

Strategic Energy Planning

Identify and value your available energy efficiency resources

Maximize your opportunities for demand- and supply-side management



The current industry landscape places energy efficiency and demand response in the forefront of utility strategic planning efforts. Increasing customer demand and the need to address climate change, T&D constraints, reliability issues, lifting rate caps, and high energy prices make demand- and supply-side management activities critical to the power industry.

Utilities must assess what is technically possible, economically viable, and realistically achievable from their programs in the face of naturally-occurring efficiency and Federal, state and local codes and standards, as well as program-funding levels and market structure. Further, highly visible goals and promises put forth by elected officials create the imperative for utilities to monitor progress and make adjustments in near real-time to achieve success.

The Typical Situation – Inertia

The typical utility approach is to conduct a research project of significant scope (and price) to estimate the potential for energy efficiency and demand response. The results identify potential program savings which are the precursor to program design and implementation over a multi-year time period (often 3-5 years). At the end of each program year, rigorous evaluation studies are undertaken to assess savings and program processes to inform the next round of program design and/or execution. This cycle provides good information, but has several potential shortcomings:

- The results can be static and slow – as opposed to a dynamic process that enables utilities to analyze market, technology, and regulatory changes as they occur.
- The cost of the studies is sufficiently high to preclude utilities from conducting them routinely.
- The evaluation process, which produces the rigorous and defensible results required by regulators, takes time and delays success for program planners who want to continuously improve their programs' impact.

A Unique Approach – Manage DSM with annual operating plans

Customer behavior changes, technologies change, rules change, your company's priorities change, shouldn't your plans be dynamic?

Global's approach to energy planning puts utility staff in the driver's seat by delivering both data and analysis tools that enable updating and assessment of the dynamic environment more frequently. Utilities can take into account changes in the market and customer behavior as programs are implemented. They can also conduct variance analysis to see how program results compare with the plan, to better manage expectations and influence future program results. The Global framework allows you to answer the following questions on an ongoing basis:

- How are your customers using energy today? How much are they likely to use in the future, given technology trends, codes and standards, and/or existing utility programs?
- How much could be achieved under different technology, pricing, and program scenarios?
- Where will the savings come from – from which customers and end uses/technologies?
- Which utility programs will meet our goals most efficiently?
- How well are the programs faring after 6/12 months?



Developing an Energy-Efficiency and Demand Response Plan

Global works with clients to execute key steps in the planning process:

- Identify, characterize, and screen energy-efficiency measures
- Define base-year energy use and forecasts (preferably using current primary data)
- Estimate potentials – from technical to realistically-achievable
- Define program best-suited to accomplish the potential
- Integrate results into integrated resource planning process
- Support the regulatory process with filings and testimony

Global uses planning models that we've perfected over decades for energy efficiency and demand response potential assessments:

End-use forecasting model. Global has developed a simplified model that delivers a baseline forecast and alternative forecasts characterizing technical potential, economic potential, and achievable potential. Built in Excel, the framework is both accessible and transparent.

Database of Energy Efficiency Measures (DEEM). Analogous to the DEER database of energy-efficiency measures for California, DEEM provides estimates of typical savings for hundreds of energy efficiency measures for four US regions and selected large cities.

Customized measure savings. Global uses its Building Energy Simulation Tool (BEST), a derivative of the powerful DOE-2 building simulation software, along with prototypical building models for residential homes and businesses by region to develop customized measure savings.

The process Global applies includes three steps:

1. Leverage Global's databases and analysis approach to obtain a reasonable potential estimate and identify the most important areas for additional research.
2. Refine the estimates with new primary research about your customers and arrive at final targets, priorities, and plans.
3. Update the analysis annually: check progress against the existing plan, incorporate new information about customer behavior, technologies, and programs, and refine your plan.

This process empowers program managers to treat their programs just like they would manage a business – with annual progress updates pointing the way to key program changes. Without such an approach, key market dynamics are not being accounted for on a timely basis.

To find out more about how Global can help you, contact:

Jon Starr
Director Business Development
(925) 818-2787
jstarr@gepllc.com

Bettina Arrigoni
Senior Associate
(541) 727-1980
barrigoni@gepllc.com

Global's Track Record

Global has been conducting energy planning with an emphasis on demand side planning for over 20 years. Results we have delivered include:

National Energy Efficiency and Demand Response Potential in a Carbon-Constrained Future – Global was selected by EPRI and EEI to work with the Brattle Group to conduct and deliver the most comprehensive, current, and detailed study available today for North America

Global's planning efforts with a large mid-western IOU have resulted in four years of sustainable, cost-effective and comprehensive program implementation

Global's planning and regulatory support efforts with a western US utility resulted in major program expansion, tripling the approved budget for programs covering all customer segments

Global's efforts to support a mid-sized mid-western utility's in transforming markets through energy efficiency technologies resulted in a prioritization review of over 145 technologies

