



The N_{ew}ERA Model

NERA Economic Consulting has long been at the forefront of the continuing transformation of energy industries worldwide, pioneering and advancing the application of sound economic analysis to the energy sectors. The proprietary N_{ew}ERA model is the latest advance allowing us to provide invaluable assistance to companies in managing unprecedented change and uncertainty in the energy sectors related to factors such as technology change, environmental regulation, and energy availability.

The N_{ew}ERA model is a unique tool for effectively measuring the macroeconomic and detailed sectoral impacts of changes affecting the energy sectors. Its macroeconomic outputs include forecasts of prices of energy commodities, demand and supply of all goods and services, changes in imports and exports, gross domestic product, gross regional product, consumption, investment, disposable income, and changes in employment statistics. Detailed electric sector outputs include new builds, retrofits and dispatch decisions for generating units.

Applying the expertise of leading economic modelers and the extensive energy industry experience of NERA Economic Consulting, the model allows for:

- Full evaluation of how new and potential future policy, technology, and other changes will interact with each other and influence the key market drivers for the energy sectors;
- Assessment of the economic consequences these changes may have on the non-energy sectors of the economy, for which energy usage and costs are important factors;
- A complete understanding of the economic impacts of different policies and regulations on all sectors of the economy, through a unique combination of a macroeconomic model incorporating all sectors of the economy (except for the electric sector) with a detailed electric sector model; and
- The global form of the N_{ew}ERA model accounts for changes in terms of trade of world regions and spillover effects of one region's policy on other regions.

The N_{ew}ERA model's integrated approach gives NERA's experts the capability to evaluate the full economic impacts of a range of current and proposed market-based and command-and-control policies, such as:

- Renewable portfolio standards (local, regional, national, or supranational);
- Clean energy standards;
- Transportation fuel policies (e.g., renewable fuel standards, low carbon fuel standards, automobile fuel efficiency);
- Emission taxes;
- Emission cap-and-trade policies;
- Efficiency standards in electric and non-electric sectors (e.g., heat rate standards for units, emissions intensity standards for refineries);
- Mandated construction of new builds or retrofits (or requirements to retrofit or retire); and
- Financial incentives (for renewables or electric vehicles, for example).

NewERA Applications: Corporate Planning

In the current uncertain environment, business planning is exceptionally challenging for energy sector companies and those highly dependent on energy. We can help clients gain a data-driven, objective understanding of how proposed policies are likely to affect their businesses, to better inform their own business strategies. Using the NewERA model, NERA's experts can help clients look at a range of possible "futures" in a consistent manner. This consistency is invaluable as companies conduct internal planning and consider long-term investments in the face of a number of uncertainties, particularly:

- Future developments in natural gas markets;
- The future direction of electricity demand, and the concurrent uncertainty about the need to build additional capacity; and
- Uncertainty about the future course of environmental regulation.

By integrating energy prices, energy demand, the broader economic outlook, and other key factors in our projections, NERA can quantify the range of uncertainty and assign probabilities to various scenarios. This approach helps businesses understand how they can minimize risk and assists in decision-making on critical issues such as what new capital projects to undertake (and when), whether an aging investment should be retrofitted or retired, and which fuel choice or energy source offers maximum return and minimum risk.

N_{ew}ERA Applications: Analyzing and Informing Policy Developments

Using the N_{ew}ERA model, NERA experts can provide clients with objective economic analysis, reports, and estimates of the potential impacts of regulations and legislation, helping clients in several ways:

- We can help clients gain a data-driven, objective understanding of how proposed policies are likely to affect both their industry and the economy at large, allowing them to educate policymakers and other firms in their industry and to more effectively engage in and inform the process of policy development.
- The model has the capability to examine the likely economic impacts of a policy at a detailed local or regional level, helping policymakers and legislators understand how a proposed policy may affect employment and economic growth in particular sectors or regions of interest to them.
- Even industries that are not directly subject to a proposed policy can be affected because of the policy's potential broader effects on factors such as job growth, energy prices, or terms of trade. The N_{ew}ERA integrated model has the flexibility to examine specific sectors in detail, so it can help a client understand where common interests exist between its industry and other industries in regards to a proposed policy—even when those interests may not be obvious. As a result, a broader cross section of industries can speak with the same voice in providing input to policymakers.

NERA experts frequently help communicate the model's outcomes through presentations to companies or industry associations, in thought leadership articles, or in independent testimony before regulatory bodies, legislative hearings, and other venues.

About NERA

NERA Economic Consulting (www.nera.com) is a global firm of experts dedicated to applying economic, finance, and quantitative principles to complex business and legal challenges. For over half a century, NERA's economists have been creating strategies, studies, reports, expert testimony, and policy recommendations for government authorities and the world's leading law firms and corporations. We bring academic rigor, objectivity, and real world industry experience to bear on issues arising from competition, regulation, public policy, strategy, finance, and litigation.

NERA's clients value our ability to apply and communicate state-of-the-art approaches clearly and convincingly, our commitment to deliver unbiased findings, and our reputation for quality and independence. Our clients rely on the integrity and skills of our unparalleled team of economists and other experts backed by the resources and reliability of one of the world's largest economic consultancies. With its main office in New York City, NERA serves clients from more than 20 offices across North America, Europe, and Asia Pacific.

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