



LNG Market Analysis, Assessment, and Forecasting



Worldwide growth in the demand for natural gas and the availability of large deposits of stranded gas resources has led to a major expansion of investment interest in liquefied natural gas (LNG) projects. Major import projects have been announced for North America, Europe, India, and the Far East. Liquefaction projects are on the drawing boards in a number of countries, principally in Africa, the Middle East, and the Far East. The success of these projects depends on a host of factors—from local consuming market dynamics, to competitive sources of gas supply, including pipeline gas as well as other sources of LNG.

Bringing LNG projects to fruition has proved to be a challenge. There are so many elements of risk to consider, and the high cost of LNG facilities requires mitigation of these risks. LNG pricing and contract structures are undergoing changes, and the traditional approaches can be expected to be replaced by more dynamic and flexible arrangements. Impacts to downstream markets will dramatically change asset valuation and the competitive landscape.

ICF International (ICF) works with clients to understand, quantify, and mitigate risks by developing a better understanding of LNG market dynamics.

LNG Services:

- Market Forecasts and Assessments
- Due Diligence for Investors and Lenders
- Market Strategy Development and Implementation
- Global Exploration and Production Trends
- Supply Acquisition and Planning
- Asset Valuation
- Conceptual Design Optimization
- Technical Feasibility Studies for Proposed LNG Projects
- Capital Budget Analyses
- Socioeconomic Impact Assessments
- Training Program Development and Delivery
- Heads of Agreement (HOA) Development and Implementation
- Regulatory Assessment and Support

Our Approach

ICF's LNG expertise and project experience spans commercial, financial, technical, environmental, and safety and security disciplines and provide essential LNG services to clients worldwide. ICF has provided sophisticated market analysis and modeling, competitor research, and pricing and contracting strategies to numerous clients.

ICF has successfully undertaken more than 300 energy projects around the world—delivering on time and on budget. We have participated in many of the most significant LNG projects in the world since the early 1970s. ICF is uniquely qualified to help LNG decision makers meet a variety of LNG challenges by providing comprehensive state-of-the-art LNG services.

ICF uses a multidisciplinary approach to offer clients innovative and cost-effective solutions to overcome the challenges facing LNG project development. ICF professionals draw upon extensive experience and a suite of proprietary and licensed gas modeling tools to give our clients timely intelligence, detailed insight, meaningful conclusions, and clear recommendations. While our approach is sophisticated, our goal is straightforward—to help our clients achieve success.

Passion. Expertise. Results.

Featured Solutions

Analysis of LNG Strategy for North America.

For a major international LNG trading company, ICF performed a series of studies of North American regional markets and helped develop an overall strategy for entering each market. We identified major market risks, transportation issues, and regulatory considerations. We examined the basis impact of imports at different market locations.

Evaluation of LNG Market in South Korea.

ICF performed an economic and financial feasibility study of an existing gas-fired generation power station in South Korea for a major private-sector gas and power company. The analysis looked at the effects of changes in relative price of LNG, nuclear buildup, the effects of new combined cycle gas turbine (CCGT) technology and demand for power to determine the future prospects of the existing station and potential expansions at the same site. ICF estimated revenues and dispatch forecasts for all the major power producing facilities in the country. We also established the effect on the overall size of the LNG market.

North American LNG Trade. ICF has provided several LNG import studies for Asian, Middle Eastern, European, and U.S.-based clients seeking to import LNG to North America. We focused on the dynamics of the North American market, price formation, the outlook for LNG as a competitive source of supply, and the impact on pipelines and pricing basis of individual LNG facilities in specific regions. Clients have used our work to help guide their investment decisions.

Pacific Basin LNG Trade. ICF has conducted LNG market and LNG supply studies on behalf of clients for importations of LNG into Thailand and Singapore. The studies were in-depth analyses of local markets, market structures, and pricing dynamics. Key elements were our in-depth Pacific Rim LNG supply market analyses and our understanding of the development of LNG capabilities, shipping, and deliverability.

Natural Gas Reliability and Capacity Analysis. ICF performed a reliability and capacity study for a Midwest gas utility's facilities for supplying natural gas during peak demand periods. The supply facilities included a substitute natural gas (SNG) plant, a LNG storage tank and vaporizer, an underground gas storage field, and a propane/air injection unit. We determined the probabilities of facility outages and associated gas delivery capacities using the estimated reliability and effective capacity levels for the individual gas supplies. Our analysis assessed the adequacy of the reserve margin to support its presentations to the state public utility commission.

LNG Supply Analysis. ICF evaluated several gas distribution company LNG projects to perform regional gas supply studies. We developed computer models to optimize the gas supply options—including gas supply contracts, pipeline contracts, storage, peak shaving facilities, and LNG facilities.

Atlantic Basin LNG Trade. For the government of Qatar, ICF studied the competitive aspects of Atlantic basin LNG markets with respect to the positioning of Qatari imports to North America. Our review included an assessment of the reserves and costs of production in various countries, liquefaction costs, transportation, and netbacks from the U.S. markets. This was part of a larger study of U.S. import issues for Qatar.

About ICF International

ICF International (NASDAQ: ICFI) partners with government and commercial clients to deliver consulting services and technology solutions in the energy, climate change, environment, transportation, social programs, health, defense, and emergency management markets. The firm combines passion for its work with industry expertise and innovative analytics to produce compelling results throughout the entire program life cycle, from analysis and design through implementation and improvement. Since 1969, ICF has been serving government at all levels, major corporations, and multilateral institutions. More than 2,500 employees serve these clients worldwide. ICF's Web site is www.icfi.com.

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