

ENERGY CONSULTING

Power Economics

To succeed in the evolving global energy marketplace, utilities, plant owners, operators, designers, investors, and energy consumers must base their decisions not only on technical considerations but also on a range of economic and regulatory drivers.

The Power Economics team provides policy, planning, and investment decision expertise to help you make complex energy asset decisions while reducing potential risks. We analyze electric power market conditions, system dispatch and operations, and energy policy implications to help you make strategic planning decisions in today's often uncertain world.

Policy and Planning

Drawing on our knowledge of power system engineering and operations, our consultants develop analytical models that reflect power system fundamentals to give you a better understanding of market dynamics and mechanisms. These analyses factor in the effects of new regulations that may alter the boundaries of traditional electric utilities, expand power system infrastructures, and increase constraints on operating costs such as fuel, O&M, emissions, and water. A tool essential to this study work is GE's proprietary Multi-Area Production Simulation (MAPS*) software, which has become an industry standard in the US for accurately analyzing the complex interaction between generation and transmission. Our team is also proficient with other sophisticated power system analysis tools commonly used in the electricity sector.

Energy Financial Analysis

The Power Economics team can provide forecasts of energy market prices and revenues to analyze investment decisions for new generation, generation uprates, transmission, or to understand broad market trends. Typical outputs would include projected energy prices, capacity prices, ancillary service prices, renewable energy credits, and fuels (natural gas, coal, oil) as well as summary financial reports. A wide range of services are available, including:

- Zonal price forecasts
- Comprehensive nodal dispatch analysis to understand congestion/basis risk
- Scenario analysis designed to quantify risks associated with assumptions such as fuel prices, load growth, renewable penetration, etc.
- Evaluation of impact of policy initiatives

Recent Projects

Our clients include electric utilities, plant owners and investors, project developers, independent system operators, and regulatory and research groups. We have recently performed:

- Distribution energy resource (DER) integration and analysis
- Resilient and off-grid microgrid engineering design and economic evaluation
- Energy storage applications in the power systems (various)
- Electric vehicle deployment and power system impact analysis (HNEI, PJM, Pan-Canadian studies)
- International electricity wholesale market development
- Power sector environmental impact analysis and GHG policy evaluation
- Net zero energy community analysis
- Develop twenty-year Locational Marginal Price (LMP) forecasts to inform corporate renewable PPA procurement decisions for RE100 companies

These studies offer insights into expected power system operations and costs, as well as the value of power produced, to help you understand the impact on the overall project. Scenario analyses identify your benefits while examining the potential effects of items such as new regulations, competitor activity, and changes in fuel price or availability.



For more information visit: www.geenergyconsulting.com

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