

Air Pollution Control Technology Market Assessment



ICF Consulting supports construction-engineering firms, pollution control equipment vendors, power companies, fuel companies, and government agencies by assessing the impacts of proposed multi-pollutant regulations on control investments, electric markets and corporate strategy.

- **Pollution Control Installation Demand Forecasting**
- Strategic Planning for Pollution Control Investment
- Air Pollution Regulatory Assessments
- Emissions Allowance Forecasts
- Environmental Due Diligence
- Public Policy Analysis

Significant new multipollutant air regulations are on the horizon. President Bush's proposed Clear Skies Act, the most visible of these new air pollution initiatives, will require over \$40 billion in new pollution control investments by 2020, covering installations on roughly 75% of existing coal-fired capacity. Many states are also acting on air pollution and implementing aggressive regulations in some cases preempting Federal regulatory actions. These state regulations are likely to create hot spots of mandated control technology investment. ICF Consulting helps key players in the air pollution control industry examine the impact of these proposals on the need for SO₂, NO_x, and mercury pollution control equipment. ICF Consulting also assists power companies, fuel companies, and government agencies in assessing the market and strategic impacts of these multi-pollutant proposals.

Our Approach

At ICF Consulting, we believe in taking an integrated approach to examining power, fuel, and environmental markets in order to accurately assess the need for air pollution control equipment at power plants. We have expertise in each of these key market areas and use our proprietary Integrated Planning Model (IPM[®]) to incorporate this expertise into one unified vision of these converging markets. IPM[®] is an engineering-economic model with detailed representation of every boiler and generator in North America. ICF Consulting has used IPM[®] to become one of the top three companies engaged in financial due diligence for new and existing generation assets. For more than 20 years, we have used IPM[®] in analyses for power companies, trade associations, and government agencies in order to assess the costs and market impacts of each of the significant new air pollution regulations and legislation including the Clean Air Act Amendments of 1990, the NO_x SIP Call, and the various multi-pollutant policies on the table today.

For companies in the pollution control industry, both engineering firms and equipment vendors, ICF Consulting uses IPM[®] to project installations of NO_x, SO₂, and mercury control equipment on a unit-by-unit basis. Our clients can then use this information to develop marketing plans based on a sound understanding of the overall outlook for pollution control investment, and the relative economics of alternative types of equipment. Clients can also use ICF Consulting's detailed analysis to identify specific clients for business development outreach.

ICF Consulting provides a comprehensive up-to-date assessment of air pollution regulatory actions at the state and Federal levels. Our clients also receive insightful analyses on the future of the electric power, coal, and natural gas markets, as well as the NO_x, SO₂, and mercury allowance markets.

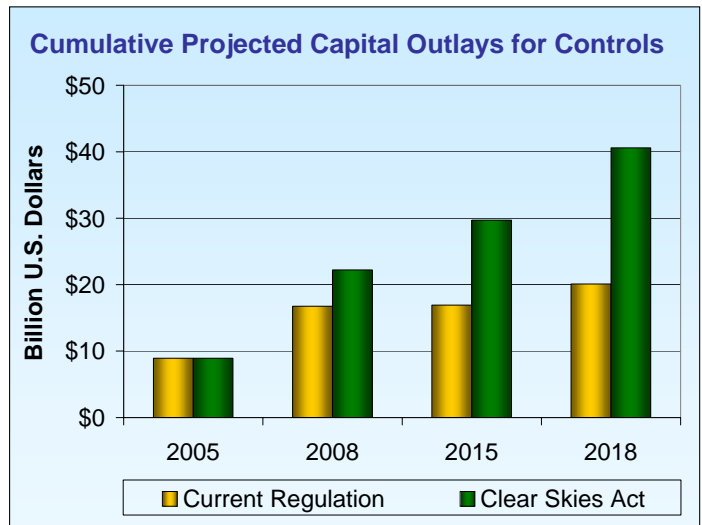
Featured Projects

Pollution Control Technology Penetration Forecast

For a construction and engineering firm, ICF Consulting provided an analysis of the future market for air pollution control equipment. The analysis began with an assessment of state and Federal air pollution legislative and regulatory initiatives. Using this regulatory roadmap as a starting point, and working with the client to develop detailed information on the cost and performance of pollution control equipment, ICF Consulting used IPM[®] to forecast installations of NO_x, SO₂, and mercury controls. These pollution control projections were summarized on a state and holding company basis. Projections of individual generation unit controls were also provided for key client targets to help the client with business development and marketing outreach.

Real Options Analysis of NO_x Compliance

For a Mid-Atlantic power company, ICF Consulting conducted a real options analysis to determine the optimal sequential compliance strategy for the upcoming NO_x SIP Call regulation. As part of this effort, ICF Consulting used IPM[®] to evaluate numerous NO_x control technology options for each of the power company's generation units. Technologies evaluated included SCR, SNCR, and RJM's layered NO_x technology. IPM[®] was also used to evaluate how compliance strategies were affected by major uncertainties including gas prices, electric demand growth, weather, and technology performance. The value of the power generator's portfolio for alternative compliance strategies under each uncertainty outcome was used in a real options decision analysis framework to identify the optional compliance choice.



NO_x and SO₂ Allowance Market Outlook

Since 1992, ICF Consulting has offered multi-client analyses of the air emissions allowance markets. These studies provide an engineering-economics fundamental view of the uncertainties surrounding the future prices of NO_x and SO₂ emission allowance values. Uncertainties examined include technological advances in pollution control equipment, financing, multi-pollutant legislation, demand growth, and natural gas and coal pricing. The results of the analyses are summarized in presentation-style briefing books that contain assessments of recent and planned pollution control installations; allowance market trends; regulatory developments; impacts of uncertainty drivers on allowance prices; and probability distributions for future allowance prices.

About ICF Consulting

ICF Consulting is a leading management, technology, and policy consulting firm. Drawing upon extensive industry knowledge, distinguished professionals, and innovative analytics, the firm develops solutions to complex defense, homeland security, energy, environment, social program, and transportation issues. ICF Consulting's approach to these issues is strengthened by its expertise in information technology, organizational improvement, program management, and communications. Since 1969, ICF Consulting has been serving major corporations, government at all levels, and multinational institutions. More than 1,200 employees serve these clients from key business centers in the Americas, Asia, and Europe.

For more information contact: John Blaney
Phone: 1.703.934.3367
E-mail: jblaney@icfconsulting.com