenced in '04 and the supply of the balance 2.5mmtpa LNG would start in the Q4CY09 to expanded the Dahej capacity. It is receiving LNG at Dahej through two LNG vessels, *Disha* and *Raahi*, which were taken under a Time Charter Agreement from consortium led by Mitusi OSK Lines. The third LNG vessel is due to be delivered in Q4CY09. In addition to the above, LNG is also being sourced under short-term contract and from spot market by PLL.

PLL enters into back-to-back long-term purchase agreement (with LNG exporters) and sales agreement (with regasified natural gas offtakers). The sale of imported LNG by PLL is tied up for 25 years, with LNG exporters through gas sale and purchase agreement (GSPA) on take-or-pay basis. The ex-terminal natural gas cost would consist of LNG cost on FOB basis at prevailing exchange rate, taxes/duties, shipping cost, insurance charges and regasification margins.

PLL has simultaneously entered into the take-or-pay agreement with the regasified natural offtakers, thereby mitigating the risk if natural gas offtakers default on natural gas offtake and PLL needs to pay to the LNG exporter.

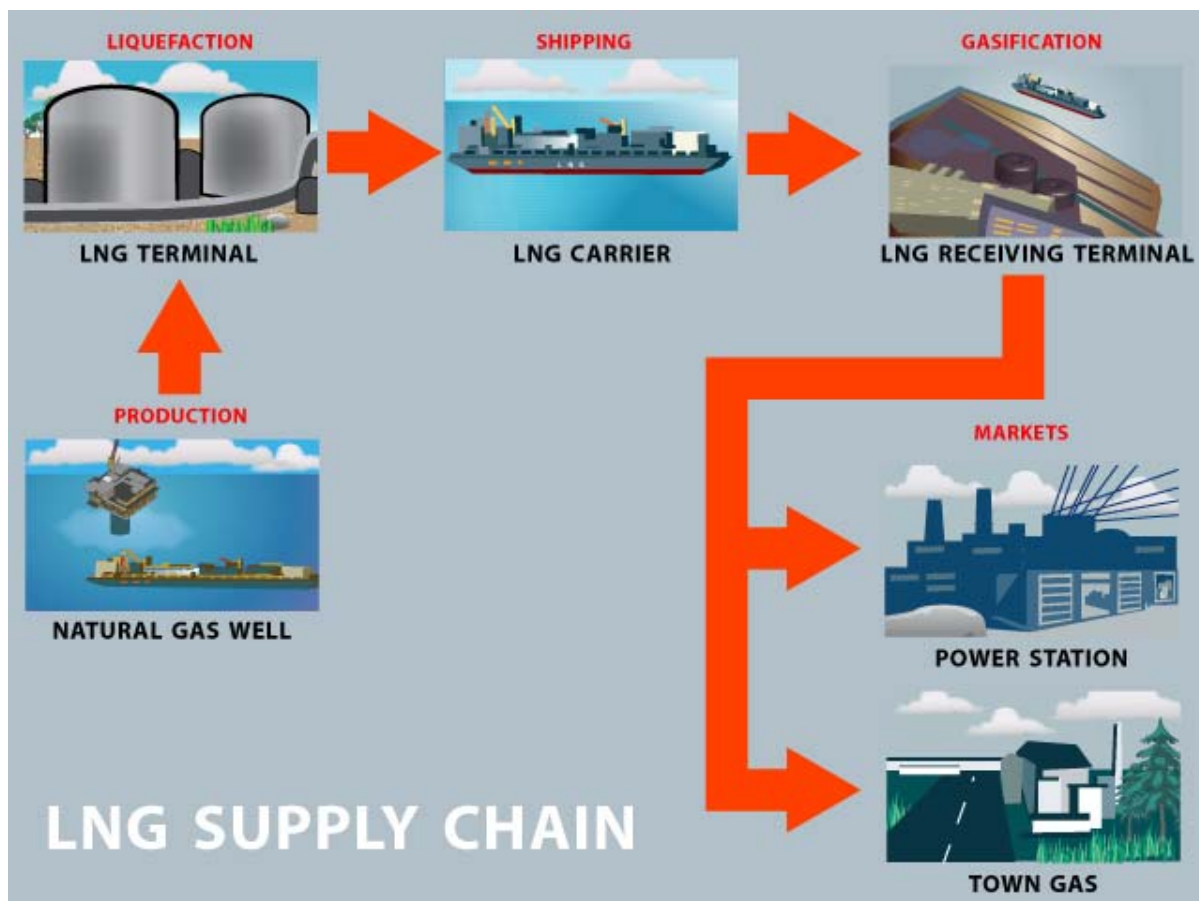
LNG regasification process

Liquefied natural gas or LNG is a natural gas (predominantly methane, CH₄) that has been converted temporarily to liquid form for ease of storage or transport. LNG takes up about 1/600th the volume of natural gas in gaseous state. The reduction in volume makes it much more cost-efficient to transport over long distances, where pipelines do

not exist. Where moving natural gas by pipelines is not possible or economical, it can be transported by specially designed cryogenic sea vessels (LNG carriers) or cryogenic road tankers.

LNG is unloaded and regasified at the regasification terminal using sea water as the medium of heating to gaseous state before being supplied to end users by gas pipelines.

Chart 1: LNG supply chain



Source: Aspen Aerogels

Regasified Dahej LNG plant – Operations and description

The project was initially designed for R-LNG send-out capacity of 5mmtpa, with further expansion to 10mmtpa in FY10E. The project consists of three components: i) transportation of LNG, ii) marine works & unloading facilities and iii) LNG receiving & regasification facility.

Transportation. PLL has hired two ships to bring LNG from RasGas. PLL is using specially designed LNG carriers, which can transport ~138,000scm LNG, of which 136,000scm can be unloaded. The LNG is stored in a special containment system within the inner hull where it is kept at atmospheric pressure and (-) 160°C.

Table 1: Estimated break-up of timeline for a round trip of LNG vessel

	Duration (hours)	Duration (days)
Loading at Qatar	24	1.0
Qatar to Dahej trip *	69	2.9
Unloading at Dahej	24	1.0
Dahej to Qatar trip *	69	2.9
Total time required for round trip	186	7.8

* 1,350 nautical miles distance at speed of 19.5 nautical miles per hour

Source: I-Sec Research

Marine works and unloading facilities consist of an all-weather deep-sea single berth jetty used for berthing LNG tankers, while unloading LNG. The unloading facility includes three LNG unloading arms, a vapour return arm and two unloading lines with an unloading capacity of 10,000scm/hour.

LNG receiving and regasification facility consists of four LNG storage tanks of 160,000scm capacity each, of which 148,000scm LNG can be stored. These tanks are used to store LNG after unloading from the tankers prior to regasification. The storage tanks have a dome-shaped roof and are double-walled with inner pressure vessel made from nickel steel alloys exhibiting high strength characteristics under cryogenic temperatures. Many inches of insulation in a vacuum environment between the outer jacket and the inner pressure vessel protect the tank from ambient heat. The outer shell is made of carbon steel, which is not normally exposed to cryogenic temperatures. Storage tanks are installed above the ground level. LNG is stored as a boiling cryogen. Each of these tanks has the facility for recondensation of the boil-off gas. This system is used to recover LNG lost due to vaporisation in the LNG storage tanks. Shell and Tube (STV) and Submerged Combustion Vaporizer (SCV) are used to regasify the LNG and deliver R-LNG to the offtakers at the delivery point

PLL – Expansion plans

Dahej regasification terminal

PLL has spent US\$360mn for the Dahej capacity expansion, with total debt of US\$275mn. The company could potentially increase the capacity to 20mntpa through additional capex of US\$700-800mn.

Kochi regasification terminal

PLL plans to spend US\$850mn for the 2.5mntpa Kochi terminal through a total debt of US\$610mn for the project. The company plans to issue FCCBs worth US\$100mn to a strategic partner for partially funding the equity portion. Remaining US\$140mn would be generated through internal accruals. The company plans to further increase capacity to 5mntpa provided it gets assured long-term LNG supplies and corresponding local demand.

The terminal consists of two storage tanks, a vaporisation system and utilities and marine facilities. Cochin Port Trust (CoPT) has allocated 32 hectare land for the LNG terminal at the Puthuvypeen island in the outer Cochin harbour, which is in the Puthuvypeen SEZ. The concession agreement and land lease agreement for usage of water front and land respectively has been executed with Cochin Port Trust on March 12, '09. The EPC contract for construction of two LNG Storage tanks, each of 188,000scm (gross capacity) is being carried out by M/s IHI Corporation, Japan. The terminal is expected to be mechanically commissioned by December 31, '11.

PLL has reached an agreement with subsidiaries of Exxon Mobil Corporation on the intent to supply from Gorgon, Australia, ~1.50mmtpa of LNG, with the potential for additional volumes, for 20 years for the Kochi LNG terminal. The company is in talks with various LNG suppliers for sourcing additional LNG required for the Kochi project.

Two power plants proposed near Dahej & Kochi terminals

Reportedly, PLL is planning to diversify by setting up two power plants of 1,200MW capacity each, near its Dahej and Kochi terminal facilities. The capex for the projects is estimated at Rs70bn, which would be financed by debt:equity of 70:30. Reportedly, the PLL Board will give approvals for buying land. The company is expected to project feasibility analysis till January '10 and then start raising capital by Q3FY11, with project commissioning target at FY13 end. At present, we have not factored in the proposed power plants in our fair value. We are awaiting further clarity post the feasibility studies.

Solid cargo port in Dahej

PLL in JV with Adani Petronet (Dahej) Port Private is implementing a solid cargo port in Dahej, in which PLL has 26% stake. The project is scheduled for completion by June '10. The solid cargo port would have facilities to import/export bulk products such as coal, steel and fertiliser. PLL needs to invest Rs900mn in this project, of which Rs321mn has already been invested till FY09 and the rest will be done in FY10.

We have incorporated only Rs900mn equity investment for solid cargo port in our fair value.

Indian gas market – LNG to plug gas deficit

The Indian market is set to see a three-fold increase in domestic gas supplies from KG-D6, NEC-25, and Gujarat State Petronet Corporation's (GSPC) and Oil and Natural Gas Corporation's (ONGC) deepwater and CBM blocks (Table 2) as well as from new LNG facilities (Dabhol, Mangalore, Kochi, Dahej expansion). Numerous domestic offshore blocks in KG (D3, D4 & D9) and Mahanadi (D4) Basins would offer further upside to domestic gas production in future.

Despite the sharp jump in domestic gas supplies, they would still lag demand on the back of significant demand growth in power & city gas distribution at 12.6% & 22.5% through FY10E-14E respectively. Subsequently, dependence on imported LNG will continue to fulfill the domestic gas supply deficit.

Supply driven by domestic discoveries

Domestic gas supplies are expected to grow at 11.8% CAGR through FY10E-14E to 224mmscmd from 144mmscmd, which would satisfy 64-76% of the domestic gas demand during that period. But still, domestic gas supplies would not be able to match with the growing demand, leading to continued dependency on imported LNG to plug the supply-demand gap.

Table 2: Projected domestic gas supply mix

(mmscmd)

Natural Gas - Supply break-up of new finds	FY10	FY11	FY12	FY13	FY14
RIL-KG basin, D6	60	95	95	95	95
RIL-KG basin, D6, new discoveries (indicated by company)			10	10	10
RIL-KG basin, MA		6	9	9	9
RIL NEC 25			4	6.6	6.6
GSPC-KG basin			5.7	17.1	17.1
CBM	2.5	4	5	6	6
Total projected new domestic gas supplies, mmscmd (A)	62.5	105.0	128.7	143.7	143.7
ONGC	55.3	55.9	56.9	55.8	54.6
Pvt / JV (as per DGH)	25.7	25.9	26.4	25.9	25.4
Total existing domestic gas supplies, mmscmd (B)	81.0	81.8	83.3	81.6	80.0
Total domestic gas supplies, mmscmd - (A) + (B)	143.5	186.8	212.0	225.4	223.7
Projected re-gasified LNG capacity					
Dahej (mntpa)	7.5	10	10	10	10
Hazira (mntpa)	3.6	3.6	3.6	3.6	3.6
Dabhol (mntpa)	0.5	2.0	2.0	5.0	5.0
Mundra				6.5	7.5
Kochi (mntpa)	0	0	0.0	2.5	5.0
Total LNG supply (mntpa)	11.6	15.6	15.6	27.6	31.1
Total RLNG capacity, mmscmd - (C)	43.8	58.9	58.9	104.3	117.5
Total gas availability and RLNG capacity - (A)+(B)+(C)	187.3	245.8	271.0	329.7	341.2

Source: Industry, I-Sec Research

Upcoming eastern offshore gas to drive domestic gas supply

Demand driven by power and CGD

Going forward, we expect increased domestic gas supplies to encourage many industries (power, fertiliser, captive power) to shift from costly naphtha/fuel oil to cheaper natural gas. Also, higher gas supplies would facilitate new CGD investments and improvement in PLF of existing gas-based power plants. Considering possible gas supplies and accounting for upcoming/announced projects in user industries along with existing capacities, we expect domestic gas supply demand scenario to still be gas deficit owing to significant demand growth in power and CGD at 12.6% and 22.5% CAGR respectively over FY10E-14E.

Table 3: Projected domestic natural gas supply-demand

(mmscmd)

	FY10E	FY11E	FY12E	FY13E	FY14E	CAGR (%)
Demand						
Power	76.0	84.3	87.6	115.6	122.4	12.6
Fertiliser	56.2	79.4	79.4	79.4	79.4	9.0
City gas	13.8	15.5	18.9	24.1	31.0	22.5
Industrial/captive power	17.2	18.6	20.0	21.5	23.2	7.7
Petchem/refineries/internal pipelines use	55.0	61.5	65.5	73.1	73.1	7.3
Sponge iron/ steel	5.8	8.3	8.3	8.3	8.3	9.6
Total gas demand	224.0	267.5	279.6	321.9	337.4	10.8
Supply						
Existing fields	81.0	81.8	83.3	81.6	80.0	(0.3)
New gas discoveries	62.5	105.0	128.7	143.7	143.7	23.1
LNG supplies under LT contract *	23.6	28.3	28.3	34.0	34.0	9.5
Total committed/available supplies	167.1	215.2	240.3	259.4	257.8	11.4
Gas Deficit/(Surplus)	56.9	52.3	39.3	62.6	79.6	

* Only PLL's current volumes under long-term contract are considered

Source: I-Sec Research, Industry, Infraline

CGD to drive incremental gas demand due to positive gas allocation policy

CGD is expected to drive incremental gas demand through 22.5% CAGR over FY10E-14E, resulting in CGD contribution to total demand jumping 1.5x from 6.2% in FY10E to 9.2% in FY14E. We expect 5-8 cities per year to be added under CGD and assume that 2-3 years will be required in each city for 1mmscmd demand ramp-up.

Power and fertilisers to remain key gas demand consumers

In the past, power and fertiliser sectors have been key gas consumers and have accounted for ~65% of total gas demand. These sectors would continue to dominate natural gas demand through ~60% of gas demand share. The combined demand from power and fertiliser is expected to grow at the same rate as total demand. Estimated demand from these sectors is based on existing capacities, additional fuel switching capacity and upcoming new projects.

City gas to drive incremental gas demand at 22.5% CAGR over FY10E-14E

Spot LNG demand would still be robust for next five years

Spot LNG supplies will continue to meet demand. In FY10, additional LNG demand (or gas supply deficit) is ~3x uncontracted LNG capacity. Additional LNG demand would be balanced with uncontracted LNG supply by FY13 due to commissioning of Dabhol, Mundra & Kochi regasification terminals, implying that spot LNG demand would still be maintained despite significant domestic gas supplies growth and tripling of regasification capacities in the next five years.

Table 4: Additional LNG demand trend

(mmscmd)

	FY10E	FY11E	FY12E	FY13E	FY14E
Total gas demand	224.0	267.5	279.6	321.9	337.4
Less: Domestic gas supplies	143.5	186.8	212.0	225.4	223.7
Less: Contracted LNG	23.6	28.3	28.3	34.0	34.0
Gas deficit (or demand for additional LNG)	56.9	52.3	39.3	62.6	79.6
<i>Additional LNG demand as % of total gas demand</i>	<i>25.4</i>	<i>19.6</i>	<i>14.0</i>	<i>19.4</i>	<i>23.6</i>
Uncontracted LNG capacity	20.2	30.6	30.6	70.3	83.5
<i>Additional LNG demand as % of uncontracted LNG capacity</i>	<i>281.5</i>	<i>171.0</i>	<i>128.3</i>	<i>89.0</i>	<i>95.3</i>

Source: I-Sec Research

Global LNG industry

Short-term supplies abundant

Over the next six years, liquification capacities are expected to double providing supplies to gas deficient nations. PLL would be a key beneficiary with increased supplies as the company would be able to enter into short-term deals to bring gas to the deficient domestic market. LNG liquefaction capacity of 47.9mmtpa is expected to be on stream in the next 12-15 months (31.2mmtpa from Qatar), which would be more than sufficient to fulfil incremental LNG demand globally (Table 5 & 6).

Table 5: Upcoming LNG liquefaction terminals globally in next 6-7 years

LNG liquefaction facilities	Country	Start-up year	Capacity (mmtpa)
MLNG (Dua) Debottlenecking	Malaysia	2009	1.2
Qatargas II - Train 5	Qatar	2009	7.8
RasGas III - Train 7	Qatar	2009	7.8
Balhaf	Yemen	2009	6.7
Peru LNG	Peru	2010	4.5
Qatargas IV - Train 1	Qatar	2010	7.8
Pluto LNG	Australia	2010	4.3
Qatargas III - Train 6	Qatar	2010	7.8
Skikda Rebuild	Algeria	2011	4.7
Iran LNG	Iran	2011	8
Qatargas III - Train 7	Qatar	2011	7.8
Brass LNG	Nigeria	2011	10
PARS LNG	Iran	2012	8.5
Donggi Senoro LNG Project	Indonesia	2012	2
Nigeria LNG Train 7	Nigeria	2012	8
Sulawesi Island	Indonesia	2012	2
Gassi Touil	Algeria	2012	3.8
Angola LNG	Angola	2012	5
Marisal Sucre - Train 1	Venezuela	2013	4.7
Gorgon	Australia	2014	15
Marisal Sucre - Train 2	Venezuela	2014	4.7
Olokola - Train 1	Nigeria	2014	5.5
Papua New Guinea LNG	Papua New Guinea	2014	4.5
Shtokman LNG	Russia	2014	15
Gladstone (coal seam gas)	Australia	2014	3.5
Ichthys /Darwin LNG	Australia	2015 or later	6
Browse LNG	Australia	2015 or later	10

Source: Projects website, media, I-Sec Research

Table 6: Trends in global LNG liquefaction capacities

Year	LNG liquefaction capacities (mmtpa)	Total global LNG liquefaction capacity (mmtpa)
Current global liquefaction capacity		183.7
New capacities in '09	23.5	207.2
New capacities in '10	24.4	231.6
New capacities in '11	30.5	262.1
New capacities in '12	29.3	291.4
New capacities in '13	4.7	296.1
New capacities in '14	48.2	344.3
New capacities in '15 or later	16.0	360.3

Source: Projects website, media, I-Sec Research

Spot LNG prices to be subdued

Due to increased supplies and subdued demand on slowdown in the global economy, long-term contracts are uncommon (also on high price expectations by LNG sellers). But this has led to oversupply in spot markets, significantly straining spot prices. This is a good opportunity for companies such as PLL to benefit from lower prices.

Global LNG liquefaction capacity expected to double in next 6-7 years, leading to surplus LNG liquefaction capacity in medium term

Financials

Regulations, the key concern

Initially in '04, the Government had asked the Tariff Commission to look at the regasification margins for the Dahej terminal and the commission had recommended tariffs providing 12% IRR for the company.

The commission's study was further provided to the Inter-Ministerial group (IMG) for further study and in the interim report, IMG recommended an initial tariff of Rs23.7/mnbtu, in line with Petronet regasification margins of Rs23.85/mnbtu. However, the panel recommended that 5% annual increase was unwarranted and the hike was to be linked to the following elements:

- For every 10 points change in wholesale price index-all commodities (WPI) (base 1993-94=100) from 180.3 of March '04, the regasification charge will vary Rs0.18/mnbtu.
- For every one rupee increase/decrease in rupee-dollar exchange rate from Rs44.75/US\$, the regasification charge will increase/decrease Rs0.11/mnbtu
- For every one US dollar increase/decrease in FOB price of LNG from base price of US\$2.53/mnbtu, the regasification charge will increase/decrease Rs1.37/mnbtu.
- For any increase/decrease in interest rate from 9% per annum (compounded monthly) by 25bps, the regasification charge will increase/decrease Rs0.08/mnbtu.
- For every 1% change in the effective rate of corporate tax rate of 36.6% (of assessment year '04-05 basic rate 35%, surcharge 2.5% and education cess 2%), the regasification charge will change Rs0.11/mnbtu.

However, in the final report of the panel, the Government approved PLL's charges of Rs23.85/mnbtu and 5% annual increase. As per our calculations, this would have offered 16% RoCE to the company over the life of the terminal. However, the IMG had also made a recommendation that in case the company was to expand the capacity to 10mntpa as per the plans, the tariffs would have to be reviewed after a period of 3-4 years.

We believe the tariff review is long overdue and our internal calculations suggest that the regulators should reduce the tariff 40% in one go in CY10E to provide a similar 16% RoCE to the company. Otherwise, the regulator may reduce the tariffs in two phases – 25% in CY10E followed by another 38% in CY13E.

We recently met officials in the Ministry of Petroleum and Natural Gas (MoPNG) and believe there is, as of now, no step to consider PLL's regasification margins. However, in the long term, we believe such a review is not only important but imminent. We expect a steep correction in PLL's tariffs, which would be a negative trigger for the stock.

However, the stock's subdued valuations already account for the risk and even under our assumption of a sharp cut in regasification margins, we believe the marketing margins, especially over the next 3-4years, would support earnings for the company.

LNG sourcing

We expect PLL to be able to maintain 85% & 75% capacity utilisation for Dahej & Kochi terminals on the back of spot purchases and additional long-term contracts. At present, the company has 7.5mmtpa long-term contract with RasGas (Qatar) for Dahej terminal (of which, 2.5mmtpa would start from Q3FY10) and 1.5mmtpa long-term contract with Gorgon (Australia) for the upcoming Kochi terminal.

Operating assumptions

Dahej terminal

In our bull-case, we have assumed 25% YoY correction in CY10E regasification margins on the back of expected 25% discount in regasification margins owing to higher sales volumes with expanded Dahej capacity. Going forward, we expect 5% YoY growth in regasification, effective at the end of each calendar year over the remaining life of the Dahej terminal at 85% capacity utilisation.

Table 7: Dahej – Operating assumptions

	FY09	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E
Volumes (mmtpa)										
Terminal capacity	10.4	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
LNG sold	6.2	8.2	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
Capacity utilisation (%)	60	72	85	85	85	85	85	85	85	85
Margins (Rs/mmbtu)										
Regasification margins	29.2	28.4	23.0	24.1	25.3	26.6	27.9	29.3	30.8	32.3
Marketing margins on spot sales	18.1	8.5	8.5	8.5	8.5	8.5	8.5	8.5	-	-
Operational cost break-up (Rs/mmbtu)										
Staff cost	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
Power, utilities and chemicals	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.7
Insurance & other variable costs	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.8
Other expenses	0.8	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.1

Source: I-Sec Research

Kochi terminal

We expect regasification margins to be Rs44.6/mnbtu for the Kochi terminal, implying RoCE of 16% (at 75% capacity utilisation) over the life of the project.

Table 8: Gross block and capital employed calculations for Kochi terminal

(Rs mn)									
	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E	
Gross block	39,058	42,863	43,367	43,871	44,375	44,879	45,383	45,887	
Accumulated depreciation	4,123	5,761	7,486	9,230	10,995	12,780	14,586	16,411	
Net block	34,935	37,102	35,881	34,640	33,380	32,098	30,797	29,476	
Working capital	1,685	3,798	3,824	3,850	3,879	3,908	3,939	3,972	
Capital employed	36,620	40,900	39,705	38,491	37,258	36,006	34,736	33,447	

Source: Company, I-Sec Research

Table 9: Tariff calculation for Kochi terminal

(Rs mn)

	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E
Capital employed	36,620	40,900	39,705	38,491	37,258	36,006	34,736	33,447
16% required RoCE	5,849	6,202	6,448	6,256	6,060	5,861	5,659	5,455
NPV of 16% RoCE over remaining life of terminal	33,195							
Volumes regasified (mmtpa)	1.9	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Volumes regasified (mmscm)	2,586	5,171	5,171	5,171	5,171	5,171	5,171	5,171
Required average realisation (Rs/mmbtu)	320	322	325	327	330	332	335	338
Post-tax pre-interest returns	1,573	4,502	4,725	5,006	5,302	5,613	5,941	6,286
NPV of Post-tax pre-interest returns	33,195							

Source: Company, I-Sec Research

Table 10: Kochi – Operating assumptions

	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E
Volumes								
Terminal capacity (mmtpa)	2.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0
LNG sold (mmtpa)	1.9	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Capacity utilisation (%)	75	75	75	75	75	75	75	75
Margins								
Regasification margins (Rs/mmbtu)	44.6	46.8	49.2	51.6	54.2	56.9	59.8	62.7
Marketing margins on spot sales (Rs/mmbtu)	8.5	8.5	8.5	8.5	-	-	-	-
Operational cost break-up (Rs/mmbtu)								
Staff Cost	1.4	0.8	0.8	0.9	0.9	1.0	1.0	1.1
Power, utilities and chemicals	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5
Insurance & other variable costs	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.6
Other expenses	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0

Source: I-Sec Research

Conservative estimates

Conservatively, we have used 25% lower regasification margins for the Dahej terminal in our earnings estimates from CY10E, leading to an earnings decline in FY11 earnings. However, the management has indicated only 10% dip in regasification margins. If the actual reduction is only 10%, it would imply significantly higher earnings for the company. Moreover, the implied RoCE assuming 85% capacity utilisation would be higher at 27.1%.

Also, if the actual cut is 10%, our fair value would increase to Rs97/share, with bull-case value at Rs125/share and bear-case at Rs68/share.

Table 11: Earnings could be 31-36% more than our estimates

Regasification margins dip	EPS				Fair value		
	FY10	FY11	FY12	FY13	Bull case	Bear case	Fair value
10%	8.2	9	8.6	10.1	125	68	97
25%	7.8	6.8	6.4	7.7	104	70	87
upside	5.7	31.2	36	32.1	20.2	(2.9)	11.1

Source: I-Sec Research

Valuations

We value PLL at Rs87/share implying 19% upside from current valuations. Our fair value comprises the average of bull-case and bear-case fair values at Rs104/share and Rs70/share respectively. We assume 23% RoCE under bull-case and 16% under bear-case. Under both cases, we have assumed 16% RoCE for the Kochi terminal. We have not assumed any marketing margins in our calculations for RoCE. However, the same has been considered in our earnings model.

Bull-case value of Rs104/share

Under bull-case, we have assumed a 25% cut in Dahej regasification margin CY10E onwards due to higher capacity of the terminal. We continue to factor in a 5% YoY increase thereafter in line with the current trend, leading to 23% implied RoCE over the life of the terminal.

Table 12: Bull-case – DCF valuations

	Rs mn	Rs/share	Remarks
Equity Value of Dahej	52,521	70.0	DCF
Equity Value of Dahej	16,940	22.6	DCF
Solid cargo port	900	1.2	Valued at equity investment
Cash & other investments	7,669	10.2	FY10 end
Value of PLL to equity-holders	78,030	104	

Source: I-Sec Research

Bear-case value of Rs70/share

In bear-case, we have factored in 16% RoCE for the life of the Dahej terminal implying further 40% dip in regasification margins CY13E onwards.

Table 13: Bear-case – DCF valuations

	Rs mn	Rs/share	Remarks
Equity Value of Dahej	27,001	36.0	DCF
Equity Value of Kochi	16,940	22.6	DCF
Solid cargo port	900	1.2	Valued at equity investment
Cash & other investments	7,669	10.2	FY10 end
Value of PLL to equity-holders	52,510	70	

Source: I-Sec Research

Sensitivity

Discount rate (WACC). PLL's fair value may dip 9% if we increase WACC by 100bps to 13.5% (Table 14).

RoCE. PLL's fair value may decrease 6% if the company earns 100bps lower RoCE on the Dahej terminal (Table 14).

Table 14: Sensitivity analysis – PLL's fair value sensitivity

DCF value per share			
Implied RoCE over life of Dahej terminal	Discount rate (%)		
	11.5	12.5	13.5
16%	77	70	64
17%	82	74	67
18%	86	78	71
19%	91	83	75
20%	97	88	80
21%	102	93	85
22%	108	98	90
23%	115	104	95

Source: I-Sec Research

Annexure 1: Financials

Table 15: Profit and Loss statement
(Rs mn., year ending March 31)

	FY08	FY09	FY10E	FY11E	FY12E
Gross Sales					
Less: Excise Duty					
Net Sales	65,553	84,287	116,599	150,470	168,105
Total Operating Income	65,553	84,287	116,599	150,470	168,105
Less:					
Raw Material	55,664	73,756	103,723	137,782	154,834
Staff Cost	210	196	235	249	264
Power, utilities and chemicals	444	375	520	642	668
Insurance & other variable costs	339	364	509	635	666
Other expenses	235	583	351	386	405
Total Operating Expenses	56,892	75,274	105,338	139,694	156,837
EBITDA	8,661	9,013	11,260	10,776	11,268
EBITDA Margin (%)	13.2	10.7	9.7	7.2	6.7
Depreciation & Amortisation	1,022	1,025	1,439	1,859	2,888
Other Income	536	765	636	459	285
EBIT	8,175	8,753	10,458	9,375	8,665
Less: Gross Interest	1,024	1,012	1,777	1,729	1,554
Recurring Pre-tax Income	7,152	7,740	8,681	7,647	7,111
Less: Taxation	2,405	2,556	2,867	2,525	2,348
--Current Tax	2,185	2,526	2,833	2,495	2,320
--Deferred Tax	220	30	34	30	28
Net Income (Reported)	4,747	5,184	5,814	5,122	4,763
Recurring Net Income	4,747	5,184	5,814	5,122	4,763

Source: Company data, I-Sec Research

Table 16: Balance sheet

(Rs mn, year ending March 31)

	FY08	FY09	FY10E	FY11E	FY12E
ASSETS					
Current Assets, Loans & Advances					
Cash & Bank balance	3,586	6,578	4,947	2,713	1,333
Inventory	909	3,856	3,078	3,425	3,828
Sundry Debtors	3,330	6,712	6,539	8,435	9,430
Loans and Advances					
Operational	640	783	1,120	1,444	1,615
Other Current Assets	41	168	168	168	168
Total Current Assets	8,507	18,097	15,852	16,185	16,375
Current Liabilities & Provisions					
Current Liabilities					
Sundry Creditors	3,388	5,751	4,103	4,591	5,159
Other Current Liabilities	900	1,614	1,732	2,296	2,578
Provisions	1,332	1,557	1,557	1,557	1,557
Total Current Liabilities and Provisions	5,619	8,922	7,392	8,444	9,294
Net Current Assets	2,887	9,175	8,460	7,741	7,080
Investments					
Other Marketable Investments	5261	2722	2722	2722	2722
Strategic & Group Investments	212	321	900	900	900
Total Investments	5,473	3,043	3,622	3,622	3,622
Deferred Tax Asset	-	-	-	-	-
Fixed Assets					
Gross Block	19,718	19,748	35,657	35,927	75,254
Less Accumulated Depreciation	4,038	5,062	6,501	8,361	11,249
Net Block	15,680	14,686	29,155	27,566	64,005
Add: Capital Work in Progress	10,614	18,470	15,338	25,661	128
Less: Revaluation Reserve					
Total Fixed Assets	26,293	33,156	44,494	53,227	64,134
Total Assets	34,654	45,373	56,576	64,590	74,836
LIABILITIES AND SHAREHOLDERS' EQUITY					
Borrowings					
Long Term Debt	15,776	22,817	29,872	34,233	41,083
Total Borrowings	15,776	22,817	29,872	34,233	41,083
Deferred Tax Liability	2,692	2,722	2,756	2,785	2,813
Share Capital					
Paid up Equity Share Capital	7,500	7,500	7,500	7,500	7,500
No. of Shares outstanding (mn)	750	750	750	750	750
No. of Warrants outstanding* (mn)					
Face Value per share (Rs)	10	10	10	10	10
Reserves & Surplus					
Share Premium	1,555	1,555	1,555	1,555	1,555
General & Other Reserve	7,131	10,780	14,893	18,517	21,886
Less: Revaluation Reserve					
Net Worth	16,185	19,834	23,948	27,572	30,941
Total Liabilities & Shareholders' Equity	34,654	45,373	56,576	64,590	74,836

Source: Company data, I-Sec Research

Table 17: Cash flow statement

(Rs mn, year ending March 31)

	FY08	FY09	FY10E	FY11E	FY12E
Cash Flow from Operating Activities					
Reported Net Income	4,747	5,184	5,814	5,122	4,763
Add:					
Depreciation & Amortisation	1,022	1,024	1,439	1,859	2,888
Provisions					
Deferred Taxes	220	30	34	30	28
Less:					
Other Income	536	765	636	459	285
Net Extra-ordinary income	-	-	-	-	-
Operating Cash Flow before Working Capital change (a)	5452	5473	6651	6552	7393
Changes in Working Capital					
(Increase) / Decrease in Inventories	1,190	(2,946)	778	(347)	(404)
(Increase) / Decrease in Sundry Debtors	(17)	(3,382)	173	(1,896)	(995)
(Increase) / Decrease in Operational Loans & Adv.	1,411	(143)	(337)	(325)	(170)
(Increase) / Decrease in Other Current Assets	(27)	(127)	-	-	-
Increase / (Decrease) in Sundry Creditors	263	2,363	(1,648)	488	568
Increase / (Decrease) in Other Current Liabilities	(520)	940	117	565	282
(Increase)/Decrease in Deferred Tax Asset					
Working Capital Inflow / (Outflow) (b)	2,300	(3,295)	(916)	(1,515)	(719)
Net Cash flow from Operating Activities (a) + (b)	7,752	2,178	5,734	5,038	6,674
Cash Flow from Capital commitments					
Purchase of Fixed Assets	(6,042)	(7,887)	(12,777)	(10,592)	(13,795)
Purchase of Investments	(2,693)	2,431	(579)	-	-
Consideration paid for acquisition of undertaking					
Cash Inflow/(outflow) from capital commitments (c)	(8,735)	(5,456)	(13,356)	(10,592)	(13,795)
Free Cash flow after capital commitments (a) + (b) + (c)	(983)	(3,278)	(7,622)	(5,555)	(7,121)
Cash Flow from Investing Activities					
Other Income	536	765	636	459	285
Net Cash flow from Investing Activities (d)	536	765	636	459	285
Cash Flow from Financing Activities					
Proceeds from fresh borrowings	1,944	7,041	7,055	4,361	6,850
Dividend paid including tax	(1,316)	(1,536)	(1,701)	(1,498)	(1,393)
Other items	0	(0)	-	0	0
Net Cash flow from Financing Activities (e)	628	5,505	5,355	2,863	5,457
Net Extra-ordinary Income (f)	-	-	-	-	-
Total Increase / (Decrease) in Cash (a) + (b) + (c) + (d) + (e) + (f)	181	2,992	(1,631)	(2,234)	(1,380)
Opening Cash and Bank balance	3,405	3,586	6,578	4,947	2,713
Closing Cash and Bank balance	3,586	6,578	4,947	2,713	1,333
Increase/(Decrease) in Cash and Bank balance	181	2,992	(1,631)	(2,234)	(1,380)

Source: Company data, I-Sec Research

Table 18: Key ratios
(Year ending March 31)

	FY08	FY09	FY10E	FY11E	FY12E
Per Share Data (Rs)					
Diluted Recurring Earning per share (DEPS)	6.3	6.9	7.8	6.8	6.4
Diluted Earnings per share	6.3	6.9	7.8	6.8	6.4
Recurring Cash Earnings per share (CEPS)	8.0	8.3	9.7	9.3	10.2
Free Cashflow per share (FCPS-post capex)	(1.3)	(4.4)	(10.2)	-7.4	-9.5
Reported Book Value (BV)	21.6	26.4	31.9	36.8	41.3
Adjusted Book Value (ABV) **	21.6	26.4	31.9	36.8	41.3
Dividend per share	1.5	1.8	1.9	1.7	1.6
Valuation Ratios (x)					
Diluted Price Earning Ratio	11.5	10.6	9.4	10.7	11.5
Price to Recurring Cash Earnings per share	9.1	8.8	7.5	7.8	7.1
Price to Book Value	3.4	2.8	2.3	2.0	1.8
Price to Adjusted Book Value	3.4	2.8	2.3	2.0	1.8
Price to Sales Ratio	0.0	0.0	0.0	0.0	0.0
Enterprise Value (Rs mn)	61,679	68,267	76,953	83,548	91,777
EV / EBITDA	7.1	7.6	6.8	7.8	8.1
EV / Total Operating Income	0.9	0.8	0.7	0.6	0.5
EV / Operating Free Cash Flow (Pre-Capex)	8.0	31.3	13.4	16.6	13.8
EV / Net Operating Free Cash Flow (Post-Capex)	(62.7)	(20.8)	(10.1)	(15.0)	(12.9)
Dividend Yield (%)	2.1	2.4	2.7	2.3	2.2
Growth Ratios (% YoY)					
Diluted Recurring EPS Growth	51.5	9.2	12.1	(11.9)	(7.0)
Diluted Recurring CEPS Growth	14.4	4.2	16.8	(3.8)	9.5
Total Operating Income Growth	19.0	28.6	38.3	29.0	11.7
EBITDA Growth	33.7	4.1	24.9	-4.3	4.6
Recurring Net Income Growth	51.5	9.2	12.1	-11.9	-7.0
Operating Ratios (%)					
EBITDA Margins	13.2	10.7	9.7	7.2	6.7
EBIT Margins	12.5	10.4	9.0	6.2	5.2
Recurring Pre-tax Income Margins	10.9	9.2	7.4	5.1	4.2
Recurring Net Income Margins	7.2	6.2	5.0	3.4	2.8
Raw Material Consumed / Sales	84.9	87.5	89.0	91.6	92.1
Other Income / Pre-tax Income	7.5	9.9	7.3	6.0	4.0
Effective Tax Rate	33.6	33.0	33.0	33.0	33.0
Return / Profitability Ratios (%)					
Return on Capital Employed (RoCE)-Overall	20.9	17.4	15.7	11.2	8.8
Return on Invested Capital (RoIC)	30.5	25.8	24.9	19.0	16.6
Return on Net Worth (RoNW)	32.8	28.8	26.6	19.9	16.3
Dividend Payout Ratio	23.7	25.3	25.0	25.0	25.0
Solvency Ratios / Liquidity Ratios (%)					
Debt Equity Ratio (D/E)	0.97	1.15	1.25	1.24	1.33
Net Working Capital / Total Assets	(2.0)	5.7	6.2	7.8	7.7
Interest Coverage Ratio-based on EBIT	8.0	8.6	5.9	5.4	5.6
Current Ratio	1.5	2.0	2.1	1.9	1.8
Turnover Ratios					
Inventory Turnover Ratio (x)	37.1	31.0	30.0	42.5	42.8
Assets Turnover Ratio (x)	2.1	2.1	2.3	2.5	2.4
Working Capital Cycle (days)	22.0	26.1	27.6	19.6	16.1
Average Collection Period (days)	18.5	21.7	20.7	18.2	19.4
Average Payment Period (days)	21.4	22.6	17.3	11.5	11.5

Source: Company data, I-Sec Research

Annexure 2: Global LNG industry, key players & pricing

Key players

The current global LNG liquefaction capacity is ~184mntpa (based on data until '09 for LNG export from Bloomberg). Globally, key LNG exporting countries are Qatar (18%), Malaysia (13%), Indonesia (10%), Australia (10%), Algeria (9%) and Trinidad (9%). With the commissioning of Shtokman LNG (15mntpa) in '14 and other LNG liquefaction terminals in future, we expect Russia to become a key LNG supplier.

In terms of demand, key LNG importing countries are Japan (37%), South Korea (16%), Spain (10%), France (6%), Taiwan (5%), India (5%) and the US (5%). Surprisingly, unlike crude oil, the US is not a significant LNG importer since the country has surplus natural gas availability domestically.

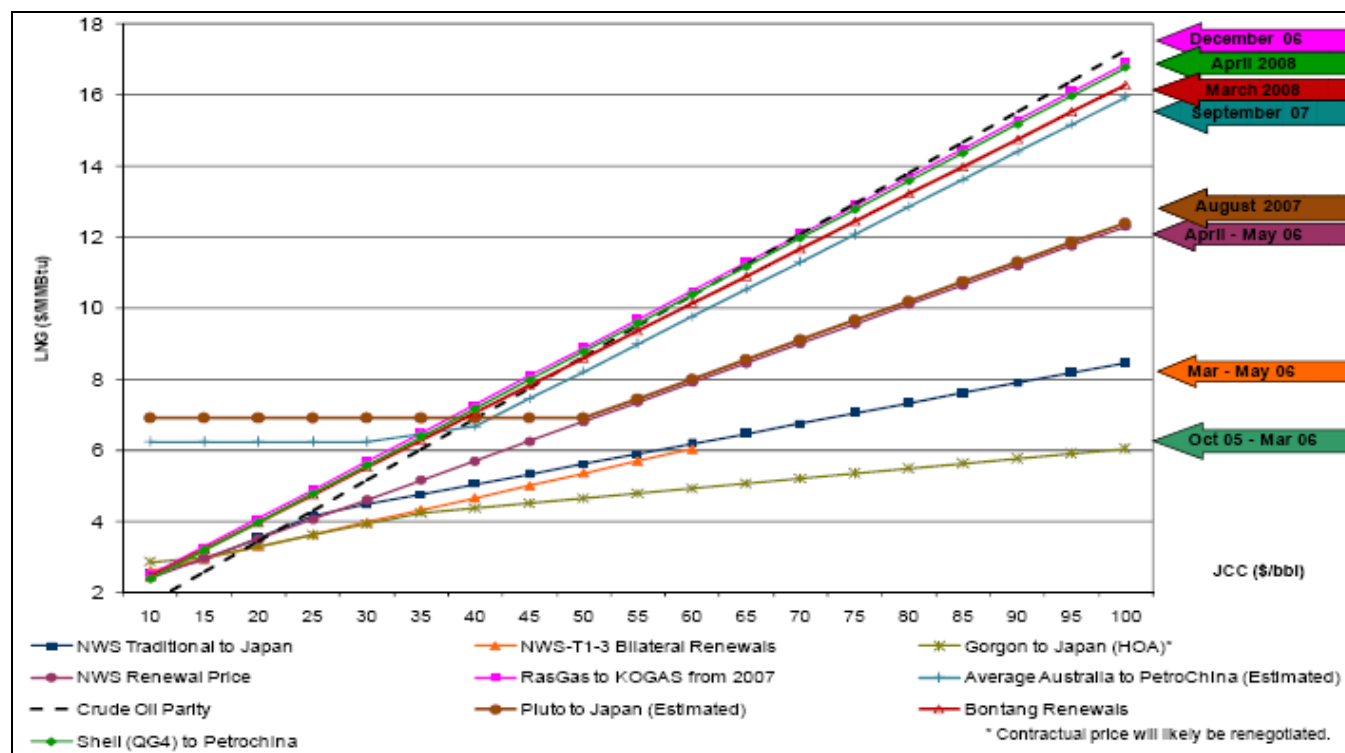
Global LNG pricing

There are four major regional natural gas markets globally that determine LNG pricing – the US, the UK, Europe and Asia. LNG prices in the US follow natural gas prices in Henry Hub index, LNG prices in the UK follow UK National Balancing Point Hub and the rest of Europe mostly follow Zeebrugge gas terminal hub price. Asian LNG prices are linked to crude oil prices as Japanese Crude Cocktail (JCC) prices which is Japanese customs clearing price for crude oil. For long-term LNG import to Asian countries, JCC benchmark is normally followed with floors and caps to safeguard buyers and sellers from sharp jump/fall in crude prices.

The US and Europe import LNG only for peak demand as most of the natural gas imports is through pipelines. Hence, the US and Europe are unaffected by the surge in LNG prices.

The dynamics of LNG import is different in Asia Pacific, which constitutes nearly 70% of the total LNG demand globally – demand for LNG far outstrips supply, leading to a seller's market. Moreover, Japan, South Korea, China & Taiwan, the key Asian importers of LNG, bid aggressively for future LNG supplies. Consequently, small LNG consumers such as India have to buy LNG at a high price to secure future LNG supplies.

Chart 2 : Recent LNG import contracts to Japan, Korea and China



Source: Oil Search Limited presentation, I-Sec Research

Annexure 3: Index of Tables and Charts

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I-Sec investment ratings (all ratings relative to Sensex over next 12 months)

BUY: +10% outperformance; **HOLD:** -10% to +10% relative performance; **SELL:** +10% underperformance

ANALYST CERTIFICATION

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