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Financing Implications for LNG Projects by A.T. Marks

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OGEL (Oil, Gas & Energy Law Intelligence): Focussing on recent developments in the area of oil-gas-energy law, regulation, treaties, judicial and arbitral cases, voluntary guidelines, tax and contracting, including the oil-gas-energy geopolitics.

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Please contact **Editor-in-Chief** Thomas Wälde at twwalde@aol.com if you would like to participate in this global network: we are ready to publish relevant and quality contributions with name, photo, and brief biographical description - but we will also accept anonymous ones where there is a good reason. We do not expect contributors to produce long academic articles (though we publish a select number of academic studies either as an advance version or an OGEL-focused republication), but rather concise comments from the author's professional 'workshop'.

OGEL is linked to **ENATRES**, the electronic energy law, policy and economics information and discussion forum moderated by Thomas Wälde.

FINANCING IMPLICATIONS FOR LNG PROJECTS

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In the next several years, liquefied natural gas is expected to play an increasingly important role in energy markets throughout the world. Worldwide, LNG demand is expected to double by 2010 to 205MT and to grow to over 430MT by 2020. In North America as well as in other areas, traditional supply basins of natural gas are maturing and demand is fast catching up with remaining supply potential. As new domestic sources of natural gas become harder to find, many utilities and other consumers and distributors of natural gas are looking to LNG imports as an additional source of supply. Increased reliance on natural gas as the fuel of choice for new power plants in the United States, Canada and other countries has exacerbated this trend. At the same time, oil majors are seeking to create new outlets for production from new gas fields in Asia, Africa, Latin America and the Persian Gulf. With over 96% of the world's natural gas supplies located in places that are considered geographically remote, an estimated $200 billion is necessary to develop new LNG projects worldwide to accommodate projected demand around the globe.

Much – maybe most – of this investment will be undertaken by major oil and gas producers using their own cash reserves or with new debt raised on the strength of their existing balance sheets. Many LNG projects, however, will be financed on a project finance basis. "Project finance" in this context means the debt financing of a facility in which the financing

parties look principally to the cash flow generated by the operation of the specific project to repay the debt. The use of proceeds is limited to the project, and the lenders are structurally senior with respect to the project assets and cash flow. The security for the financing consists of all tangible and intangible assets of the project, including, most importantly, the project contracts that generate revenue or lock in supplies. As a result, the LNG facility can often benefit from greater leverage, boosting return on equity. This type of nonrecourse financing structure is particularly attractive to sponsors of projects being developed on a joint venture basis, since it insulates the balance sheets of the equity investors from the risks associated with the project beyond their initial investment.

In order to address the project financing implications involved for LNG development, we must first understand the LNG process. Using advanced technology, natural gas is converted from gas to liquid form (by cooling it to minus 260 degrees Fahrenheit). Next, the liquefied gas is shipped in special vessels to LNG terminals. These LNG terminals receive the liquefied gas and regasify it for delivery by pipeline to domestic markets. Depending on the quality and specifications of the LNG at a particular delivery point and the demands of the ultimate consumers, revenue may be derived from the sale or lease of plant capacity under tolling arrangements, from sales of natural gas directly, from generation of power at generation facilities linked to the regasification facility, or from sales of gas liquids or other byproducts. Project financing will be a necessary and integral part of LNG development at all steps in the value chain. For instance, separate financings can provide the funds necessary for upstream exploration and production of gas, the construction and operation of gasification facilities, dedicated vessels for shipping LNG, the construction of LNG terminals for regasification and storage, and the construction or expansion of hundreds of miles of gas pipelines on either end.

There are a number of implications in using project finance techniques in connection with an LNG project (discussed in more detail in the accompanying slide presentation). This paper focuses briefly on three major areas of concern: recent market changes; regulatory issues; and political issues.

Recent Market Changes

Changing market practices may significantly alter the risk profile for financing LNG projects. The traditional LNG trade was based on long-term purchase contracts entered into by investment grade highly credit-worthy entities with pricing and volume fixed for the entire life of the contract. Even now, many of the most readily financed new projects (like the Freeport project being built in Texas by Cheniere Energy, Inc., ConocoPhillips and their partners) rely on either tolling arrangements (in which the gas buyer also agrees to supply the LNG, paying in effect a service fee or capacity lease to the regas plant) or long term commitments from credit-worthy parties to take output from the plant. These long term contracts reflected the investors' primary concern with security and guaranteed revenue streams for the life of the loan. Rigid contract terms can be fatal for project economics, however, when LNG or gas markets move or if the buyer's credit erodes. Competition in the current market and the need for greater flexibility over time is challenging the necessity for traditional long-term purchase contracts.

In today's market, gas buyers are repeatedly requesting short- to medium-term purchase contracts with flexible pricing and volume commitments to adapt to changing market conditions and to remain competitive in the natural gas market. Although these short-term contracts provide little to no security for lenders providing the financing of these projects, these contracts do increase overall market competition for LNG products. This increased market competition has not only motivated companies to increase their market share, but is redefining the roles companies have played in the traditional LNG market. Tokyo Gas has increased its investments

in the upstream sector, including investing in a liquefaction plant in Australia. BP and Shell Oil Company have started leasing capacity at terminals, developing their own LNG regasification facilities (such as Shell's development of a planned Baja California facility together with California utility and energy trader Sempra Energy) and are extending their role into trading. Gas hubs emerging in the United States, Belgium and the United Kingdom are presenting opportunities for price arbitrage and advanced hedging strategies. Rapid growth in Middle East LNG supply may contribute to a convergence of price, at least in the Atlantic basin, and more flexibility in sourcing supplies and vessels.

The LNG market is evolving as we speak, and market changes are shifting the traditional project finance credit risks that suppliers, buyers and lenders have dealt with in the past. The credit risk is clearly shifting from the creditworthiness of a single entity to a broader market evaluation of LNG and natural gas. As LNG claims a larger share of gas imports and the global LNG infrastructure becomes more established, this trend should continue. Supply will be more assured. Volume risk may become less critical than price risk in forecasting future cash flows. Price volatility is becoming the greatest commercial and credit risk for new LNG projects and products. Concerns over managing price volatility could lead to increased balance sheet financing – mitigating the trend toward using nonrecourse project financing – or at least to higher debt service coverage ratio requirements.

In order to understand these risks, suppliers, buyers and lenders will be required to perform due diligence, which is always the key to successful project financings. Feasibility studies and a detailed review of all project documents by technical advisors, market experts, legal consultants, environmental consultants, and political consultants will help ensure that all risks have been properly identified and allocated to all participants, and mitigated to the extent it is possible and cost-effective to do so. The LNG market is definitely growing. The key question

will be at what risk to lenders, buyers and suppliers. Only if these risks are appropriately allocated to the parties best able and most willing to manage them will overall project costs be reduced.

Regulatory Issues

LNG projects also face intense regulatory scrutiny. In the United States, most LNG projects fall within the purview of the Federal Energy Regulatory Commission's (FERC). The U.S. Coast Guard also has jurisdiction over offshore projects. The FERC has a widely-praised policy of approving as many projects as comply with applicable requirements, allowing markets to pick the winners and losers and maintaining great transparency throughout the process. By assisting applicants with the pre-filing process, the FERC is able to speed application times considerably.

Some interesting new issues have arisen in obtaining government permits or other government approvals, particularly with respect to the scope of FERC jurisdiction and the interplay between federal and state oversight. The battle between national and state and local agencies can impede project development. In Mexico, Marathon Oil Company received timely federal regulatory approval and received a permit to build a Tijuana Regional Energy Center LNG Import Terminal but ran into difficulties with the local government. In California, litigation between the FERC and the California Public Utility Commission (CPUC) is currently underway regarding who has final jurisdiction over LNG projects in the state, particularly Mitsubishi Corporation's planned terminal in the Port of Los Angeles. This litigation was brought forth after the FERC announced an open door policy in which it decided not to impose open access requirements for LNG terminals and not to regulate the process for storage, withdrawal or regasification of liquefied natural gas (i.e., the LNG facility owner could provide LNG terminal service at the rates, terms and conditions mutually agreed with a customer). In the

Hackberry decision, the FERC clarified the limits of its own jurisdiction under federal law in approving the siting of new regasification facilties but did not – and could not – address the boundary or overlap between federal and state jurisdiction. The CPUC has disagreed with the FERC's open door policy stating that state regulators have final authority over when and where a LNG project may be built within the state. The question is essentially whether the state and federal regulators have complementary jurisdiction or whether a federal approval pre-empts state requirements. A California victory could have a chilling effect on LNG facility development in California, where environmental and land use decisions are highly politicized, but also in other states where regulators may have conflicting requirements.

Political Issues

Lastly, political issues are also greatly affecting the financing of LNG projects. There is a large gap between industry views of LNG and the public perception of LNG projects and their safety. In the town of Eureka, in Northern California, local opposition to an LNG project proposed by Calpine was so fierce that the LNG proposal was cancelled and no new plans for a project in that location have since moved forward or are likely to. Political collapse and succession as well as political and public opposition poses a challenge to many new LNG projects. Despite huge investments by three multinationals to build 400 miles of pipeline from Bolivia through Chile to the Pacific Coast (the shortest route) in order to liquefy natural gas and ship it to California as LNG, the pipeline project had to be scuttled due to nationalism and political opposition in Bolivia. The issue: whether to build a pipeline through Peru or through Bolivia's old enemy, Chile. Repsol-YPF of Spain, British Gas and Pan American Energy, a BP subsidiary, all insisted that Chile was the only economically viable option, because building through Peru would cost an additional $600 million. In October 2003, a nationwide protest led to the ouster in the next election of Bolivia's foreign-investor-friendly president, Gonzalo

Sánchez de Lozada, a defeat attributable to his open support of exporting natural gas via a pipeline through Chile. The pipeline project is now progressing in conjunction with Peru's Camisea development, but that project still faces enormous economic, environmental and political challenges. The commercial viability of Bolivian gas exports through a Pacific port is now greatly delayed, at best.

These are just a few examples of the risks associated with the financing of LNG projects around the globe. With the ever changing energy market and the redefined roles of suppliers, buyers and lenders, project financing of LNG facilities faces numerous challenges. It is necessary that each of these challenges be addressed and conquered, or at the very least mitigated, in order to expand the growth of LNG into the future. With a thoughtful and efficient allocation of risks, the best LNG projects will get financed and built, helping to meet the growing demand for natural gas.

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