

ICF

INTERNATIONAL



Energy and Environmental Analysis, Inc.

an ICF International Company



ICF International's oil and gas team supports public sector clients by providing economic and technical services and policy analyses that enhance their ability to make informed strategic and resource development decisions.

Our analyses and technical services cover all aspects of the domestic and international oil and gas industry.

- Regulatory Support
- Supply Assessments and Project Evaluation
- Market Assessments and Forecasting
- Strategy Development and Implementation
- Government Services
- Environmental Issues
- Asset Valuation and Due Diligence

Oil and Gas Services for the Public Sector

Effective government policy must consider a wide range of costs and benefits for multiple stakeholders. ICF International works with federal, state, local, and international government agencies to support the development and implementation of prudent, science-based, cost-effective public policies that address a broad spectrum of economic, technical, and environmental issues affecting the oil and gas and power industries. We develop and refine strategies that support market-based incentives, voluntary programs, and public-private partnerships. ICF developed many of the energy markets models that are used to support program and policy analyses for a variety of U.S. government agencies. ICF has contributed to energy planning and policy-making programs for the U.S. Department of Energy, U.S. Environmental Protection Agency (EPA), the Minerals Management Service, various states including California, Massachusetts, New York, and Texas, and other countries.

Featured Projects

State and Regional Petroleum Infrastructure and Distribution System

ICF analyzed the petroleum infrastructure and distribution system in New England for the Massachusetts Division of Energy Resources to establish a baseline for evaluating potential future energy and emergency planning policies. We analyzed trends in petroleum supply and demand, characterized terminal storage facilities and delivery systems, identified potential vulnerabilities, and suggested possible remedies.

Petroleum Infrastructure Study

ICF analyzed the petroleum infrastructure and distribution system of southern New York state for the New York State Energy and Research and Development Authority and the New York Public Service Commission. A major part of the study was the evaluation of the impact of natural gas interruptible contracts and the strain that they placed on the petroleum system. ICF identified the geographic areas and the economic sectors that were most subject to strain.

Natural Gas STAR Program Support

ICF provides technical support and implements the EPA's voluntary methane emissions reduction program for the natural gas industry, Natural Gas STAR. ICF identifies methane emissions reduction best management practices and conducts technology transfer and outreach to all sectors of the gas industry.

Long-Term Crude Oil Supply and Prices

For the California Energy Commission (CEC), ICF examined questions related to world crude oil supplies and prices, the timing of peak oil production, and the likelihood of supply constraints from the present to 2050. ICF also reviewed other factors (geopolitical events, spare production capacity, and hedge fund activity) for possible impact on prices. This effort culminated in a report that allows the CEC to assess the potential impact of a variety of resource, production, and demand assumptions on the availability of sufficient crude oil supply to meet future demand.

Support to the EPA for New Source Review

ICF provides ongoing support to the EPA's Clean Air Act Advisory Committee. We implemented the EPA's public outreach for New Source Review by facilitating public hearings across the country, publishing all oral and written comments, and authoring a survey paper of available literature and public statements on New Source Review issues.

Off-Highway Distillate Infrastructure and Distribution System

ICF analyzed the U.S. distribution system and consumption patterns for various grades of off-highway distillate fuel oil. We characterized the number, capacity, and types of oil storage tanks in off-highway distillate service for various industry sectors and evaluated the capability of the land-based and marine infrastructures to accommodate additional product grades.

Passion. Expertise. Results.

Our Tools

ICF has developed proprietary analytical tools to meet a range of client needs from basic reporting to complex integrated policy and market analysis. We also implement leading spatial analysis software. Following is a selection of tools we have applied to analysis of public sector oil and gas issues.

Gas Market Model (GMM®)

- Represents the entire North American natural market and international competition for liquefied natural gas imports
- Provides detailed regional, annual, and monthly forecasts of prices, demand, supply, and pipeline flows
- Supports ICF subscription services and is used to produce hundreds of customized cases for clients each year
- Long-run gas supplies come from the Hydrocarbon Supply Model, which can be used to investigate the impact of resource base uncertainty, upstream technology evolution, land access restrictions, and tax policies on future oil and gas supply

The ICF Short-Term Oil Model

- Designed to capture market fundamentals in the short term (5–10 years)
- Uses an economic mass balance approach to determine the price of crude oil
- Demand and supply of crude oil are modeled over six regions worldwide
- Demand from the regions is estimated using historical gross domestic products, population, crude oil demand, and crude oil price
- Supply is estimated using worldwide resources, proven reserves, reserve additions, and crude oil prices
- Mass balance equilibrium in the model is achieved through a linear program that solves for generating enough supply to satisfy demand
- The model can be calibrated to respond to supply constraints and spare production capacity

Well Characterization Tool for Risk-Based Data Management System (RBDMS)

- Rapid identification and selection of target oil and gas wells within RBDMS, which meet user-specified criteria
- Components: builds a master database from RBDMS tables, graphical user interface, customized query results table, ODBC compliant
- Capability to rank order selected wells by criteria indicating levels of risk

Energy Asset Decision Support System (EADSS™)

- Represents multiple asset types (e.g., gas and power together)
- Provides detailed market and operational rules in a stochastic modeling framework
- Shows when and where new capacity is needed
- Incorporates effects of uncertainty and volatility on asset operation, revenues, and value- or location-specific assignments
- Evaluates high-deliverability storage, pipelines, daily gas and electric market interactions, and contract terms
- Provides complete gas market interactions on revenues and asset value

About EEA and ICF International

Founded in 1974, EEA has exhibited leadership and innovation in analyzing energy and environmental issues for a wide range of industry, government, and nongovernmental clients. Like ICF, EEA brings strong analytics and proprietary models to its engagements. Together, EEA and ICF provide expanded capabilities to serve commercial and government energy market participants with unparalleled analyses of natural gas supply, transportation, and market issues; automotive and transportation technology; environmental regulations and policy; and distributed generation/combined heat and power markets and technologies. Experienced professionals from both firms also provide superior strategic planning and regulatory support to all segments of the natural gas industry, which augments ICF's traditional strengths in energy modeling, electric power, transmission, emissions markets, energy efficiency, and water markets.

ICF International (NASDAQ: ICFI) partners with government and commercial clients to deliver consulting services and technology solutions in the energy, environment, transportation, social programs, defense, and homeland security 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 2,000 employees serve these clients worldwide. ICF's Web site is www.icfi.com.

For more information, contact:

Zeta Rosenberg
1.703.934.3949
zrosenberg@icfi.com

Harry Vidas
1.703.373.6643
hvidas@icfi.com