

This presale report is based on information as of Jul. 28, 2005. The ratings shown are preliminary. This report does not constitute a recommendation to buy, hold, or sell securities. Subsequent information may result in the assignment of final ratings that differ from the preliminary ratings.

Rationale

On July 25, 2005, Standard & Poor's Ratings Services assigned its preliminary 'A' senior secured debt rating to the proposed senior secured series A and B bonds due 2020 and 2027, respectively, that are expected to be issued by Qatar-based Ras Laffan Liquefied Natural Gas Co. Ltd. (II) (RasGas II) and Ras Laffan Liquefied Natural Gas Co. Ltd. (3) (RasGas 3). The outlook is stable.

RasGas II and RasGas 3 expect to raise \$4.6 billion through commercial bank loans that amortize from 2010 to 2020, two tranches of bonds that amortize from 2010 to 2020 and 2020 to 2027, and \$1.38 billion in shareholder loans from an affiliate of Exxon Mobil Corp. (Exxon Mobil; AAA/Stable/A-1+) in tranches that amortize on the same schedule as the bank and bond debt, all of which will rank pari passu as senior secured obligations of RasGas II and RasGas 3. Standard & Poor's expects that RasGas 3 will borrow \$300 million and RasGas II will borrow about \$1.3 billion in bonds, although the latter volume depends on the ultimate split between commercial banks and bonds of the \$3.2 billion total funding from these two sources. The final split will be established at financial close. RasGas II and RasGas 3 guarantee each other's debt and are largely linked operationally. We therefore rate them on a consolidated basis. For the purposes of this report 'RasGas' shall be used when referring to RasGas II and RasGas 3 on a consolidated basis.

We will issue final ratings upon receipt and satisfactory review of all final transaction documentation, including legal opinions. Accordingly, the preliminary ratings should not be construed as evidence of final ratings. If Standard & Poor's does not receive final documentation within a reasonable timeframe, or if final documentation departs from materials reviewed, Standard & Poor's reserves the right to withdraw or revise its ratings.

RasGas II will be a three train (3, 4, and 5) liquefied natural gas (LNG) company in the State of Qatar (A+/Positive/A-1) with an expected production capacity of about 14.1 million metric tons per annum (mtpa). It is owned about 70% by Qatar Petroleum (QP; A+/Positive/--) and 30% by Exxon Mobil RasGas Inc., a wholly owned subsidiary of Exxon Mobil. RasGas 3 will be a two train (6 and 7), 15.6 mtpa production capacity LNG company in Qatar owned 70% by QP and 30% by Exxon Mobil Ras Laffan (III) Ltd., a wholly owned subsidiary of Exxon Mobil.

RasGas II will use the proceeds to complete construction of trains 4 (which is mechanically complete) and 5. RasGas 3 will use its proceeds to help fund construction of trains 6 and 7. Between 2006 and 2008, RasGas II and RasGas 3 expect to raise up to an estimated \$5.4 billion of debt--most likely again split between bonds, bank facilities, and an Exxon Mobil affiliate loan--to fund completion of trains 6 and 7.

The 'A' rating on both the RasGas II and RasGas 3 bonds incorporates the following strengths:

- The elimination of most potential sales volume risk due to the presence of long-term sale and purchase agreements (SPA), which cover the majority of production from trains 3, 4, and 5. RasGas 3 expects to sell the LNG produced from trains 6 and 7 under long-term agreements. Under the base case assumptions about 10% of capacity in 2006 and 2007 will be sold on spot markets.
- The good geographical diversity of revenues in markets that will most likely have low correlation with demand for production. Initial LNG markets include India, Italy, Belgium, Spain, and the U.S.
- The good revenue diversification, with about 70% of revenues coming from sales of LNG and about 30% of revenues coming from associated liquids produced alongside the LNG.

- The expectation of few, if any, technological and operational issues that could adversely affect cash flow for trains 3, 4, and 5. This expectation is based on the almost flawless construction and operational performance of Ras Laffan Liquefied Natural Gas Co. Ltd. (Ras Laffan; A/Stable) trains 1 and 2, which employ similar technology. Train 3 is already generating as well as or better than the sponsors expected.
- The presence of sponsor support, given the importance of the RasGas II and RasGas 3 expansion for generating a large portion of QP's income by 2010 and representing a significant portion of Exxon Mobil's share in Qatari projects that, in total, will provide about 30% of Exxon Mobil's global gas production by 2010. At the time of the initial debt issuance, the sponsors expect to have invested approximately \$3.3 billion in equity in the project. In addition, affiliates of Exxon Mobil are expected to lend up to 30% of the overall senior secured debt of RasGas II and RasGas 3.
- The elimination of natural gas supply risk due to the geographical location of the projects in Qatar's North Field. This is the world's largest producing nonassociated gas field, with more than 900 trillion cubic feet (tcf) of proved reserves. Production costs are low and performance on trains 1, 2, and 3 has been solid.
- The very strong competitive cost position compared with other LNG projects due to low feedstock gas prices, strong operational knowledge, and economies of scale (especially once total output is envisaged to reach approximately 30 mtpa).
- The low shipping-availability risk because of the experienced Korean ship-building capacity the project has secured to provide enough LNG shipping stock to meet the delivery requirements under existing and expected ex-ship SPAs.
- The practical elimination of construction risk for the onshore and offshore packages of RasGas II through the project's use of fixed-price, date-certain engineering, procurement, and construction (EPC) arrangements. EPC-type arrangements also govern the establishment of terminals important to but not financed by RasGas II and RasGas 3. Train 3 is operational, train 4 is in the commissioning phase, and train 5 is more than 50% complete.
- The project's competitive cost structure, which results in a financial forecast of debt-service coverage ratios (DSCRs) that are generally well over 2x under most stress scenarios. In addition, the project's break-even oil and gas prices for debt service are compellingly low (at less than \$11 per barrel of oil and less than \$2 per million BTU of gas), which will further limit default risk.
- The presence of some protection against the risk of excessive leverage due to additional debt restrictions, although these are not nearly as strong as most project financings. The level of debt that can be used for trains 3 to 7 is capped at \$10 billion.

The following weaknesses offset the above strengths at the 'A' rating level:

- The potential volatility of LNG revenues from time to time due to SPA price linkages to oil price benchmarks around the world and some gas benchmarks in Europe. The SPAs also contain price-review clauses, which could lead to deviations of LNG revenues from pro forma forecasts.
- The exposure of revenues to possible volatile commodity prices because about 30% of revenues will be derived from the sale of associated liquids produced alongside the LNG (liquefied petroleum gas [LPG], condensate, sulfur, and helium) under short-to-medium term contracts or on the spot market. In addition, the project has forecasted that a high concentration of products will be sold to Asian markets.
- The high counterparty risk because many SPA counterparties have credit ratings or

creditworthiness below the preliminary ratings that have been assigned to the senior debt to be issued by RasGas II and RasGas 3. Initially, about 74% of LNG sales (by volume) will go to offtakers with 'BBB' or lower ratings or to spot sales, although this share will decline to about 22% by 2011, assuming affiliates of Exxon Mobil purchase train 6 and 7 LNG output.

- Additional counterparty risk due to the unusually strong reliance upon third parties or the sponsors to complete large infrastructure projects to support LNG sales, such as the expanding of port facilities in Ras Laffan City, the building of regasification terminal capacity in Europe and the U.S., and the building and ability to utilize up to 38 LNG ships.
- The exposure of RasGas II to indemnity payments and the spot LNG markets of Europe if the Adriatic terminal in Italy supporting the Edison Gas SPA (part of Edison SpA; BBB+/Stable/A-2) is not completed on time. Additionally, the Adriatic terminal and pipelines are under legal challenges. Although these challenges have not yet been successful to date, they still remain outstanding by way of appeal and could delay terminal completion.
- Uncertainty related to the development of trains 6 and 7. Although negotiations are in progress for trains 6 and 7, the absence of signed construction contracts introduces costs and schedule risk. A lack of SPAs for trains 6 and 7 introduces marketing risk, although a heads-of-agreement contract with Exxon Mobil is in place. The use of unproven liquefaction technology on trains 6 and 7 could reduce production volumes. Finally, the use of unproven large LNG tanker designs increases transport risk.
- The possibility of liquidity concerns if a catastrophic event occurred due to the absence of business interruption insurance. Insurance proceeds may be insufficient to repay the debt in the highly unlikely event of a total loss.
- The threat of a potential conflict in the Middle East, which could temporarily impair LNG production and the production of associated liquids and deliveries beyond six months, the period for which the debt-service reserve could be used to meet debt obligations.
- The limited credit support provided by the structural features in this financing, which are weaker than most project financings. The support includes a six-month debt-service reserve and some limitations on additional debt.

[↑ back to top](#)

Outlook

The stable outlook reflects the on-schedule status of construction activities for RasGas II and RasGas 3, third party terminals, and ship works, as well as the favorable natural gas fundamentals in target markets over the next five years. The outlook also assumes strong spot market sales potential over the next two to three years, and good operations leading to good DSCRs.

We expect that the 15.6 mtpa output for the unbuilt trains 6 and 7 will be covered by long-term SPAs with affiliates of Exxon Mobil or other parties of reasonable credit standing. An improvement in the rating is not likely in the near term given the large construction activity and the relatively weaker creditworthiness of offtakers. A longer-term improvement in the rating is likely to be limited by the weak structural and security arrangements. The rating could deteriorate if construction problems delay the commissioning of RasGas II and RasGas 3 infrastructure or related works such as regasification terminals or the port expansion of Ras Laffan City; offtaker credit declines; SPAs come under pressure; or global LNG markets deteriorate.

[↑ back to top](#)

Project Background

RasGas II and RasGas 3 plan to source approximately 1.9 tcf per year of natural gas from Qatar's North Field and use it to produce about 30 mtpa of LNG, 62.4 million barrels of condensate, and 2.1 mtpa of LPG. At this size, RasGas II and RasGas 3 jointly will be the world's largest LNG producers,

with about 12% of the global LNG market by 2010, according to the sponsors. The expansion represents about \$13.7 billion of an approximate \$55 billion natural gas investment plan in Qatar. By mid-2007, RasGas II will consist of three fully operational trains (and associated works) producing a total of 14.1 mtpa of LNG or 4.7 mtpa for each train. It is anticipated that by the fourth quarter of 2009, RasGas 3 will consist of two fully operational LNG trains (and associated works) producing a total of 15.6 mtpa or 7.8 mtpa each. Associated works include offshore platforms and wells, pipelines, and port and storage facilities.

The project will depend on affiliates of the sponsors, third parties, or both, to construct the offshore Adriatic terminal and associated pipelines in Italy, which will involve QP, Exxon Mobil, and Edison Gas (part of Edison SpA; BBB+/Stable/A-2). The project will also depend on the completion of an expansion of the Zeebrugge terminal in Belgium, in conjunction with Fluxys LNG N.V./S.A. (Fluxys), the owner and operator of the Zeebrugge LNG terminal; and the construction of a regasification terminal at Golden Pass in Texas, with QP and Exxon Mobil.

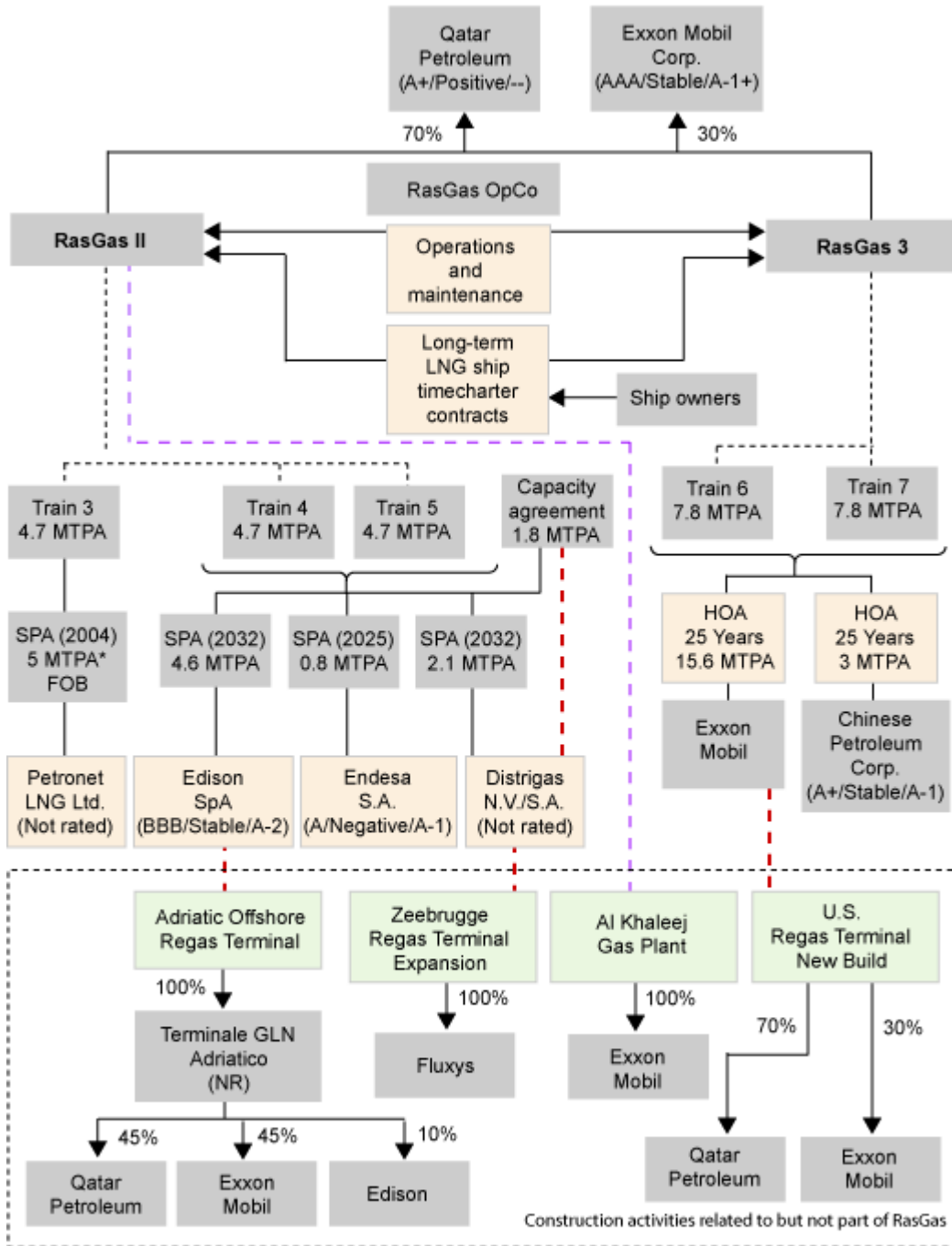
Ras Gas Operating Co. (RasGas OpCo) performs all operations and maintenance (O&M) activities for train 3 of RasGas II and will do the same for the expansion trains of RasGas II and RasGas 3. RasGas OpCo expects to produce low unit operating costs for all the companies due to economies of scale, as RasGas II and RasGas 3 share staff and facilities with Ras Laffan and other projects in Ras Laffan City.

RasGas II and RasGas 3 will generate cash flow from the sale of LNG (about 71%), condensate (about 22%) and LPG. Natural gas demand in target markets is expected to increase, but insufficient domestic production will tend to support gas imports through LNG, pipelines, or both. These markets have favorable long-term natural gas demand fundamentals. RasGas II will sell most LNG production under long-term SPA's with take-or-pay provisions, with the principal target markets being India, Italy, and Belgium. It will also sell a modest amount to Spain. RasGas II expects to complete trains 4 and 5 prior to the start of certain long-term SPAs and will, therefore, sell production of about 6.7 million tons (although the base case assumes only 2.4 million tons) into spot markets from about the third quarter of 2005 to the fourth quarter of 2007 in order to bridge the time gap prior to the start of deliveries under the long-term SPAs. The project's base case shows about \$450 million in revenue from these bridge sales. There is low volume risk associated with these spot sales because of existing commitments to buy these cargoes and strong demand for the remaining noncontracted cargoes through 2007. RasGas II intends to sell the remaining uncommitted capacity of about 1.8 mtpa (representing about 13% of RasGas II capacity) under a long-term capacity supply agreement between the sponsors and Fluxys. Until this volume can be contracted under long-term agreements, the volume will be sold on the spot market or under short-term contracts.

RasGas 3 expects to place LNG production from trains 6 and 7 into the U.S. markets under a future SPA with an affiliate of Exxon Mobil, and also potentially under an SPA with Chinese Petroleum Corp. (CPC; A+/Stable/--) in Taiwan, or with other creditworthy parties. Presently, only heads of agreements exist to support the supply of trains 6 and 7.

The issuers will arrange for the delivery of LNG to customers under all SPAs except for those with India-based Petronet SpA and possibly CPC through a fleet of approximately 38 LNG ships of various sizes that will be owned by third parties and time chartered to RasGas II and 3. All ships are expected to be built in Korea. There is some technology risk in the planned approximately 24 large LNG vessels whose capacity exceeds that of conventional LNG tankers. These larger ships are primarily planned to serve the U.S. market and the large size helps improve cost competitiveness.

**Chart 1
RasGas II And RasGas 3 Transaction Summary**



*4.7 MTPA from RasGas II train 3 and 0.3 MTPA from Ras Laffan.
HOA--Heads of agreements.
MTPA--Million metric tons per annum.

[↑ back to top](#)

Analytical Approach

Standard & Poor's primarily relied upon its project finance methodology to assess RasGas II and RasGas 3 credit risk. Compared with most projects, however, RasGas II and RasGas 3 have relaxed a number of constraints that would otherwise have resulted in a cleaner and more robust project structure. Despite some weaknesses in the project structure that might indicate a corporate analysis, we have assigned debt ratings to RasGas II and RasGas 3 and not a corporate credit rating. The debt

ratings are the same because each entity guarantees the other's debt obligations and the entities are largely linked operationally. We therefore rate them on a consolidated basis.

[↑ back to top](#)

Sponsor Strategy: RasGas Is Strategically Important To Qatar, QP, and Exxon Mobil

RasGas II and RasGas 3 are strategic to QP, a wholly owned subsidiary of the State of Qatar, because they represent the largest part of QP's ambitious investment plan totaling about \$55 billion in development plans to further monetize the value of North Field natural gas resources and thus reduce reliance on oil revenues. LNG is a key component of the strategy: RasGas II and RasGas 3, Ras Laffan, and all the Qatargas (an LNG project in Qatar operational since 1996 and owned by QP, Exxon Mobil, and others) projects will provide about 40% of QP's revenues by 2011 compared with 26% today. RasGas II and RasGas 3, along with Ras Laffan, will produce nearly 37 mtpa of the planned 77 mtpa of LNG exported by 2010 and provide about 8% of the expected 2010 GDP of the State of Qatar by way of royalties, taxes, and dividend distributions received by QP. QP and Qatar play a crucial role in completing certain key infrastructure elements such as port facilities, power facilities, and water facilities, which come from outside Ras Laffan City. Without this support, the issuers would be very challenged to succeed.

RasGas II and RasGas 3 are also important investments for Exxon Mobil and represent a major component of Exxon Mobil's strategic investments in Qatar. Exxon Mobil expects that its interest in RasGas II and RasGas 3, along with its interests in other Qatari projects, will represent about 30% of its worldwide gas production by 2010. Exxon Mobil is investing in other large projects in Qatar that are integrated with or will benefit from the operations of RasGas II and RasGas 3. By 2010, Standard & Poor's estimates that Exxon Mobil will have a total investment of nearly \$15 billion in Qatar and nearly \$6 billion for all assets related to RasGas II and RasGas 3. Of the 77 mtpa of LNG that Qatar plans to produce by 2010, Exxon Mobil is expected to have an interest in approximately 60 mtpa. Apart from strong distributions for RasGas II and RasGas 3, Exxon Mobil, as co-owner by way of an affiliate of the planned Adriatic terminal in Italy and the expected co-owner (through an affiliate) of the planned Golden Pass terminal in the U.S., QP and Exxon Mobil will earn additional income for regasifying RasGas II and RasGas 3 LNG volumes for offtake customers.

[↑ back to top](#)

Contractual Structure: SPAs Support Cash Flow But Finance Structure Is Relatively Weak

RasGas II has established adequate contractual arrangements to produce natural gas from the North Field; construct, operate, and maintain facilities in order to achieve planned operational performance; sell nearly all of its output for 20 to 25 years into markets with favorable gas demand fundamentals; and arrange for a large fleet of LNG vessels to meet delivery obligations. RasGas II and RasGas 3 have also entered into financing agreements that provide structural features that have weaker credit support when compared with most other highly rated project-type structures. The project's solid financial forecast, however, combined with the strong historical performance of Ras Laffan, provide a measure of mitigation against potential risks that deficiencies might cause.

[↑ back to top](#)

Development And Fiscal Agreements And Reserve Study: Adequate Gas Availability

RasGas II and RasGas 3 and the sponsors have entered into various agreements with the State of Qatar that give them access to a specific portion of the North Field gas reserves and thus enables them to produce quantities of LNG and other products. These agreements cover the life of the debt and provide access to natural gas reserves that can be developed at relatively low cost.

The various Development and Fiscal Agreements (DFAs) set out the terms by which the government of Qatar grants the rights to develop a defined location in the North Field to produce gas and related products, as well as to construct related facilities at Ras Laffan to manufacture LNG, LPG, and other petroleum products. It also grants exploitation rights in connection with those products produced at the facilities.

In return for granting these rights, Qatar will receive royalties denominated in U.S. dollars.

Natural gas resource

The reserve risk for RasGas II and RasGas 3 is low. The North Field contains about 900 trillion cubic feet (tcf) of non-associated gas. RasGas II and RasGas 3 expect to produce about 1.9 tcf per year. From 2010 to 2027, project use would represent less than 4% of the North Field's total natural gas reserve. Production wells have been performing well for Ras Laffan's trains 1 and 2 and for RasGas II's train 3.

[↑ back to top](#)

LNG Supply Contracts

RasGas II's business is supported by four long-term LNG SPAs with customers in India, Italy, Belgium, and Spain, as shown in table 1. These SPAs secure the sales of approximately 12.5 mtpa of LNG, or approximately 88% of RasGas II's projected nameplate capacity. There is also a capacity subscription agreement with Fluxys. Exxon Mobil provides a letter of comfort supporting the sale of up to an additional 3.4 mtpa of RasGas II LNG output (see section titled 'Fluxys capacity subscription agreement'). RasGas II may sell another 2.5 mtpa to Petronet, if certain conditions precedent in the current SPA are met. The overall creditworthiness of the counterparties introduces credit risk because most cash flow is earned from companies with lower credit ratings or creditworthiness than RasGas II's debt.

Table 1 RasGas II SPA					
Counterparty (country)	Rating*	BACQ (mtpa)¶	Country of destination	Start date	Shipping responsibility
Petronet LNG Ltd. (India)	N.R.	5.0	India	Jan-04	Petronet
Endesa Generation (Spain)	A/Negative/A-1§	0.8	Spain	2005	RasGas II
Distrigas (Belgium)	A-/Stable/A-2**	2.1	Belgium	2007	RasGas II
Edison SpA (Italy)	BBB+/Stable/A-2	4.6	Italy	2008	RasGas II
Total	N/A	12.5	N/A	N/A	N/A

*At July 28, 2005. ¶mtpa--Million metric tons per annum. BACQ--Base annual contract quantity. BACQ has been increased progressively between 2003 and 2005 and is now at a plateau volume of 5 mtpa. Initial delivery was supported by Ras Laffan. §Rating of Endesa S.A. (guarantor). **Rating of Suez S.A. (majority owner). N/A--Not applicable. N.R.--Not rated.

These four SPAs have a similar structure that mitigates volume sales risk, but not sale price risk. The terms range from 20 to 25 years, and require the offtaker to take or pay for contracted LNG volumes, which provides good cash flow stability even if the offtaker fails to take its contracted amount, except if excused under a force majeure event. Nevertheless, the contracts give the offtakers some flexibility to take a lesser amount within specified limits annually, although these must be made up in later years.

LNG pricing in the SPAs varies with certain benchmark indices, which exposes RasGas II to the risk of market-price fluctuation. Some of the price formulas include market-based indexes, while the formula of the Petronet SPA defines a floating minimum and floating maximum price. The pricing of several SPAs is also subject to periodic price reviews. Aside from the obvious potential effect on revenues, price review clauses can provide mitigation against termination risk, which could occur if the contract is priced uneconomically for the offtaker.

The SPAs also define the LNG delivery responsibility. Except for under the Petronet SPA, RasGas II is responsible for shipping the LNG from Qatar to destination ports and has arranged or is arranging adequate shipping capacity to meet this responsibility (see the section below titled 'Shipping'). The SPAs define the point of delivery of the LNG, so that RasGas II can anticipate its future shipping costs.

Force majeure provisions in the contracts are fairly typical for LNG contracts. As is typical for contracts of this nature, neither party is liable to pay penalties if it fails to fulfill its obligation under the contract for reasons due to force majeure. As noted in other LNG transactions rated by Standard &

Poor's, force majeure risk is extremely rare in the LNG industry. In more than 30 years of shipping, there has never been a loss incident at sea or in port.

Petronet LNG SPA

Through to 2028, Petronet will buy 5.0 mtpa of rich LNG from RasGas II--4.7 mtpa currently supplied from train 3, and the other 0.3 mtpa currently supplied from Ras Laffan (as train 4 is not yet operational)--all on a free-on-board basis. Through 2008, pricing is fixed and thereafter is indexed to the crude oil prices within a moving floor and cap structure based on historical prices. The operational risk under the Petronet SPA is currently lower than with the other SPAs because Petronet completed its 5.0 mtpa capacity regasification terminal at Dahej (Gujarat State) in 2003 and began taking LNG from RasGas II in January 2004. Petronet took 33 cargoes during 2004. Petronet developed, designed, constructed, and owns part of the terminal. Petronet plans to double the Dahej capacity by year-end 2008 and may secure an additional 2.5 mtpa from RasGas II related to that expansion.

Petronet presents counterparty risk to RasGas II because it is small and not rated (see section titled 'Counterparty Risk: Moderate' below). Therefore, RasGas II requires Petronet to financially back its purchase obligations in the form of a letter of credit of about \$100 million (or about two months of LNG sales), which is currently provided the State Bank of India (BB+/Stable/B) and currently confirmed by BNP Paribas (AA/Stable/A-1+). There is also a somewhat limited security interest assignment to RasGas II in the three back-to-back gas sales and purchase agreements (GSPAs) that Petronet has signed with its owner and offtakers. The three GSPAs fully cover the 5.0 mtpa of LNG that Petronet purchases from RasGas II, and thus would potentially enable RasGas II to sell directly to these offtakers were Petronet to become insolvent and should RasGas II have no other viable alternative.

Endesa SPA

The Endesa SPA runs through to 2025 and has a take-or-pay structure with pricing linked largely to the crude oil price and limited downward reductions in volumes. The risk associated with this contract is limited. Deliveries began in April 2005. RasGas II is currently shipping the LNG to an existing LNG terminal in Cartagena in Spain but will deliver to the new Sagunto LNG terminal in Valencia, as soon as it is completed (which is estimated in 2006). The Sagunto terminal is owned by Saggas, in which Endesa owns a 20% stake, and in which Union Fenosa S.A. (BBB+/Negative/A-2) and Iberdrola S.A. (A+/Stable/A-1) also have interests. RasGas II is monitoring the terminal construction progress and does not expect any material delays.

Distrigas SPA

Deliveries under the 20-year SPA will begin in April 2007, and the risk associated with delay of this contract is relatively low. Sales are on a take-or-pay basis with pricing linked to the price of natural gas at Zeebrugge. Distrigas will receive the LNG mainly at the Fluxys terminal in Zeebrugge, where it has adequate access to the terminal's current capacity under an existing capacity subscription agreement to regasify the RasGas II volumes. Standard & Poor's expects that Distrigas will use the RasGas II SPA to replace its existing Algerian LNG SPA that terminates in 2006.

Edison SPA

Until about 2032, RasGas II will ship and sell 4.6 mtpa of LNG to Edison under take-or-pay conditions, with some downward flexibility, at a price that has a variable large component linked to crude oil and a modest fixed component. The implementation of this SPA requires the completion of offshore terminal and pipeline and onshore pipeline facilities in Italy and therefore bears a higher risk than other SPAs until the terminal facilities are operational.

RasGas II will deliver LNG to the offshore terminal in the Adriatic Sea, which is located about 17 miles off Italy's northeast coast and is expected to have a capacity of up to 5.8 mtpa. The terminal project is owned by affiliates of QP (45%) and Exxon Mobil (45%), and Edison (10%). Edison has contracted with the terminal company for 80% of its capacity, equivalent to 4.6 mtpa, which is the SPA quantity. The remaining 20% must be auctioned off on the open market in accordance with

EU regulation. Edison will transport gas from the offshore terminal along a planned 85 kilometer (km) pipeline to Minerbio, near Bologna. SPA implementation requires that certain considerable construction risks are overcome (see section below titled 'Construction Arrangements: Moderate').

Attached to the SPA is an indemnity agreement that essentially exposes RasGas II to financial risks--and not the terminal company directly--for any delay in completion of the terminal. In case Edison has completed its construction requirements but the terminal has not been completed, RasGas II could incur liabilities (for a period of up to 18 months) for the additional costs that Edison incurs for the purchase of replacement gas because no LNG can be delivered (that is, the costs in excess of what Edison would have paid to RasGas II). Alternatively, if the terminal is complete but Edison cannot take the LNG volumes, Edison would incur liabilities.

Fluxys capacity subscription agreement

The agreement helps to mitigate the market risk exposure on about 1.8 mtpa in RasGas II LNG volumes not yet sold under long-term SPAs in Northwest Europe. Affiliates of QP and Exxon Mobil signed a 20-year ship-or-pay capacity subscription agreement with Fluxys, the owner and operator of the Zeebrugge LNG terminal in Belgium, for 33 slots (representing 2.05 mtpa) beginning April 2007. The capacity of QP and Exxon Mobil will increase to 55 slots (3.4 mtpa) upon completion of the terminal expansion, which is expected by early 2008. The sponsor affiliates granted RasGas II a call option on their rights and obligations under the Fluxys agreement. The call option is subject to certain conditions and Fluxys consent. RasGas II expects to use 1.8 mtpa of capacity, but the amount could rise if the Adriatic terminal is delayed and RasGas II needs to divert cargoes elsewhere. From the available capacity of Ras Laffan, RasGas II, and RasGas 3, the sponsors expect to fully utilize the contracted Zeebrugge LNG terminal capacity. The intent is to assign the terminal capacity to future ex-ship customers of the three entities.

Future SPAs

RasGas II has 1.8 mtpa without SPA cover, which it plans to sell on a spot basis to various customers or in Zeebrugge via the Fluxys agreement. Additionally, RasGas II has a nonbinding letter of comfort with Exxon Mobil Gas Marketing Europe Ltd. (EMGME), with whom it may enter into an SPA for the sale of gas. RasGas II is working on obtaining additional long-term SPAs for the noncommitted volumes and, if successful, may reconsider its option under the Fluxys agreement.

RasGas 3 does not have firm SPAs for the volumes produced by trains 6 and 7, but does have a heads-of-agreement contract that could lead to SPAs for the entire 15.6 mtpa production. The base case is that an Exxon Mobil affiliate purchases the entire output of trains 6 and 7 under a 25-year take-or-pay contract starting in 2008 and sells it into U.S. markets at a liquid market point and price. Delivery is likely to be to the planned Golden Pass, Texas, regasification terminal, which has been designed to handle volumes from trains 6 and 7 and large LNG ships. The U.S. Federal Energy Regulatory Commission (FERC) approved the Golden Pass with regards to its environmental impact in late June 2005, which essentially means that the project can proceed. The SPA provisions that might emerge are likely to be no worse than similar structures to RasGas II SPAs.

RasGas 3 has entered into a heads of agreement to sell up to 3.0 mtpa to Taiwan-based CPC over 25 years. In addition, RasGas II has agreed to sell an additional 2.5 mtpa to Petronet upon satisfaction of certain conditions precedent.

[↑ back to top](#)

Construction Arrangements: Moderate

Construction contracts exist for the RasGas II facilities, regasification terminals in Italy and Spain, expansion of the Zeebrugge terminal in Belgium, and the construction of 11 more conventional LNG (C-LNG) tankers. Contractual arrangements are pending and expected in the fourth quarter of 2005 for the construction of RasGas 3 trains 6 and 7, the Golden Pass regasification terminal in Texas, and approximately 24 large LNG (L-LNG) tankers. Overall, technology risk is low for RasGas II, Zeebrugge, Golden Pass, and the C-LNG tankers. There is some risk with the Adriatic terminal. RasGas 3 and the L-LNG tankers will incorporate technology that has not yet been commercially

proven but which represents progressions of existing designs. The independent technical engineer, Stone & Webster Consultants Ltd., stated in its report that there is no area of high technical risk associated with the RasGas II and RasGas 3 facilities.

LNG trains and offshore works (Qatar)

Construction risk is low for RasGas II and moderate for RasGas 3. RasGas II commenced sales of LNG and condensate from train 3 in February 2004, has started commissioning train 4, and is more than 50% complete on train 5. RasGas II and RasGas 3 are also building three new storage tanks. The use of experienced contractors with EPC contractual arrangements for RasGas II supports our conclusion that there is low construction risk. A consortium comprising primarily Chiyoda Corp. and Snamprogetti SpA is establishing the onshore works for train 5. Chiyoda was one of the primary contractors that performed front-end engineering work on Ras Laffan trains 1 and 2 and was the EPC contractor for Qatargas trains 1, 2, and 3. J. Ray McDermott is now establishing offshore works for trains 4 and 5, which involve two wellhead platforms supporting 20 wells. The firm was one of those successfully constructing offshore works for Ras Laffan and the works for RasGas II are simpler. The natural gas is dried offshore for Ras Laffan but onshore for RasGas II, making the construction works for the latter a simpler process.

Favorable contractor performance on Ras Laffan and RasGas II trains 3 and 4 further support the conclusion that construction risk for train 5 is low. Mechanical completion is expected in December 2006. Contractors include Chiyoda and Snamprogetti. The EPC contract is date certain with a contractor payment based on a lump sum plus the cost of reimbursables. There are large damages payable for delays and performance shortfalls, and contractors provide a bank guarantee equal to 10% of progress payments earned. The consortium provides a two-year warranty, with extensions for work repaired under warranty. In addition to the financial incentives in the EPC contracts, the contractors for RasGas II have a very strong incentive to perform well given the upcoming opportunity to bid for the large train 6 and 7 works.

Sponsors have received bids for EPC works for trains 6 and 7, and plan to use the proven formula of experienced contractors working under fixed-price contracts, with incentives to meet schedule and performance targets. Contractor selection could occur by the end of 2005.

Adriatic regasification terminal and pipelines (Italy)

Construction of the Adriatic terminal is exposed to technology risk and residual legal challenges. Affiliates of sponsors QP and Exxon Mobil are providing some credit support by guaranteeing sufficient funding to the terminal to reach completion by a deadline. It will be the world's first offshore, gravity-based LNG reception terminal, consisting primarily of two 125,000 cubic meter nickel steel LNG storage tanks, clad in concrete to prevent leakage. The topsides will sit above the tanks and will consist of conventional regasification facilities with sea-water cooling and living quarters. Although the overall technology is proven, it will be the first-time application of the storage tanks in an offshore gravity structure. Exxon Mobil has had previous experience of developing this type of offshore application, however.

Aker Kvaerner, a very experienced firm, is constructing the terminal project under an EPC contract. Construction began in early May 2005 and is on track for completion by the end of 2007. Kvaerner is assembling the terminal at a specially prepared site in Algeciras, Spain, prior to towing to Italy for installation and commissioning. Although this is a typical approach for construction of offshore oil platforms, this represents the first of its kind for an LNG terminal. Terminal assembly should occur by the third quarter of 2007, after which the basin will be flooded, and the assembled structure towed to sea and ballasted to sit on the seafloor.

The 40 km offshore/onshore pipeline that is part of the terminal scope of work will connect the terminal to the metering station at Cavarzere. Snamprogetti is the EPC contractor for this activity. Favorably, Snamprogetti is also the contractor for the 85 km pipeline that Edison must build from Cavarzere to Minerbio to connect with the national gas grid. Snamprogetti built about 90% of the Italian natural gas pipeline network. Snamprogetti expects to complete the pipelines several months before the terminal is complete, giving room for unexpected delays. Progress to date is on

schedule. About 50% of landowners have already allowed their lands to be used for the pipeline, and expropriation efforts have commenced to secure the remaining tracts. A number of complex engineering features have been identified for this pipeline route, which encompasses offshore, wetlands, and dry land. These obstacles, however, are not expected to create insurmountable problems and have been factored into schedules and costs.

Parties in Italy have challenged the permits for the terminal and offshore/onshore pipelines, but according to the sponsors, these were all rejected by the Italian court in July 2005. This still leaves room for appeals. The sponsors believe the risk of successful appeals is low.

Sponsor construction commitments. QP and an affiliate of Exxon Mobil have entered into an agreement to extend funding commitments related to the completion of the Adriatic terminal to RasGas II, which Standard & Poor's views as a favorable credit factor, given that the Edison SPA will provide about 15% of LNG revenues, according to the base case model. QP and an Exxon Mobil affiliate guarantee that certain funding obligations of their respective affiliates who are involved in building the Adriatic terminal will be met within a specific time period. Although an equity commitment falls short of a standard project finance completion commitment, this funding commitment does equate to a sponsor risk commitment of about \$1.2 billion, according to the sponsors, which should provide additional incentives to complete the terminal as planned. Notably, the funding commitment is subject to partial relief during a period of force majeure, which could occur if the project permits encounter problems with the Italian legal process.

Zeebrugge LNG terminal expansion (Belgium)

The Zeebrugge LNG terminal expansion has low construction risk. The €165 million project will expand capacity by 3.4 mtpa to 6.8 mtpa and involves the construction of conventional regasification and storage technology adjacent to the existing facilities. All requests for regulatory permits relating to the expansion have been obtained. Hence, there are no issues concerning land purchase or permitting. RasGas II is actively monitoring the expansion project progress. An EPC contract for the expansion was awarded in July 2004 and is currently on schedule for completion in early 2008. In the unlikely event that the terminal expansion is not completed, RasGas II and Distrigas have priority over all existing terminal capacity in equal proportions, giving RasGas II 2.05 mtpa capacity, which exceeds the 1.8 mtpa of noncontracted supply that RasGas II currently plans to send through the facility.

Sagunto regasification terminal (Spain)

The Sagunto LNG terminal construction presents low completion risk. The project consists of a green-field regasification terminal and port facilities to be constructed in the port of Sagunto, along with a gas spur line that will tie the terminal facilities to local industrial consumers and to the Spanish gas grid. The project is currently under construction and is scheduled to start commercial operation by the beginning of the second quarter of 2006. The terminal will employ conventional low-risk regasification and storage technology, comprising two 150,000 cubic meter storage tanks and regasification capacity equivalent to 1.8 billion cubic meters per year.

U.S. regasification terminals

RasGas 3 plans to sell LNG volumes from trains 6 and 7 to Exxon Mobil for delivery in the U.S., mostly likely through the planned Golden Pass terminal, which recently received FERC approval and thus has favorable prospects to proceed. There is some potential, however, for some of the volume to go to other creditworthy buyers. QP and Exxon Mobil are currently in a tender process that is expected to result in an EPC being awarded before the end of 2005 for Golden Pass, and expect construction to begin in early 2006 and be complete by the fourth quarter of 2008. For this sale, QP and Exxon Mobil want to participate in all stages of the value chain, so it is unlikely that RasGas 3 would contract with a third party for U.S. regasification capacity.

[↑ back to top](#)

Shipping

Shipping arrangements involve low to moderate risk. RasGas II needs 14 C-LNG vessels to meet its delivery obligations to Edison, Fluxys, and Endesa, and to assist with spot cargo marketing. It has made adequate direct and indirect arrangements to ensure the vessels are available as planned and

three have already been delivered. RasGas 3 expects to arrange construction contracts for up to 24 L-LNG vessels, which will be of relatively unproven technology, although Qatargas II--which has ordered similar type ships--will have some ships in operation before RasGas 3 takes delivery of its ships. Existing U.S. regasification facilities currently cannot accommodate the L-LNG ships to which RasGas 3 will be committing. The Golden Pass terminal, being developed by QP and Exxon Mobil, however, is being designed to accommodate these ships. Finally, the lack of L-LNG building contracts and rising steel prices introduce the risk that the L-LNG ships will cost more than RasGas 3 envisages.

RasGas II and Ras Gas 3 need ships to meet LNG delivery obligations, but do not want to serve as a shipping primary. The shipping strategy is to rely upon options for pre-negotiated ship-building contracts with qualified shipping-company contracts with Korean shipyards for C-LNG and L-LNG vessel construction under shipyard slot agreements. The pre-qualified ship owners then bid long-term charter rates based on being assigned the pre-negotiated ship-building contracts. Although not the ship owners, RasGas II and RasGas 3 have broad rights with respect to the building of the vessels. RasGas II and RasGas 3 also have extensive surveillance rights within the shipbuilding construction program and has certain rights under the time charters to ensure performance.

The project expects that Daewoo, Hyundai Motor Co. (BB+/Positive/--), and Samsung Heavy Industries will build the RasGas II and RasGas 3 vessels under fixed-price, date-certain contracts that have adequate incentives to ensure completion on time and to specification and that come with good warranty provisions. Shipyard monetary performance is backed by guarantees from highly rated Korean banks. Each yard has extensive experience building conventional LNG ships and they are recognized for their on-time delivery and high quality specifications, in the opinion of the sponsors. Daewoo has previously built 18 LNG vessels, Hyundai 13, and Samsung 11. Also, the shipyards desire more LNG vessel construction work and are expected to perform well for the RasGas II and RasGas 3 sponsors, especially considering that they hold about 100 shipbuilding slots with the yards.

The entities are further insulated from construction risk because they require the ship owner, which is the actual construction counterparty, to meet certain ship-delivery schedules and performance requirements under the time-charter contracts. So, if a Korean shipyard did not perform, the owner would bear additional damages for schedule and performance shortfalls.

The time-charter contracts have terms adequate for service SPAs and provide ship owners with strong incentives to perform. Each ship owner will be paid a capacity element and a fixed operating element. A risk for RasGas II and RasGas 3 is that, if a vessel is not available as required, they may need to secure LNG tankers in the market for short periods.

Ship-owner insolvency risk is remote. A Qatari entity is a part owner of each ship, and the ship-owning sponsors jointly and severally guarantee the other ship owners' obligations. In addition, each time-charter contract allows RasGas II and RasGas 3 employment of the vessel in the event of a ship owner becoming insolvent.

[↑ back to top](#)

Ras Laffan City Arrangements

The entities will rely on Ras Laffan City, which is owned by QP, to complete four additional LNG berths by 2009, to provide adequate dockworks to support LNG delivery obligations, and to make additional infrastructure improvements by 2010. Ras Laffan City is undertaking a large infrastructure expansion plan over the next five years and the massive logistical challenge presents modest risk that the port expansion activities for RasGas could be delayed. Given QP's operation of Ras Laffan City and involvement in the RasGas projects, however, in addition to the experience of having successfully built the port in the 1990s and the relatively benign construction environment, the work is likely to proceed as planned. Ras Laffan City is charged with providing all the infrastructure needs for the projects including ports, power, common sea-water cooling facilities, desalination facilities, and other items.

[↑ back to top](#)

Finance Documents

The RasGas II and RasGas 3 lending documents for the issuers provide a combination of project and corporate-style covenants and limited credit protection and rights for senior-secured lenders compared with many other similarly rated project-finance transactions. The senior secured lenders will be party to the common security agreement (CSA), which establishes, among other things, covenants, cash flow waterfall requirements, events of and remedies for default, and security interests.

Intercreditor arrangements

The CSA governs the relative rights and obligations of the senior secured parties (bonds, bank lenders, and Exxon Mobil), concerning RasGas II and RasGas 3 senior secured indebtedness. This includes the decision-making process, voting, approvals, consents and waivers, and limitations on enforcement rights. The Exxon Mobil loans are generally subject to the same terms and conditions as the corresponding bonds and commercial bank loans, but subject to certain restrictions on such items as voting and initiation of enforcement remedies. The CSA prevents any modification to the bonds or bank lending agreements without the written consent of the bond trustee or the applicable bank lender representative. A decision by the common security trustee to take enforcement actions with respect to any actionable event of default is subject to a percentage approval of total bond and bank holders, but not Exxon Mobil loans and hedge lenders. Bond holders may always accelerate their bond according to the terms and conditions, but enforcement against the security might require consent of the bank lenders and, therefore, might be blocked. Bondholders and banks generally, however, have similar economic interests in the project and therefore should align their actions.

Debt caps and prepayments

The CSA limits the use of senior debt proceeds for capital expenditure for trains 3, 4, 5, 6, and 7 to \$10 billion, but also caps debt to various lower amounts in the event of delays or noncompletion of trains 5, 6, and 7. The debt caps, which can be exceeded if sponsor completion support is provided for borrowings above the applicable cap, range between \$5.25 billion and \$7.25 billion subject to certain completion events of the first and second additional trains, respectively, after train 4 is completed. RasGas II and RasGas 3 are required, in limited situations of severe completion delays for the first additional train, to mandatorily prepay debt in excess of the \$5.25 billion cap. In such a case, banks will be prepaid first pro rata, before the bondholders receive prepayment. In other situations such as an unremedied event of default for more than 180 days, senior debt holders (excluding Exxon Mobil and hedge providers) can direct the security trustee to make a call on the completion support provided by the sponsors or their affiliates. Again, the completion support would be limited to repayment of debt over the required debt caps in those situations.

Additional senior debt and historical and forward-looking DSCR tests

Additional debt (in addition to the caps referred to above) is allowed, although relatively restricted. Except for certain kinds of new debt (such as new senior debt replacing existing senior debt or certain hedge arrangements), no debt will enjoy the benefit of the security package or otherwise have the benefit of the stipulations under the CSA or be senior debt unless one of the three requirements below is met:

- The debt-service coverage ratio (DSCR) test, which consists of an historical and forward-looking DSCR calculation, is met. The DSCR test is normally equal to cash flow after paying expenses and capital expenditures divided by debt service for the period. Trains 3 and 4 have a historical test of at least 3.0x DSCR based on actual operating revenues and costs over the past 12 months for trains 3 and 4, along with annualized revenues and costs for any other train that achieved completion during the previous 12 months. This amount, however, is adjusted for any temporary reductions in production of a nonrecurrent nature during these 12 months. This is an unusual feature that reduces the value of the test. There is also a forward-looking test of 3.0x minimum and 3.25x average based on revenues and costs of the most recent forecast, although this uses the lower of five-year historical or forecast prices after inflation adjustments. The test includes production revenues from trains 3, 4, and 5, unless the time of calculated completion for train 5 is delayed by two or more years, in which case production of train 5 will not be included

unless completion support has been provided. The test also includes production revenues from all other trains that have been completed, have contracted capacity, and are subject to performance requirements. In addition to the contracted volumes, 10% of the total assumed LNG production will be added as revenues (subject to the total expected LNG production). This is another unusual feature that lessens the credit support of the test.

- A rating affirmation if bond debt remains outstanding and there is consent from the majority of the commercial bank lenders.
- The majority of all senior lenders (excluding Exxon Mobil and hedge providers) consent.

Other requirements of additional senior debt incurrence include no default, and use of proceeds only for permitted activities.

Distribution tests

Distributions are permitted monthly if fairly high DSCR thresholds are achieved, but thresholds decline as more trains are completed. Provided that there are no defaults, distributions are permitted if DSCRs exceed 3.0x on a last-12-months and next-12-months basis. When train 5 reaches completion, however, the test steps down to 2.5x, if the 3.0x historical test is passed. Again, when train 6 reaches completion, the test drops to 2.0x, provided the 2.5x historical test is passed.

Reserves

There are six-month debt-service reserve accounts (DSRAs), funded with cash at closing from proceeds or current cash balances. There is no maintenance reserve. RasGas II and RasGas 3 control the DSRAs, subject to certain events. The cash in the DSRAs may also be provided by acceptable credit support.

Permitted investments

RasGas II and RasGas 3 can invest in short-term (up to 180 days) U.S.-dollar-denominated obligations subject to rating targets set at the 'A' level for state, bank, or corporate-related investments; 'A-1' for investments in commercial paper; or 'AAA' in case of money market funds.

Events of default

Events of default are generally standard and are subject in certain cases to materiality conditions and cure periods. Events of default include: noncompliance with finance documents; acceleration of any debt exceeding \$50 million; expropriation; bankruptcy; or a change of control. Payment defaults under the bonds and other senior debt are also actionable events of default.

Accounts and cash flow waterfall

The account structure is much weaker than typically seen in project finance transactions. There are only a few accounts but all are essentially controlled by the relevant borrower subject to the conditions in the CSA. The main accounts are the collection accounts for each of RasGas II and RasGas 3 into which all sales revenues are remitted. Other accounts include the disbursement accounts (for proceeds of senior debt), DSRAs, assets sale proceeds accounts, insurance proceeds accounts, and expropriation compensations accounts. All these accounts must be held in London. Other non-Qatari accounts may be set up in any location in which the senior lenders could obtain a perfected, first-priority security interest (at similar standards to U.K. and U.S. law) in them. The borrowers may also open and maintain accounts in Qatar for capital expenditures and funding operational costs. There is no security over these Qatar-based accounts.

Although the structure of the cash flow waterfall (see text box below) is similar to other project financings, the control mechanism of the operational accounts (the collection accounts, the DSRAs, and any other corporate accounts) is very different in that the borrowers control the accounts and disbursement of funds, subject to an accounts control event, rather than the common security trustee, as would be the case in customary project financings. The common security trustee will not provide direct oversight over the operational accounts other than receiving certificates from the issuers stating their compliance with the stipulations of the cash waterfall and

other requirements. To withdraw funds from the disbursement accounts, the relevant borrower must certify, among other things, compliance with any applicable restriction in finance documents as to the use of proceeds from debt issuance, for permitted uses of senior debt. Accounts control events include failure to comply with the cash waterfall requirements, payment defaults, nonpayment under the completion support provided by the sponsors, a change in control, expropriation action, bankruptcy of either borrower, and any common event of default in respect of which senior secured lenders can instruct the common security trustee to assume control over the operational, disbursement, and any other secured accounts. The common security trustee will also control all of the accounts in case of an enforcement direction.

RasGas Cash Waterfall

The cash waterfall from the collection account is as follows:

1. Trustee costs
2. Payments to the State of Qatar;
3. Operating costs (including maintenance expenditures);
4. Pro rata payments of senior debt;
5. Deposits into the DSRAs;
6. Capital expenditures; and
7. Distributions.

Funds not allowed to be distributed, due to a failure to meet the distribution requirements, may be applied to items 1 to 6 at the borrower's discretion. Distributions blocked may nevertheless be released if acceptable credit support is in place.

Change of control

The sponsors are required to maintain a direct or indirect ownership share of 51% for QP and 21% for Exxon Mobil.

Force majeure

Lenders in this transaction assume the usual force-majeure risks such as war, adverse weather conditions, governmental actions, strikes, or counterparty development that might interfere with the production of LNG and other products and the transportation and regasification processes. The contractual arrangements include lack of production from the North Field as a force-majeure condition. There is a modest degree of force-majeure risk in this transaction given the large array of operations and counterparties included in the project's base-case plan. Nevertheless, the diverse nature of the global operations suggests that force-majeure risk on the counterparty side is more diversified than it usually is in a single-asset project finance transaction. Business interruption insurance is not present in this transaction to provide cash flow for debt servicing during and after a force-majeure event, but Standard & Poor's expects that the sponsors would be willing and able to support the project if such problems arise.

[↑ back to top](#)

Technology And Operations: Low To Moderate Risk

Technology risk is low for trains 3, 4, and 5, the C-LNG ships, and Zeebrugge, Spain, and U.S. terminal works. Technology risk is moderate for trains 6 and 7 and the L-LNG ships.

LNG liquefaction

Technology risk is low for RasGas II trains 3, 4, and 5, because they have the same basic design and equipment as the successful Ras Laffan trains 1 and 2. Train 3 has been operating successfully for more than one year, and the EPC contract has performance test requirements that ensure a level of performance is achieved. Trains 6 and 7 will introduce some modest technology risk due to the use of new technology to overcome the size limitations of current cooling units in order to increase capacity to 7.8 mtpa.

To achieve the larger throughput, RasGas 3 will add a second nitrogen cooling loop to the existing

cooling design that has proved successful in trains 3, 4, and 5. Air Products currently produces the proven cooling loops and has designed the new cooling process for trains 6 and 7. Air Products has vast experience with LNG cooling technology, and Stone & Webster has concluded that Air Products has a good track record with successful deployment of new processing technologies. Because the new nitrogen cooling loop is being added to a proven design, if the technology does not work, trains 6 and 7 would each still be able to produce about two-thirds of their planned capacity.

LNG tankers

The C-LNG tankers that RasGas II will rely on introduce no technology risk because these tankers have been produced for many years by Korean shipyards and they enjoy a solid performance record.

RasGas 3 is exposed to modest technology risk, however. It seeks to gain economies of scale by using a much larger vessel for the long-haul routes, mainly Qatar to the U.S. If successful, the company will gain an additional competitive advantage in the LNG market. RasGas 3 plans to use two types of large LNG vessels, either the Q-Flex and/or Q-Max design. Q-Flex vessels will hold about 209,000-216,000 cubic meters (cm) of LNG while Q-Max ships will hold about 253,000-264,000 cm, and both can navigate the Suez Canal. RasGas 3 will need up to 24 large-size LNG tankers, which will be either the Q-Flex or Q-Max size. The main technology considerations for the scale up are the sloshing effects (that is, the agitation of liquid in a contained vessel) on ship performance; the ability of the membrane containment system to bear sloshing loads over the ship life; and on-board regasification, which is not commercially proven. The L-LNG vessel will use diesel fuel for propulsion and will recapture boil-off gas with on-board regasification.

Several items mitigate the risk associated with the increase in tanker size. The sponsors, shipbuilders, and membrane technology licensees have all been active in the technical qualification of the L-LNG vessels. Both Q-Flex and Q-Max vessels have successfully completed technical qualifications with the licensor fully engaged in the process, which provides some comfort that expected performance is achievable. Secondly, LNG regasification is well proven on land so, although the at-sea application is new, the overall technology is well understood. Finally, the Korean shipbuilders will be assuming the construction risk in the L-LNG building contracts, by accepting exposure to material damages for failure to meet performance requirements. Additionally, the ship owners that RasGas will enter into long-term time charters with will also be exposed to material penalties if ship performance is not adequate.

Operations and maintenance

Operations and maintenance (O&M) risk is low and unit costs will likely be very favorable due to economies of scale. RasGas OpCo will perform all operations and maintenance activities for RasGas II and RasGas 3. RasGas OpCo, which was established as the operating company for Ras Laffan, has had the experience of managing trains 1, 2, and 3 for eight years. Lenders benefit from RasGas OpCo not only for strong O&M performance, but also a large reduction in unit costs through O&M of seven trains. Unit costs are further reduced because RasGas OpCo also performs functions for certain other projects in Ras Laffan City. It also manages gas-well drilling operations for Qatargas II (a related entity of QP and Exxon Mobil) and will do so for upcoming gas-to-liquids projects. It also will operate Exxon Mobil's Al-Khaleej gas plant, which is located with the RasGas facilities, and will operate the helium plant in RasGas II that L'Air Liquide S.A. (A+/Stable/A-1) is establishing. RasGas II and RasGas 3 expect economies of scale will materially reduce their O&M costs.

Insurance

The lack of business interruption insurance is an important risk for this transaction, given the large number of complex operations and unusually high reliance on third parties to perform. Such insurance is common in project-finance deals, but noticeably absent in this one. Furthermore, the issuers have limited cover for catastrophic events in which case proceeds received under the insurance are unlikely to cover debt repayment. In addition, given the expectation that insurance will be shared with other entities, claims by those entities may increase the insurance premium or reduce the cover for the issuers. Finally, the projects lack insurance for acts of terrorism.

The lack of business interruption insurance is partially mitigated by the importance of the project to the sponsors, which have adequate liquidity to temporarily support RasGas II and RasGas 3 if a portion of the business is temporarily interrupted. Also, stress tests have shown that the project can withstand sustained production interruptions at trains 6 and 7.

[↑ back to top](#)

Competitiveness And Markets

Global perspective

RasGas II and RasGas 3 are, or will be, selling contractually into markets whose fundamentals indicate long-term sustainable growth in natural gas demand, but inadequate domestic production to meet that demand at normalized pricing. The entities should be well placed to secure sales of their noncontracted volumes of LNG because LNG is becoming increasingly important as a fuel, driven by higher oil prices, lower technical costs, and environmental considerations. North America is a key market for natural gas, with an average annual growth rate of nearly 10%. European LNG demand is likewise increasing as a consequence of declining indigenous production.

Gas Strategies, the independent market consultant for this financing has concluded that, on a free-on-board basis, RasGas II and RasGas 3 enjoy a significant cost advantage over virtually all other LNG supply sources, current or planned, that they will compete against. Their competitive position is strengthened by a low-cost supply position, resulting from a combination of geographical location, low upstream production costs, and economies of scale in liquefaction and shipping. This low-cost position gives the entities greater flexibility than other LNG suppliers to optimize supply positions between markets, and it should be a source of competitive strength in the medium term.

Although there is a lack of contractual sales following the start-up of trains 4 and 5 and the start of its SPAs, RasGas II should have little problem selling the noncontracted output given its competitive position. During 2006 and 2007, RasGas II must find short-term outlets for significant volumes of LNG. These quantities represent less than 20% of the global short-term LNG market, which itself represents 10% of the total global gas market, according to Gas Strategies. RasGas II has also received requests for LNG volumes well beyond those expected to be available. Hence, Standard & Poor's considers the risk associated with placing the currently unsold volumes as low. The marketing committee for RasGas II is the same committee that manages LNG sales for Ras Laffan and trains 1 and 2. The committee is well experienced and has a good short-term market sales record. Additionally, RasGas II also has a number of master spot-sales agreements in place with several key customers, including British Gas Trading Ltd. (A/Stable/--), BP PLC (AA+/Stable/A-1+), Carboex, CMS Energy Corp. (BB/Stable/B-1), ENI SpA (AA/Stable/A-1+), Royal Dutch Shell PLC (AA/Stable/A-1+) and Tractebel, which should ease spot-sale challenges.

India

The Indian economy is growing at about 6% to 7% per year, but growth is hampered by the lack of infrastructure and could be higher. Natural gas demand in India is increasing by about 6% per year according to the U.S. Energy Information Agency (EIA), and is used primarily in fertilizers, industry, and power generation (see Table 2). Although all sectors are growing, power generation should account for most of the growth in natural gas consumption. Northwest India is a major growth area, and most domestic natural gas is produced there in the State of Gujarat. The natural gas supply deficit in Gujarat and northwest India, however, is attractive to RasGas because most of India's new natural gas reserves are located off the southeast coast, which would be costly to deliver to northwest markets. Coal is not abundant in the northwest markets either. So, although coal generation will increase nationally, the lack of adequate coal transportation facilities is likely to make many coal-generation projects unattractive to many northwest markets for some time. Natural gas is likely to be the fuel of growth for the power sector, if affordable. Growth in the power sector was supported by policy changes in 2003 to increase competition in the electricity generation sector. Among these policy changes was the Electricity Act of 2003, which, although still a work in progress, includes a tariff system that supports private investment in the sector. There is also the potential competition to LNG that could come from natural gas imports from Iran. Officials from Iran and India are assessing a 2,600 km, \$4.3 billion pipeline through Pakistan that

would deliver natural gas from Iran's South Pars field to northwest India by 2010.

Table 2 India Natural Gas Demand And LNG Imports				
	2005	2010	2015	2020
Use (bcm per year)				
Power	9	38	52	78
Fertilizer	7	17	18	3
Distribution	1	3	7	9
Industry and steel	7	12	12	13
LNG imports (bcm per year)				
Base case	4	33	37	48
High growth	4	33	48	55
Low growth	4	22	33	40
Source: Gas Strategies. LNG--Liquefied natural gas. bcm--Billion cubic meters.				

Spain

Spain is the fifth-largest energy consumer in the EU, with natural gas sales in 2003 amounting to about 24 billion cubic meters (bcm), representing 14% of the country's primary energy supply. Gas demand in Spain is still in a high growth phase, with sales having risen some 14% in 2003, historically driven by the industrial and residential/commercial sectors. The market is forecast to grow to 51 bcm per year by 2020, with the power sector as the main driver. The market in Spain is fully open to competition, with more than 70% of the gas that is consumed in the country now bought through the liberalized market. Liberalization is most dominant in the industrial sectors. Spanish gas supplies come by pipeline from Algeria and Norway, although Spanish legislation effectively caps Algerian supplies at 60% of national supply. There are four existing LNG terminals and another two LNG terminal projects under construction, including the Sagunto terminal to which RasGas II will deliver Endesa SPA LNG volumes. Construction of a new direct pipeline between Spain and Algeria is due to start in 2005. If all these projects go ahead, import capacity will be in excess of market demand, with the greatest surplus being in 2006. This situation, however, is unlikely to present serious problems to the market participants. Contracted imports from Trinidad are likely to be diverted to the U.S., and this alone will clear the majority of the surplus up to 2010. Beyond this point, new terminal capacity will be available in the U.S., and the Spanish market and prices are likely to become increasingly closely coupled to the U.S. market.

Italy

Gas Strategies reports that Italy is the third-largest gas market in Europe, with sales in 2003 of about 72 bcm, representing 35% of the country's primary energy supply. Demand is primarily in the north of the country, close to where the Adriatic terminal will be constructed, and demand growth has averaged 4% per year over the past four years. The Italian gas market has good growth prospects, with the power sector the main engine of growth. Gas Strategies' central case demand forecasts that the Italian gas market will grow to 103 bcm by 2020 from about 76 bcm currently. Gas imports, which account for about 85% of supply, will increase to meet the growing demand, given the falling indigenous production. That said, the Italian gas market is currently oversupplied due to the fact that long-term contracts are in excess of demand.

Edison's gas supply strategy aims to replace gas purchases from ENI SpA (AA/Stable/A-1+), the dominant market leader, via organic growth and third-party long-term contracted volumes, in order to provide more competitive supply for its thermoelectric production and gas clients. The SPA with RasGas II is a key supply contract for Edison. Furthermore, the Adriatic terminal represents about 38% of Edison's planned capacity additions by 2008.

Northwest Europe

The European gas market has been growing by 3.7% on average over the past 10 years, with the power sector providing the main engine of growth, a trend that should continue. Given gas demand

growth forecasts of about 1.9% per year and declining indigenous European production, European dependence on natural gas imports through pipelines and LNG will rise. Of the 269 bcm of gas that was imported into Europe in 2003, 44 bcm (about 16%) was in the form of LNG, according to Gas Strategies.

European LNG reception terminals in Europe currently provide 49 mtpa (representing 68 bcm per year) of import capacity. There are, however, a number of new terminal projects under construction or approved for construction across the region (such as in the U.K., Spain, Belgium, and Italy), which are forecast to increase European LNG import capacity to 69 mtpa (94 bcm per year) by 2009.

The Zeebrugge terminal occupies a strategic location and has good links to the European gas grid, with international links to the U.K. grid. Physical trades on the Zeebrugge hub are now at the annualized level of about 10 bcm per year. The expansion of the LNG terminal at Zeebrugge and the potential need to re-export U.K. imports should drive market liquidity. In addition, RasGas II has secured a potential marketing arrangement with EMGME to mitigate the risk of insufficient market liquidity. Furthermore, affiliates of RasGas II's sponsors have LNG import capacity under construction in the U.K.

Table 3 Liberalized Gas Price Projections*			
Year	Base case price scenario	Low case price scenario	High case price scenario
2005	4.93	4.7	5.39
2010	3.30	2.67	4.16
2015 onward	3.15	2.75	3.75

*U.S. dollar 2005 real terms. Source: Gas Strategies.

U.S.

There is solid consensus that the U.S. natural gas market will continue to rely on imports to balance rising demand over the next 20 years, with LNG forming the majority of these imports. Domestic and nearby production will increasingly fall short of rising demand, much of which is likely to come from the power generation sector, at least in the medium term. In its 2005 outlook, the U.S. EIA forecasts natural gas demand to rise to about 30 tcf in 2020 from about 22 tcf in 2004. The EIA also expects that the share of LNG in the total natural gas supply will rise to about 18% in 2020 from just less than 3% in 2004. LNG imports have been modest but will likely rise from 2006 as new and expanded U.S. regasification terminal capacity comes on line. Similarly, Gas Strategies forecasts total North American gas demand to rise to about 31 tcf by 2030 from about 25 tcf in 2004, with power generation providing most of the near-term demand. Gas Strategies also forecasts that the introduction of coal into the capacity mix after 2010, coupled with slow residential and industrial growth, will lead to a slower rate of growth in natural gas demand. Importantly, the consultancy expects that Henry Hub natural gas prices will fall slightly in the near term, but remain at about \$4 per million BTU (mmbtu) through the debt tenor in real terms. EIA forecasts a similar trend, albeit at slightly lower pricing.

LPG and condensate markets

LPG and condensate are an important part of RasGas' production portfolio and should provide about 30% of total revenues by 2010 according to the project's base case forecast. Purvin & Gertz (P&G), an independent expert, has analyzed global LPG and condensate markets for RasGas. Generally, P&G does not expect RasGas to have any problems selling all volumes of its LPG and condensate into global markets. Standard & Poor's agrees with this conclusion, although we note that sales are strongly focused on a single market, Asia, and that production is exposed to price risk.

An international market for LPG is well established, with a base demand from residential and commercial fuel feedstock and surplus, flexible demand from ethylene plants. The flexible demand acts as a balancing mechanism for supply in excess of the base demand and is highly price

sensitive. Nevertheless, this mechanism generally absorbs any oversupply. Hence, the risk to RasGas is a price risk rather than a volume risk.

RasGas will produce both field and plant condensate and P&G concludes that the projects should be able to market all production. The plant condensate is similar to refinery naphtha, for which a substantial, established, and growing market exists as feedstock for ethylene production. QP has extensive experience in marketing plant condensate and markets plant condensate produced by RasGas' current operations. The sponsors have significant experience selling field condensate produced by RasGas, and P&G confirms that historical pricing data shows that this marketing approach has captured essentially all of the value potentially available in recent years.

Condensate pricing

RasGas' field condensate will likely be used primarily in the Asia-Pacific region as a refinery feedstock. This is in line with RasGas' past marketing experience. Consequently, the primary price will likely be its valuation by refiners as a refinery feedstock in competition with other condensates and crude oils.

Plant condensate is a material similar to naphtha, and is expected to be sold in the international naphtha market as a petrochemical feedstock. Its price is expected to be closely linked to the price of naphtha and other similar light condensates. Prices have, therefore, been projected on a basis consistent with Platt's quotations for free-on-board naphtha in the Arabian Gulf market.

[↑ back to top](#)

Legal Structure

The legal structure of the RasGas II and RasGas 3 financing is very different from their predecessor in Qatar and most other highly rated project financings. The previous Ras Laffan transaction took the form of a more traditional project financing, employing a special-purpose entity, a pledge (through a series of complex mechanisms) over a broader range of assets, and generally a closer compliance with the forms of single-asset financings that have been developed over the past 20 years. Qatari Law has contained certain restrictions that have adversely affected the ability to structure a project in Qatar as a "traditional" project financing. For example, there has historically been no ability to take charge over onshore accounts, and Qatar has not historically had a developed body of insolvency law. Prior projects in Qatar, therefore, do not contain all elements of a traditional project finance security package.

The transaction under review has a structure more akin to a corporate financing than any of the preceding projects in Qatar. Nevertheless, collateral security is uncommon in medium-to-high rated investment-grade corporate financings, and RasGas II and RasGas 3 have structured their transactions with their vertically integrated operations to be viewed as such. The security package includes the following:

- A charge over the accounts in England (but not over accounts in Qatar) and security interests over accounts in other jurisdictions;
- Expropriation compensation;
- Asset sale proceeds;
- Insurance proceeds and reinsurance proceeds;
- Proceeds of a material asset sale (that is, representing 5% or more of net worth);
- Long-term SPAs (long-term means anything over 12 months and 5% of LNG production for any year, or over 60 months) except for a sales agreement with Ras Laffan; and
- All operating revenues.

There is no security over the physical assets, the land, other fixed Qatari assets or accounts, or the sponsors' ownership interests in the borrowers. Standard & Poor's notes, however, that the perfection and enforcement of some securities may also not be possible if the borrowers are insolvent.

Various aspects of prior financings remain by the Emiri decree (that is, the decree issued by the Emir that enabled the project to be established) and the project enjoys the grant of reserve rights, and a period during which the tax of RasGas II and RasGas 3 is paid by the Qatari government. Concession

rights granted by the government are enforceable against the government and the development and fiscal agreement contains an effective waiver of sovereign immunity.

Since ratings were initially assigned to the Ras Laffan transaction in November 1996, Qatar has continued to evolve as a business and commercial jurisdiction. Since 2002, the government has encouraged foreign investment to support the development of its various energy industries. Nonnationals are now permitted to hold shares of Qatari companies. Shari'ah (Islamic law) remains restricted to family, testator-related, and criminal matters. A new constitution was announced in June 2004 and will come into effect in 2006. Qatar has become a signatory to the United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, June 10, 1958), and updated its civil code with effect from September 2004. Standard & Poor's understands that, under the revised civil code, it is possible to take security over accounts and cash flow. Counsel to the project has indicated that the compliance record of Qatar in enforcing arbitral awards and court judgments is excellent.

Legal status of issuers and joint venture agreement

RasGas II and RasGas 3 are Qatari joint-stock companies. RasGas II was established in March 2001 and RasGas 3 in July 2005. Both are owned 70% by QP and 30% by an Exxon Mobil subsidiary. The issuers do not fully comply with Standard & Poor's criteria for special-purpose vehicles (SPVs).

The joint-venture agreements and articles of association limit the entities' activities and provide for special resolutions and extraordinary resolutions that require at least the approval of both QP and Exxon Mobil. These resolutions focus on key decisions that could affect the business of RasGas II and RasGas 3 and gives Exxon Mobil, the minority shareholder, an important level of control.

Cross guarantee of senior debt obligations

RasGas II and RasGas 3 will issue the initial debt under the same terms and conditions, and they will follow these conditions for their subsequent financing. Although owned by the same sponsors, RasGas II and RasGas 3 are separate legal entities and are raising finance separately. They guarantee each other's senior debt obligations, however. These guarantees are unconditional, absolute, and irrevocable for full and prompt payment. The guarantees are senior debt obligations, rank *pari passu* with all other senior debt obligations, and are secured by the security package.

Legal opinions

Final ratings are subject to satisfactory final legal opinions.

Governing law

The bond indentures and the CSA are governed by New York law. Other documents are governed by New York, English, or Qatari Law.

[↑ back to top](#)

Counterparty Risk: Moderate

Given their large size and nearly global operations, RasGas II and RasGas 3 are exposed to the creditworthiness of numerous counterparties, the most important of which are sponsors QP, Exxon Mobil, Petronet, Edison, Endesa, DISTRIGAS, Fluxys, and Ras Laffan City.

Qatar Petroleum (QP)

The 'A+' foreign currency long-term corporate credit rating on Qatar Petroleum (QP), Qatar's national oil and gas company, reflects the ratings on the State of Qatar (A+/Positive /A-1), its sole shareholder. The foreign currency long-term ratings on the two entities are identical, in view of QP's close links with the government and its strategic importance to the national economy.

The rating on QP reflects its key role in the government of Qatar's development plans. In addition, the government has placed key ministers at the top of the management. The managing director

and chairman of QP's board of directors is the second deputy prime minister and the minister of energy and industry, while the vice-chairman is the finance minister, highlighting the company's close links with the government. QP is the most important contributor to Qatar's economy and state budget, with oil and gas revenues (mostly raised from QP) representing 64% of total general government revenues for the fiscal year ended March 31, 2004. One of the main strategic development targets of the government is to expand the oil, gas, and petrochemical sectors that are QP's main areas of production and exports. QP has a cash-call account with the Ministry of Finance and its balance can go either way, thereby shifting liquidity from one entity to the other. Nevertheless, QP has its own accounts, which are separate from the state budget and are audited and published.

Exxon Mobil

The 'AAA/A-1+' corporate credit ratings on Exxon Mobil reflect the company's outstanding competitive position in all facets of the oil and gas industry and conservative financial policies. Although Texas-based Exxon Mobil operates in many different segments of the energy industry, its exploration and production (E&P) unit is by far the most important contributor to profitability and cash flow and is the driver of future growth. Exxon Mobil's proved reserves total about 22 billion barrels of oil equivalent (boe), which comprises one of the largest resource bases among oil companies. Depletion risks are mitigated by a long reserve life (13.9 years) and a large resource base (estimated at 73 billion boe) from which future commercial projects are likely to arise. In 2004, Qatar accounted for 1.7 billion boe of Exxon Mobil's 1.8 billion boe proved reserve additions. Exxon Mobil has not sacrificed competitiveness with its size. Finding and development costs and production costs are better than average due to the company's technical expertise, scale, land holdings in attractive areas of exploration, and abundant capital that enables opportunistic investments.

Petronet

The Indian government created Petronet in 1998 to improve competitiveness in the Indian gas sector, which has a long-standing supply deficit. Petronet is owned by:

- GAIL (India) Ltd. (12.5%). GAIL is India's leading gas transmission and marketing company.
- Oil and Natural Gas Corp. Ltd. (ONGC) (12.5%). ONGC is India's largest E&P company.
- Indian Oil Corp. Ltd. (IOCL) (12.5%). IOCL is India's largest downstream company.
- Bharat Petroleum Corp. Ltd. (BPCL) (12.5%). BPCL is one of India's largest refining and distribution companies.
- Gaz De France (AA-/Stable/A-1+) (10.2%).
- Asian Development Bank (AAA/Stable/A-1+) (5.2%).

The public hold the remainder.

Petronet is essentially a service company that purchases LNG, regasifies it, and sells the natural gas to GAIL (60%), IOCL (30%), and BPCL (10%), who then sell it to mainly industrial users and power producers, and others. Petronet is not rated and its small size introduces credit risk to RasGas II.

Endesa Generacion

Endesa Generacion is a wholly owned subsidiary of Endesa S.A. (A/Negative/A-1), which holds Endesa's generating and mining and coal assets. Endesa Generacion expects to use the gas supplied under the SPA as a feedstock for its electricity generation assets. Endesa is the largest electricity generating company in Spain, with a 49% market share and 41,000 MW of plant. It is also the largest electric utility in Spain, with total annual electricity sales of 134,000 gigawatt per hour. Endesa guarantees Endesa Generacion's obligations up to \$36 million for any given year during the SPA, or about 23% of the annual SPA revenues. RasGas II has a developed relationship with Endesa, and sold LNG spot cargoes to an Endesa subsidiary in 2004.

Edison

The 'BBB+/A-2' corporate credit ratings on Edison reflect its strong business position as Italy's

second-largest energy utility, stable cash flow from regulated power sales, the slow opening of Italy's energy markets to competition, and group support from shareholders. Negative factors include the risks associated with the company's competitively exposed generation and supply activities, increasing energy management risks, and reliance on a significant investment program-- which has some execution risk--to partially fuel future growth. Edison receives material support from its shareholders, which include Electricité de France (EDF; AA-/Negative/A-1+), Fiat SpA (BB-/Negative/B), the private investment firm Carlo Tassara SpA, and a group of financial institutions. The company's stand-alone credit quality is in the mid-'BBB' category. Standard & Poor's acknowledges the possibility of a change in shareholder structure in the short term, which could affect the ratings on Edison.

Distrigas

Distrigas is a former state monopoly but still supplies about 90% of the Belgian gas market, which was approximately 16 bcm in 2004. Demand is forecast to increase to 24 bcm by 2020. This increase will be driven particularly by gas-fired power generation. Distrigas, a 57.25% owned core subsidiary of Suez S.A. (A-/Stable/A-2), is the marketing arm of the previously integrated Belgium gas monopoly that was unbundled in 2001. The other company formed at that time was Fluxys, the owner and operator of the Zeebrugge LNG terminal. Distrigas is involved in LNG trading and shipping, and has control of two LNG carriers. It also controls much of the capacity infrastructure rights in Belgium and has a 10% interest in the U.K. interconnector pipeline.

Korean shipyards

The Korean shipyards are not rated, but their payment obligations under the shipbuilding contracts are guaranteed via letters of credit from a highly rated entity, usually the Korea Development Bank (foreign currency A/Stable/A-1) or Export-Import Bank of Korea (foreign currency A/Stable/A-1).

Ship-owning companies

RasGas will depend on ship-owning companies to perform under the LNG ship time charters. Usually, the ship-owning company will be a shell owned by global shipping companies, although Qatari-owned entities that are indirectly related to QP are expected to hold interests of 25%-60% in each of the ships. The sponsors must guarantee the ship-owning entities time charter obligations on a joint and several basis. Exposure to ship-owner insolvency is low due to the "quiet enjoyment" clause in the time charter (which would enable RasGas to continue using the vessel even if the ship-owning company becomes insolvent).

RasGas OpCo

QP and Exxon Mobil established RasGas OpCo in 2001. RasGas OpCo operates Ras Gas II and RasGas 3 under an O&M agreement signed in July 2002 between Ras Laffan, RasGas II, QP, and Exxon Mobil Middle East Gas Marketing Ltd. A not-for-profit entity, RasGas OpCo is reimbursed for its costs by the projects for which it undertakes work. Board decisions have to be taken with unanimous votes and the entity has a very limited ability to overspend. Shareholders must approve all major expenditures.

[↑ back to top](#)

Financial Structure And Strength: Moderate

The total finance requirements for RasGas II and RasGas 3 of about \$13.7 billion will be financed with about 27% in equity, 22% in Exxon Mobil financing, and the remainder from bond and bank debt facilities. RasGas II and RasGas 3 are borrowing about \$4.6 billion now to complete trains 4 and 5 and prefund a portion of train 6, and expect to borrow another \$5.4 billion in 2007 and 2008 to complete trains 6 and 7.

RasGas II 2004 financial results

In 2004, RasGas II recorded net revenues of \$758 million, of which about \$471 million (net) were for LNG sales. Its key customer, Petronet, took just more than 2.0 million tons, but the project sold 1.6 million tons on a spot basis. The resulting net sales figure was due to some sales purchases from Ras Laffan to fulfill supply obligations. Income before taxes was \$342 million. In the first quarter of 2005, revenues were \$301 million, and volumes sold under the Petronet SPA were 0.7 million tons.

Net income for the first quarter of 2005 was \$173 million.

Taxes

Under the DFAs, the State of Qatar assumes the tax liabilities for RasGas II and RasGas 3 for different periods. Also, purchasers of gas, condensates, and other hydrocarbons are exempt from taxes on the export of such products.

Sources and uses

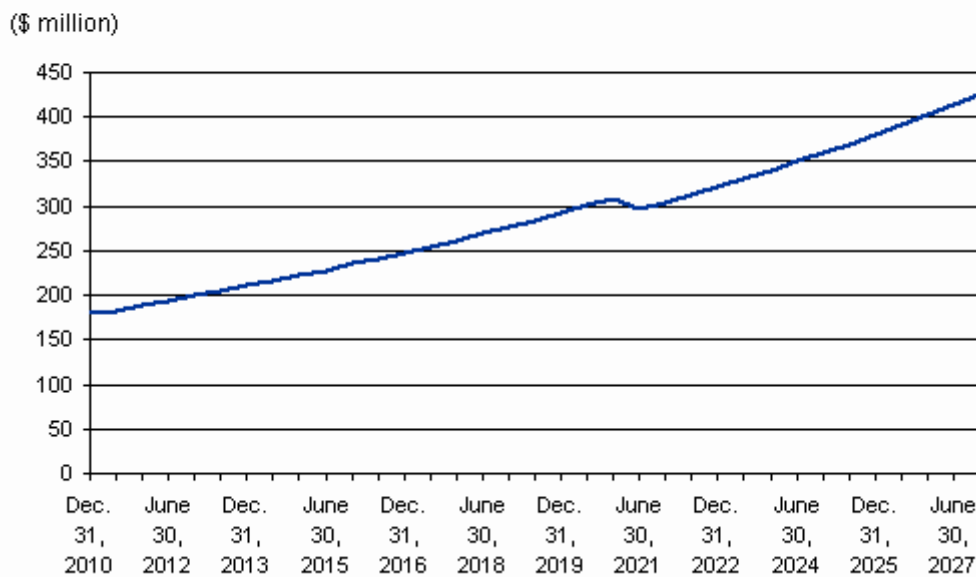
The sources and uses of cash are shown below in Table 4.

Table 4 Sources And Uses of Funds				
Sources (\$ mil.)		-	Uses (\$ mil.)	
Equity and cash contributed prior to financial close	3,525		Capital costs (trains 3 to 5)	4,179
Shareholder funding	130		Capital costs (trains 6 and 7)	8,700
Shareholder equity	3,655		Other capital costs	272
EM program debt	3,000		Total capital costs	13,151
Bank and bond program debt	7,000		DSRA and front end fees	504
Program debt	10,000			
Total sources	13,655		Total uses	13,655
DSRA--Debt-service reserve accounts.				

Bank debt is floating rate, exposing the project to interest rate risk, and matures from 2010 to 2020. The RasGas II bonds have two tranches, one maturing in 2020 (which is the last amortization year of the bank loans), with the second tranche beginning amortization in 2020 and maturing in 2027. RasGas 3 bonds will have the same amortization profile as the longer of the RasGas II bonds. Amortization is backloaded, as shown in Chart 2 below, but total debt service is level from 2010 to 2027, at about \$830 million to \$900 million per year.

Chart 2

RasGas Debt Amortization Schedule



Base case assumptions

RasGas II and RasGas 3 are expecting to increase to full production by 2010. Production volumes and price assumptions are provided below in tables 5, 6, and 7.

Table 5 RasGas Expected Sales Of LNG And Other Products											
	2005*	2006*	2007	2008	2009	2010	2011	2012	2013	2014	2015
LNG volumes (mtpa)											
Petronet	4.48	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70
KOGAS	0.31	1.12	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Edison	0.00	0.00	0.00	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70
Distrigas	0.00	0.00	1.57	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
Endesa	0.40	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Zeebrugge (Fluxys CSA)	0.00	0.00	1.58	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81
USEM 1	0.00	0.00	0.00	2.87	7.77	7.80	7.80	7.80	7.80	7.80	7.80
USEM 2	0.00	0.00	0.00	0.00	1.61	7.71	7.80	7.80	7.80	7.80	7.80
Uncontracted sales	0.56	0.73	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total LNG sales	5.75	7.34	11.12	16.97	23.48	29.61	29.70	29.70	29.70	29.70	29.70
By-product volumes											
Total field condensate (mmbbl)	9.92	12.82	19.71	30.61	42.92	54.35	53.98	53.44	52.90	52.37	51.85
Total plant condensate (mmbbl)	1.46	1.91	2.96	4.54	6.26	7.89	7.96	7.99	8.03	8.08	8.12
Total butane (mil. metric tons)	0.00	0.08	0.19	0.35	0.50	0.64	0.64	0.65	0.65	0.65	0.66
Total propane (mil. metric tons)	0.00	0.18	0.43	0.78	1.13	1.46	1.47	1.48	1.48	1.49	1.50
Total inlet gas (bcf)	323.86	421.10	650.82	1,009.81	1,411.73	1,790.51	1,796.14	1,796.14	1,796.14	1,796.14	1,796.14

*Figures for 2005 and 2006 assume production is limited to contracted sales or regasification capacity plus uncontracted volumes up to 10% of total LNG production. LNG--Liquefied natural gas. mtpa--Million metric tons per annum. mmbbl--Million barrels. bcf--Billion cubic feet.

Table 6 RasGas Nominal Base Case Product Pricing											
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Brent (\$ per bbl)	38.50	33.60	28.70	28.93	29.71	30.54	31.42	32.38	33.42	34.58	35.84
JCC (\$ per bbl)	38.25	33.95	29.53	29.68	30.28	30.98	31.81	32.74	33.78	34.93	36.20
Henry Hub (\$ per mmBtu)	6.39	5.87	5.06	4.54	4.64	4.80	4.98	5.19	5.41	5.66	5.33
Northwest Europe (\$ per mmBtu)	4.93	4.50	4.03	3.84	3.78	3.74	3.78	3.83	3.88	3.95	4.03
Field condensate (\$ per bbl)	40.27	35.79	30.89	30.95	31.71	32.55	33.45	34.44	35.53	36.72	38.02
Plant condensate (\$ per bbl)	38.21	33.50	29.19	29.40	30.12	30.91	31.78	32.72	33.76	34.89	36.12
Propane price (\$ per metric ton)	344.97	319.93	297.72	284.85	279.05	274.87	281.20	287.39	296.03	304.99	314.32
Butane price (\$ per metric ton)	343.76	312.15	283.85	276.58	274.00	269.69	275.22	281.52	289.10	297.97	308.16

mmBTU--million BTU. bbl--barrel.

Table 7 Pro Forma Financial Forecasts

(Mil. \$)	2005*	2006*	2007	2008	2009	2010	2011	2012
LNG revenue	794	1,143	1,738	2,755	4,332	5,849	6,172	6,440
Condensate revenue	410	521	671	1,034	1,509	1,971	2,043	2,086
LPG revenue	N/A	74	170	304	440	562	585	601
Other revenue	253	40	40	56	77	108	109	109
Operating costs	(794)	(857)	(1,246)	(2,018)	(2,910)	(3,881)	(4,201)	(4,475)
Cash flow after debt service	663	921	1,372	2,130	3,448	4,608	4,709	4,762
Debt repayments	0	0	0	0	0	180	373	393
Interest and commitment fees	56	156	308	402	513	546	532	512
Total senior debt service	56	156	308	402	513	726	904	905
DSCR (x)	8.25	5.89	4.45	5.29	6.73	6.34	5.21	5.26
Pre capital expenditure cash flow	607	765	1,063	1,727	2,935	3,882	3,805	3,857
	2013	2014	2015	2016	2017	2018	2019	2020
LNG revenue	6,685	6,950	6,810	7,204	7,562	7,914	8,235	8,550
Condensate revenue	2,134	2,187	2,246	2,310	2,378	2,448	2,517	2,585
LPG revenue	622	644	667	694	723	752	783	815
Other revenue	109	109	109	109	109	109	109	109
Operating costs	(4,596)	(4,712)	(4,746)	(5,080)	(5,852)	(6,519)	(6,783)	(7,083)
Cash flow after debt service	4,952	5,178	5,086	5,237	4,919	4,705	4,862	4,976
Debt repayments	415	439	463	488	516	546	577	610
Interest and commitment fees	490	467	444	421	393	364	334	301
Total senior debt service	905	906	908	909	909	910	911	911
DSCR (x)	5.47	5.72	5.60	5.76	5.41	5.17	5.34	5.46
Pre capital expenditure cash flow	4,047	4,272	4,178	4,328	4,010	3,795	3,951	4,065
	2021	2022	2023	2024	2025	2026	2027	2028
LNG revenue	8,858	9,203	9,535	9,849	10,179	10,478	10,632	9,727
Condensate revenue	2,649	2,710	2,768	2,824	2,879	2,932	2,904	2,569
LPG revenue	846	877	908	941	974	1,007	1,000	962
Other revenue	109	109	108	109	108	108	107	81
Operating costs	(7,378)	(7,698)	(8,059)	(8,455)	(8,851)	(9,102)	(9,118)	(8,401)
Cash flow after debt service	5,083	5,200	5,261	5,268	5,289	5,424	5,525	4,938
Debt repayments	601	635	672	710	750	793	838	0
Interest and commitment fees	268	233	196	156	115	71	24	(0)
Total senior debt service	869	868	867	866	865	864	863	(0)
DSCR (x)	5.85	5.99	6.07	6.08	6.11	6.28	6.49	N/A
Pre capital expenditure cash flow	4,214	4,332	4,394	4,402	4,424	4,560	4,662	4,938

**Figures for 2005 and 2006 assume production is limited to contracted sales or regasification capacity plus uncontracted volumes up to 10% of total LNG production. DSCR--Debt service coverage ratio. N/A--Not applicable. There is no LPG extraction in 2005 and no debt in 2028.

Breakeven pricing

The base case forecast, which includes full operations of trains 3 to 7, has favorable breakeven pricing as follows:

- Brent at \$10.36 per barrel
- Henry Hub at \$1.88 per mmbTU
- Northwest Europe at \$1.43 per mmbTU

Sensitivity analysis

The project shows robust performance under various sensitivity analyses. Only for the case in which product prices are fixed at 30% below the market consultants is the overall DSCR below 2x coverage. The minimum DSCRs have been measured over the term of the senior debt. The average DSCR is measured over the amortization period of the senior debt.

Table 8 Sensitivity Tests			
	Minimum DSCR (x)	Year in which minimum is reached	Average DSCR (x)
Trains 3 to 7 plus base-case price scenario	4.45	December 2007	5.84
Trains 3 to 7 plus low-case price scenario	3.05	June 2011	4.02
Trains 3 to 7 plus low-case price scenario less 30% in 2010-2015	1.23	June 2011	3.49
LIBOR plus 2% under a low-case price scenario	2.33	June 2008	3.45
12-month delay to construction of train 6 and six-month delay to train 7 under a low-case price scenario	2.34	June 2009	3.94
Trains 6 and 7 unavailable in the second half of 2011 under a low-case price scenario	2.04	June 2012	3.97
Construction of the Edison terminal delayed by 36 months under a low-case price scenario	2.81	June 2008	3.91
Liquids (LPG and condensates) prices 50% of low-case price scenario	2.25	June 2011	3.24

[↑ back to top](#)

Group E-Mail Address

InfrastructureEurope@standardandpoors.com

[↑ back to top](#)

[Disclaimers](#)

[Privacy Notice](#)

[Terms of Use](#)

[Regulatory Disclosures](#)

[Site Map](#)

[Help](#)

Copyright (c) Standard