



## Petronet LNG Limited

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### Rating

ICRA has reaffirmed the issuer rating of IrAA (pronounced as Ir double A), indicating high credit quality, assigned to Petronet LNG Limited (PLL). The rated entity carries low credit risk. The rating is only an opinion on the general creditworthiness of the rated entity and not specific to any particular debt instrument.

### Credit Strengths

- Strong and financially sound project participants, including sponsors .
- Robust contractual structure, which effectively addresses most of the risks in the project
- PLL's demonstrated ability to run regassification operations profitably
- Large latent demand for gas in the country
- Favourable financial risk profile, characterised by moderate gearing level and comfortable debt servicing ability

### Credit Concerns

- Project implementation risks inherent in the company's significant capital expenditure programme
- Exposure of the project to market risks, given the gradual alignment of LNG prices to the recent Japanese Customs Cleared crude oil (JCC) prices from 2009 onwards, and likely competition from domestic gas and alternative fuels

### Rating Rationale

PLL has completed three years of operations since April 2004. During this period, the profitability of the company has steadily improved, because of both inbuilt escalation in regassification rate as well as additional regassification revenues from spot LNG. The regassification charges, which are currently at Rs. 27/MMBTU and is to be revised 5% every year, ensures atleast 16% post-tax equity IRR for the company after meeting all expenses. Revenues from regassification of spot LNG add significantly to the profitability of PLL, as the fixed costs are fully recovered through the regassification of 5 MMTPA under long term contract and the variable costs in regassification are low.

PLL's projects have been structured with the objective of allocating most critical risks to external parties, which has led to it carrying relatively low levels of risk. Technically, the Gas Supply Purchase Agreement (GSPA) leads to absorption of market risks by the off-takers, including risks associated with inflation, and exchange rate movements. This would however depend quite heavily on the "economics" of using R-LNG as a fuel/ feedstock, which should be competitive until Dec 2008, although the potential for volatility in prices beyond 2009 remains an area of concern.

As an illustration, the delivered cost of R-LNG is likely to escalate to around \$12/MMBTU by Jan 2014 from the current level of \$5/MMBTU, due to full indexation with JCC prices, in case the later were to remain at around \$70/bbl. Although the prices of alternate hydrocarbons would be much higher than the R-LNG under the above scenario, the ability of price sensitive consumers in the power & fertilizer sector to absorb the same remains to be seen. Also, delivered cost of regassified LNG (R-LNG) to consumers could become costlier than alternate hydrocarbons such as naphtha & furnace oil, if crude oil prices were to drop suddenly, whose probability could be low to moderate levels, making the prevailing prices significantly lower when compared with past 60 month average JCC prices. This could impact offtake if the customers have dual feed facility and if competition emerges from lower cost domestic gas or imported pipeline gas/LNG. As a result, it is critical to renegotiate the price of LNG with RasGas, which is provided in the SPA, if the country is able to secure cheaper gas from the other sources.

ICRA, however, acknowledges that the domestic gas market is gradually getting aligned to global forces as seen by the sale of gas at market prices by the JV/pvt producers and PSU companies (to non APM customers) and purchase of spot LNG by power & fertilizer consumers at market determined prices. Further, Natural Gas is expected to be in short supply in the domestic market over the near to medium term. However, new sources of supply such as that from RIL, GSPC, PMT and possible imports from Iran could change the demand supply dynamics over the long term. Under such a scenario, access to cost competitive gas may assume importance.

PLL has conceived of two new projects viz. expansion of Dahej plant to 10 MMTPA and setting up a new regassification plant at Kochi of capacity 5 MMTPA, with the project cost of around Rs. 16 billion and Rs. 26 billion respectively. These projects are to be funded with a debt:equity ratio of 3.44: 1 and 2.33: 1 respectively. Although debt : equity ratio of the individual projects is high, overall net gearing of the company is expected to be at moderate levels over the long term, due to existing robust network and steady cash accruals from existing operations. The LNG for Dahej expansion would be sourced partly from RasGas (2.50 MMTPA), with the rest to be sourced from the other suppliers. Dahej expansion, which is by and large progressing as per schedule, is expected to be commissioned in phases starting from July 2008, with full commercial production to be achieved by April 2009. However, LNG could be available from RasGas' train 7 only from October 2009. As a result, the company will have to run the plant on either spot LNG or keep it idle in the intervening period. The GSPA has been signed with the existing offtakers for the incremental quantity of 2.50 MMTPA.

However, an area of concern is that LNG is yet to be tied up for 2.5 MMTPA of Dahej and the Kochi project. The global LNG market has been witnessing tight-demand supply levels over the past two years due to the entry of US & Europe as buyers and the sharp rise in the prices of alternate hydrocarbons. As a result, new capacities are not available for long term contracts until 2011/2012 and ICRA's analysis shows that going forward, globally the regassification capacity is expected to continue to exceed liquefaction capacity. PLL has been in talks with Exxon Mobil for its share of LNG from the Gorgon project in Australia, which has been promoted by Chevron (50%), Exxon Mobil (25%) and Shell (25%). PLL is likely to source 2.50 MMTPA from this project for which it is expected to sign SPA by Q1 2008, translating to availability of LNG by early 2012. The signing of SPA has been delayed by slightly more than an year, due to delays in the 'Final Investment Decision' by the Gorgon project sponsors. Pricing of LNG and other commercial details of this contract remains uncertain as of now, and the same would be a key rating sensitivity going forward. PLL expects to finalise EPC with vendors shortly, even before the signing of SPA, so that the plant would be ready for commissioning by late 2011.

The expansion of the Dahej plant from 5 MMTPA to 10 MMTPA, at a low incremental capital cost results in fairly comfortable debt service coverage indicators and Internal Rate of Return. Given that the LNG procurement charges are a pass through, the debt service capabilities of the project are fundamentally dependent upon the regasification charge, which apart from debt service would also be used to fund O&M expenses, income tax and provide returns to the equity holders. Contractually, there is a provision for increasing the regasification charge by 5% per annum, and under this scenario, the cash flows from 7.50 MMTPA Dahej plant, which have a high degree of certainty, should be adequate to service the debt of 10 MMTPA Dahej capacity and Kochi project. The company's debt service indicators are also comfortable under a stress scenario of lower growth in regasification charges. This is a major positive from the credit perspective.

## Company Profile

PLL has been promoted by four PSU oil & gas companies viz. ONGC, GAIL, IOC and BPCL with each of them having 12.50% equity stake. Gaz De France (GDF) and Asian Development Bank (ADB) have 10% and 5.2% stake in the company with the rest held by institutional investors and general public. PLL had commissioned a 5 MMTPA LNG regassification plant at Dahej, Gujarat in April 2004. The operations of the company are governed by the provisions of a series of agreements such as supply

purchase agreement (SPA) with RasGas, Qatar, Time Charter Agreement (TCA) with Mitsui OSK consortium, Port Operations Service Agreement (POSA) with a Singapore consortium, Gas Supply Purchase Agreement (GSPA) with the offtakers, and Payment Security Mechanism. PLL sources LNG from RasGas, Qatar under a 25 year SPA, for which prices will be linked to Japan Customs Cleared (JCC) crude oil of \$20/bbl in the period April 2004-Dec 2008. In the subsequent period Jan 2009-Dec 2013, LNG prices will gradually float in line with the specified formula, with the prices fully indexed to previous 12 month JCC from Jan 2014 onwards, subject to cap and floor price. Except during Force Majeure events, PLL is committed to buy LNG from RasGas at the contracted quantity, failing which it is to pay liquidated damages. For transporting LNG to its plant, PLL has entered into TCA with Mitsui consortium, who have deployed two dedicated LNG ships for the company. R-LNG from the plant is sold to GAIL, IOC & BPCL in the ratio 60:30:10, through the GSPA. Terms and conditions of GSPA are co-terminus with that of SPA. The offtakers have take or pay liabilities to PLL and the latter has supply or pay liabilities to the offtakers. While the O&M of the regassification plant is done by PLL, marine services are undertaken by PSA Marine, Singapore. Payments to RasGas, shippers, O&M agent and debt servicing are governed by payment security mechanism.

## Update on key developments

### Business and Competitive Position

**Capacity utilisation remains high due to additional spot LNG regassification:** PLL has completed three full years of operations post commissioning of its project. During 2006-07, PLL sourced 92 cargoes of LNG, which includes 12 cargoes of LNG bought from the spot market. PLL has an inbuilt cushion to handle upto 6.50 MMTPA of LNG, although the stated capacity is only 5 MMTPA, in view of higher regassification capacity available.

**Table 1: Key operational and financial indicators of PLL**

	Unit	2006-07	2005-06	2004-05
Installed capacity	MMTPA	5.0	5.0	5.0
LNG sold	MMTPA	5.63	4.84	2.45
Capacity Utilisation		112.6%	96.8%	49.0%
Purchase of LNG	TBTU	292.80	247.76	128.35
Sale of R-LNG	TBTU	253.27	246.81	125.03
Sale of spot R-LNG	TBTU	33.80	-	-
Sale value	Rs. Bn	5501	3837	1945
Raw material costs	Rs. Bn	4747	3253	1696
Contribution	Rs. Bn	754	584	249
Sale value	\$/MMBTU	4.31	3.49	3.56
Raw material cost	\$/MMBTU	3.72	2.94	3.04
Contribution	\$/MMBTU	0.59	0.56	0.50

**Note:** TBTU: Trillion British Thermal Unit

PLL has been selling 5 MMTPA LNG sourced from RasGas to its three offtakers GAIL, IOC and BPCL in the ratio of 60:30:10. Ultimate consumers of these offtakers are given in the Table 2. With the gradual rise in R-LNG volume, PLL has become a key supplier of gas in the domestic market, accounting for around 20% of the total domestic gas consumption of 103 MMSCMD in 2006-07.

**Table 2 : Industry wise offtake of R-LNG**

Industry	Share
Fertilizers	46.4%
Steel	12.1%
Power	7.8%
Glass	5.0%
Refineries	3.3%
Others	7.4%
Intermediate offtaker*	18.0%
<b>Total</b>	<b>100.0%</b>

\*GSPC

Source: ICRA Analysis

PLL has, since 2006-07, increased its presence in the spot LNG market. In order to source LNG in the spot market, PLL has entered into master agreements with leading suppliers such as GDF, Chevron, BG, BP, Vitol, Stat Oil, MLNG, Sonatrach, Gazprom, RasGas and Qalhat. The master agreement defines the detailed terms and conditions for the sale, with only a few details to be signed before concluding a deal. Signing of master agreements enables easier conclusion of final sales, as the spot market is dynamic in nature with purchase decisions to be taken at a short notice. PLL sells spot LNG to its three offtakers viz. GAIL, IOC and BPCL in equal proportions and on the same terms and conditions applicable for its existing

5 MMTPA sales. These offtakers get prior commitments from the ultimate consumers, based on which they confirm offtake from PLL, which then signs the final sale agreement for the purchase of spot LNG. The availability of latter has been gradually improving in the global markets, due to capacity additions. Most of the new LNG developers build a cushion in their plants to operate on spot LNG, due to attractive prices in relation to the long term contracts. CIF prices have varied in the band of \$8-\$9/MMBTU over the past one year for PLL, which translates to consumer prices of \$10-12/MMBTU. Power, Fertilizer and Steel companies, such as NTPC, IFFCO, KRIBHCO, Chambal, Tata Chemicals, NFL and Essar Steel, have primarily bought spot LNG due to the wide differential between the alternate liquid hydrocarbon prices (naphtha) and spot LNG prices. Shortages in the domestic gas market have also spurred spot LNG sales.

Due to growing appetite for spot LNG, PLL has planned to further increase its spot LNG activity in the current fiscal with 24 cargoes (~1.45 MMTPA) planned for 2007-08, which is inclusive of R-LNG to be supplied to Ratnagiri Gas & Power Pvt Ltd (RGPPL). Growing spot LNG sales would significantly add to the profitability of PLL, as the incremental operating cost is limited to power costs, while the fixed costs are already recovered through the regassification charges levied for 5 MMTPA operations. For spot LNG regassification, PLL has been charging similar regas charges as for its 5 MMTPA long term contract operations, which was at Rs. 26.13/MMBTU (~\$0.59/MMBTU) in 2006-07. For each ship load of spot LNG, PLL earns regas revenues of around Rs. 85 million. Going forward, there could be upside in terms of marketing margin on its spot LNG sales to the offtakers.

**PLL is largely insulated from the ongoing litigation over 'pooled gas price':** Gol recently announced a pooled gas price, which is a weighted average of the current R-LNG price from the Dahej terminal of PLL and spot LNG sourced for RGPPL, in order to lower the burden on RGPPL. However, it would mean higher gas price for the existing R-LNG consumers, as their landed cost increases approximately by around 32% from the current levels (\$4.96/MMBTU to \$6.51/MMBTU for Gujarat consumers). Some of these consumers have approached Courts and obtained stay orders. The Supreme Court subsequently, while vacating the stay granted by the lower courts, has ordered that a two member bench be constituted to hear the matter further. PLL's profitability is largely insulated from the litigation as the pooling is done at offtakers end and even if the pooling is held null and void, the offtakers could sell the spot LNG to other consumers, for which demand is expected to remain good atleast over the near term.

## Financial Position

**Profitability improves following additional regassification volume growth:** PLL's net profit in 2006-07 showed a significant increase of 61% over 2005-06. This was because of increase in LNG throughput, remunerative spot LNG transactions and 5% annual escalation in the regassification rates. Due to growing liquid investments, the company also generated higher interest income. Growth in net cash accruals however was low at only 3.3% during the above period, as the company paid its maiden dividend (dividend rate: 12.5% and dividend payout ratio: 35%) in 2006-07. Improved profitability also led to better RoCE, gearing and debt protection metrics compared to 2005-06.

**Table 3: Key credit metrics of PLL**

	2006-07	2005-06	2004-05
RoCE	24.83%	18.95%	5.45%
Total Gearing	1.08 X	1.18 X	1.46 X
OPBDITA/Int	6.04 X	4.31 X	1.40 X
Total Debt/OPBDITA	2.13 X	2.57 X	8.26 X
RCF/Total Debt	31%	13%	11%

Source: ICRA analysis

The working capital incidence in the business is low (NWC/OI: 3% in 2006-07) due to liberal credit terms from the LNG supplier & shippers and stringent payment terms on the offtakers. Rasgas raises an invoice on PLL after despatch of each ship load, which has to be paid in 15 days after the receipt of the cargo. Thus it gets an effective credit period of 19-20 days. With regard to the time charter rates for shippers, PLL gets a credit period of one month. With regard to the inventories, PLL maintains on an average 10 days of consumption (including in transit inventory). The company extends an average credit period of 18 days to its offtakers on the sale of R-LNG. In view of low working capital blockage and robust cash generation, liquidity position of the company continued to remain comfortable, with built up surplus investments at around Rs. 6.18 billion as on 31.3.07.

However, the company's free cash flows have been low since inception, primarily because of the large capex the company has been incurring. All the projects are backed by committed funding lines.

### New Projects

**Dahej expansion project on target:** PLL is in the process of expanding its plant capacity to 10 MMTPA, with a cushion to handle upto of 12.50 MMTPA of LNG. Cost of the project estimated is Rs.15.91 billion, which is funded with a D:E ratio of 3.44:1. As on July'07, the project was about 54% complete in terms of

physical progress, marginally behind the original target. The delay was primarily due to the shortage of construction personnel experienced by the contractors (IHI consortium) appointed by PLL. Nevertheless, the company hopes to commission the 3<sup>rd</sup> LNG tank by July 2008 and the second tank by December 2008, which was the original schedule. With regard to the two LNG ships, construction progress is as per schedule at Daewoo's yard in Korea, with the shipping consortium (Mitsui OSK lead) expected to make available the ships in synchronisation with the send out of LNG from RasGas's new LNG train. PLL's project is commissioned. LNG for the expanded capacity upto 2.50 MMTPA will be available from RasGas only by October 2009 coinciding with the commissioning of 'train 7' liquefaction plant at Qatar. Thus, PLL plans to operate the plant until then with spot LNG, which however should not be a constraint given the improved availability of LNG in the spot market. PLL would like to start spot LNG regassification from the new plant as early as July'08, when the 3<sup>rd</sup> LNG and full regassification plant will be ready.

In terms of financial progress, PLL has spent around Rs. 4.70 billion, funded by Rs. 1.80 billion loans with the rest from internal accruals. (PLL has contracted term loans from a consortium of 11 banks for Rs. 12.33 billion). In addition to the above project, PLL's management is thinking of setting up 5<sup>th</sup> & 6<sup>th</sup> LNG tanks as well as a parallel jetty to expand capacity further and insulate the existing plant operations from any breakdown/disruption in the import jetty. However, the plan is still in feasibility study stage with clarity expected to emerge in a year from now.

**Kochi project delayed:** Except some civil works, PLL has not commenced construction as it is yet to sign land concession agreement with the Kochi Port Trust. Supply Purchase Agreement (SPA) with Exxon Mobil to source LNG on a long term contract from the Gorgon liquefaction terminal (located in Barrow Island in Western Australia) also got delayed, as the project consortium (Chevron-50%, Exxon Mobil-25% and Shell-25%) experienced delays in getting environmental clearances from the Western Australia province. The consortium has recently obtained the environmental clearances. However, the consortium is believed to be deliberating certain changes in the scope of plant design, following which final investment decision (FID) will be taken. The delay notwithstanding PLL's management has finalised the term sheet with Exxon Mobil, with only the SPA to be signed after FID is completed. R-LNG from the terminal will be marketed by BPCL (40%), GAIL (30%) and IOC (30%).

PLL is expected to award the EPC contract shortly, so that the project could be completed by mid to late 2011. It hopes to sign SPA with Exxon Mobil by Q1 2008, which should translate to availability of LNG by early 2012. Cost of the project earlier was estimated at Rs. 22.19 billion for 2.50 MMTPA capacity. The company now has decided to go for 5 MMTPA as the incremental costs are low at only Rs. 3.81 billion for the balance capacity. Thus, the revised capital cost is expected at around Rs. 26 billion, which PLL plans to fund at a D:E ratio of 2.33:1. The debt portion of the project will be funded with a mix of term loans and bonds.

**Investments in port and shipping ventures:** PLL has a commitment to invest around Rs. 860 million as equity capital towards its share of equity in the JV that it has promoted with Adani Exports Ltd for developing a solid cargo port at Dahej. This investment would be phased out between 2007-2010. The company has also planned to pick up minority equity stake in separate joint ventures that would own and operate LNG ships. Total investments planned are around Rs. 2.82 billion, which would be phased out between 2006-2010.

### **Risk Analysis for Existing Operations and New Projects**

#### **Completion Risks**

For Dahej expansion, PLL has already awarded the EPC contract to IHI, Japan; the contract is a fixed-price fixed-date contract. Completion risk in this case is mitigated by the fact that IHI has rich experience in executing regassification terminals and was also the contractor for phase I of the Dahej project. The new EPC contract provides for liquidated damages (LD) of up to 15% of the contract value of Rs. 11.81 billion, which in case of inordinate delays in project completion would cover up to 21 months' interest payments. As for shipping arrangements for the Dahej expansion, PLL has awarded the contract to the Mitsui OSK consortium, which is committed to make available the ship by September 2009. The cost of the ship is estimated at US\$250 million, for the funding of which the consortium has attained financial closure. The risk of delays in ship availability is partly mitigated by the compensation of US\$1,50,000/day that the ship owners have committed to pay for a maximum of 180 days. The gas evacuation pipeline network is not expected to be a constraint as both GAIL and GSPL are either expanding capacities or laying new pipelines, which should be in place well before the target completion date for the Dahej expansion project.

With regard to the Kochi project, it is expected that the company will put in place significant risk mitigants in its contracts so as to have the project completed on time.

#### **Supply Risks**

Supply risks in PLL's business emanate primarily from the adequacy of gas reserves in the exporting country for meeting the long-term requirements of a project and the ability of the exporter (RasGas in this case) to operate the liquefaction facility at the desired efficiency levels. Supply side risks in the PLL's Dahej project upto 7.50 MMTPA of LNG are quite low on account of the following factors:

- Access to the world's largest non-associated gas reserves, the North Field, which is estimated to have reserves of 900 TCF. Within the allotted blocks for RasGas I, II and III, certified recoverable reserves amount to about 3X36 TCF, which can produce 30 MMTPA of LNG for 25 years. Over the contract life, RasGas I, II and III, would utilise an estimated 4% of the proven reserves. Further, the Qatar Government, which owns QP, has also given a firm commitment to RasGas for allocating further acreage, apart from the 144 sq. km. already allocated to RasGas II, in case the existing reserves are insufficient to meet the requirements of the liquefaction project.
- ExxonMobil, an entity rated Aaa by Moody's Investors Service, is firmly committed to RasGas, and has already demonstrated its capabilities of setting up and operating the first five trains, which are supplying LNG to Korea, Europe and India under long-term 25 year contracts. Further, ICRA draws additional comfort from the strategic importance of the RasGas project to both its sponsors and the fact that RasGas is investing a substantial amount of capital (US\$2.8 billion) for meeting its supply commitments to the PLL project.
- While there is no explicit supply or pay liability on RasGas in the SPA, the risk arising from this is mitigated by a clause in the SPA, according to which all foreseeable losses and damages from breach of the agreement, are to be compensated by either party. This should take care of PLL's liabilities to the offtakers under GSPA and its debt service commitments, but perhaps not loss of profit. ICRA however believes that in the event of a dispute, actual compensation could be subject to judicial interpretation.

For the Dahej expansion (for quantities beyond 7.50 MMTPA) and Kochi projects of PLL, supply risks would however be significant. Demand-supply levels in the global LNG market have been tight over the past one year and are likely to remain so over the medium term. Although significant new capacity additions have been announced, most of the firm capacities have been tied up through long-term contracts until 2010. Most of these projects are also understood to be facing time and cost overruns. Besides, because of the increased mobility of gas and the rise in crude oil prices, long-term f.o.b. contracts are now being signed at US\$4-6/MMBTU as against US\$2-3/MMBTU until a few years ago. Consequently, there has been considerable delay in tying up LNG on a long-term contract basis by Indian players, including PLL.

Availability of spot LNG on the otherhand is expected to considerably improve going forward, from the current level of almost 10% of overall traded LNG volumes. The availability of a fairly large and vibrant spot market considerably reduces the supply risks associated with the failure of RasGas to supply in accordance with the contractual terms. Purchases from the spot market would however expose PLL and its offtakers to the risks associated with volatility in LNG prices.

### **Market Risks**

The current domestic demand-supply position for gas is quite favourable, with supplies estimated at 103 million metric standard cubic metres per day (MMSCMD) in 2006-07 falling well short of the estimated demand of 180 MMSCMD. The demand for natural gas although substantial is highly price sensitive, given that the power and the fertilizer sectors, the largest consumers of gas, remain subsidised and operate within regulatory controls. However, over the past three years, there have been significant developments in the domestic market towards gradual deregulation of the gas sector. These include modest increase in landfall prices for core sector consumers, linking of landfall gas prices for other consumers with market rates, and gradual rise in gas prices for bulk supplies to Compressed Natural Gas (CNG) companies. On the supply front, sources have diversified with R-LNG being marketed from PLL and Shell Hazira India. Going forward, supplies are expected to further diversify with RIL (in the near term) and GSPC (in the medium to long term) expected to begin supplies from their new finds and with gas being sourced possibly from transnational pipelines (notably, Iran-Pakistan-India) According to ICRA's estimates, gas supplies would more than double by 2011-12 over the current levels. While demand could still be higher, ICRA believes gas-to-gas competition could emerge in certain regions, which would place marketers with access to cost competitive gas at a competitive advantage over others. ICRA expects the fertilizer sector to be the main driver of incremental gas demand over the medium term in view of the conversion of plants using naphtha, furnace oil (FO), and low sulphur heavy stock (LSHS) to gas as the feedstock/fuel. As for the power sector, demand from it could be limited, with natural gas being used possibly to meet only peak demand, given the price competition from coal-based plants. ICRA also expects demand to diversify with the petrochemicals, refineries, industrial, transport and residential sectors consuming more gas because of cost economics, thereby diminishing the current concentration on power and fertilizers.

The landed cost of R-LNG from PLL compares quite favourably against the prices of alternative liquid hydrocarbons such as naphtha, FO, LSHS and light diesel oil (LDO), and gas from some private producers.

**Table 4: Landed Cost of R-LNG to Consumers**

	Unit	Upto Dec 2008	
		Within Gujarat	O/s Gujarat
JCC price	\$/bbl	20	20
FOB price of LNG	\$/MMBTU	2.53	2.53
Shipping charges	\$/MMBTU	0.26	0.26
Transit Insurance	\$/MMBTU	0.00	0.00
CIF	\$/MMBTU	2.79	2.79
Customs duty	\$/MMBTU	0.14	0.14
Regassification charges	\$/MMBTU	0.57	0.57
Ex-Dahej price	\$/MMBTU	3.51	3.51
VAT	\$/MMBTU	0.44	0.44
Marketing Margin	\$/MMBTU	0.05	0.05
VAT Credit	\$/MMBTU	0.00	-0.30
Pipeline tariff	\$/MMBTU	0.53	0.53
Service Tax on pipeline tariff	\$/MMBTU	0.07	0.07
Local sales tax <sup>^</sup>			0.17
Delivered price at GCV	\$/MMBTU	4.59	4.30
Delivered price at NCV	\$/MMBTU	5.05	4.72

<sup>^</sup>Illustrative purpose only as LST could vary from State to State.  
Certain sectors are also exempted from LST

Source: ICRA estimates

However, the f.o.b. prices of LNG would undergo a structural change from January 2009, when they would gradually float in line with the previous 12 months' average JCC prices, subject to certain floating cap and floating floor prices. In the event of crude oil prices remaining firm, the landed cost of R-LNG could increase to around US\$12/MMBTU by January 2014, if the previous 12 months' average JCC prices and previous 60 months' average JCC prices were US\$70/bbl each. While alternative liquid hydrocarbons could be more expensive, such high R-LNG prices may not be affordable for some of the price sensitive consumers. Besides, with the anticipated improvement in domestic gas availability, consumers will have access to cheaper gas. PLL's R-LNG prices could be costlier if the current crude oil prices are significantly lower when compared with the previous 60 months' average JCC prices and the previous 12 months' average JCC prices. This is because, while liquid hydrocarbons are priced immediately, with a maximum lag of two to three weeks, PLL's R-LNG will be tied to the previous 60-months average and previous 12-months average JCC prices. Thus, in a scenario of sharply declining crude oil prices, PLL will face a pricing risk in the intervening period until its LNG is priced as per the formula. Overall, while this risk would remain, ICRA believes it would not be material enough to impact the cost economics of using R-LNG. Above all, market risks for PLL are considerably mitigated by the provisions of the GSPA; these provisions enable the transfer of market risks to financially strong counterparties with an established presence in the domestic oil and gas sector.

As for the Kochi project, demand for natural gas in Kerala is estimated at 22 MMSCMD, i.e. both current demand and demand based on future projects. Key customers for R-LNG are expected to be BPCL (for its Kochi refinery) and FACT, besides number of smaller industrial consumers. National Thermal Power Corporation (NTPC), had also planned to increase the capacity of its Kayamkulam plant from 350 MW to 2,300 MW, which will require 2.10 MMTPA of R-LNG. Currently, this plant runs on naphtha and below the optimum plant load factor (PLF), given that naphtha is a high-cost fuel. However, it is uncertain if NTPC will still go ahead with the project due to likely competition for power from other sources.

ICRA believes, while the demand potential is good in Koch region, it would be contingent on the reasonableness of R-LNG price. Pricing of LNG and other commercial details of the contract with Exxon Mobil remains uncertain as of now, which would be a key rating sensitivity going forward.

**Force Majeure Risks**

*Force Majeure* assumes considerable significance in a project of the nature of PLL, given that the supply chain can be disrupted by event risks affecting any of the following:

- The LNG supplier's facilities
- PLL's facilities
- GAIL's transmission network
- The LNG carriers

The risk associated with non-availability of the chartered LNG vessels or disruptions in RasGas' facilities could be countered either by hiring ships or sourcing gas from the spot markets, which have grown quite considerably over the past few years. Such purchases would however be exposed to volatility in prices. The project is however exposed to risks associated with disruptions in its own facility and/or in the evacuation system, which could affect the operations of the entire chain and impact debt servicing. Such event risks have been addressed through adequate business interruption insurance covers, which take care of fixed charges including debt servicing commitments, shipping charges and profit for 18 months post-disruption. Proceeds from insurance companies, following the incidence of a *force majeure* event, usually come in after a lag, and during this period, the debt holders would have access to DSRA LC, which would provide coverage for six months of debt servicing (principal and interest).

**Funding Risks**

Funding risks for the new projects of PLL are not significant, as the debt component for the Dahej expansion project has been tied up fully. PLL has also tied up significant part of the debt for the Kochi project, with the remaining to be tied up in the short term. ICRA however does not consider this to be an issue of concern, given the demonstrated ability of PLL to raise funds at competitive rates.

**Prospects**

ICRA expects PLL's debt servicing ability to be comfortable over the long term, given the strong contractual provisions for transferring most critical risks to external parties, the company's significant cash accruals from operations, and the long maturity profile of its debt.

**Key Conversion Factors**

1 MMTPA of LNG	= 50.9852 TBTU
1 MMTPA of LNG	= 3.58 MMSCMD of R-LNG
1 TBTU of LNG	= 42299 m <sup>3</sup> of R-LNG

**Key Financial Indicators**

	30/06/07	31/3/07	31/03/06	31/03/05
Net Sales	15510.2	55006.0	38371.7	19452.6
Operating Income	15626.10	55089.5	38371.7	19452.6
Operating Profit before Depreciation, Interest and Tax	2164.9	6484.6	4902.9	1526.0
Profit after Tax	1080.3	3132.5	1949.3	-284.5
Equity Capital	7500.0	7500.0	7500.0	7500.0
Net Worth		12755.2	10719.5	8630.2
Profit after Tax/Operating Income (%)	6.91	5.69	5.08	-1.46
Profit before Interest and Tax/(Total Debt + Net Worth) (%)		24.83	18.95	5.45
Operating Profit before Depreciation, Interest and Tax/(Interest and Finance Charges) (Times)	8.43	6.04	4.31	1.40
Net Cash Accruals/Total Debt (%)	-	22	23	6
Total Debt/Net Worth (Times)	-	1.08	1.18	1.46
Total Debt/(Net Worth + Deferred Tax Liability) (Times)	-	0.91	1.11	1.46
Current Ratio (Times)	-	1.85	2.38	1.60

*Note: Amounts in Rs. million*

**Rating History**

	Amount Outstanding	Maturity Date	Rating Outstanding	Previous Ratings	
				August 2006	-
Issuer Rating	-	-	IrAA	IrAA	-

August 2007



**ICRA Limited**  
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