

Integrated Resource Planning

MAY 2014

CONGRESS SHOULD

- Encourage states to establish least-cost, integrated resource planning requirements.

STATE LEGISLATURES AND REGULATORS SHOULD

- Establish least-cost, integrated resource planning requirements.
- Require utilities to acquire all cost-effective energy efficiency prior to investments in more expensive resources.

THE ISSUE

Under traditional utility regulation, utilities submit filings to a regulatory authority detailing their load forecasts and describing the resources that will be required to meet electricity or gas demands during the forecast periods. Options were typically limited to, and selected only from, the supply side (options to supply more power) as opposed to the demand side (options to reduce electricity demand) of the electricity system.

By incorporating least-cost and integrated resource planning (IRP), a utility is required to report its load and resource forecast for a specified period, and utilize the least-cost resource mix, including both supply and demand-side options. Because energy efficiency is such a low-cost resource, proper utilization of IRP tends to result in the incorporation of energy efficiency as a utility system resource and reduce the need for additional supply resources. This also reduces total resource costs for utilities.

SUMMARY

With traditional utility resource planning, planners take the demand to be met, the reliability to be achieved, costs of available options, and applicable government policies and regulations into consideration. The planners then select the type of fuels, power plants, distribution systems and patterns, and power purchases that will meet these objectives within acceptable reliability and cost parameters.

IRP attempts to take the traditional planning approach several steps further. It strives to:

1. Evaluate all options, from supply and demand sides, in a fair, consistent and comparable manner,
2. Minimize total costs (and not just average rates), and
3. Create a flexible plan that allows for uncertainty and permits adjustment in response to changed circumstances.

The traditional goals of utility planning are reliable service, economic efficiency, environmental protection, and equity. Reliable service necessitates the balancing of customer and investor interests (i.e., balancing the quality and reliability of service against cost). Equity necessitates the additional balancing of the interests of the various customer classes as well as the interests of present and future generations.

IRP provides a common framework for balancing these traditional goals by considering all supply and demand options as potential contributors and selecting an integrated set of least-cost resources that meets expected needs. The result is an opportunity to achieve lower overall costs than might result from considering only supply-side options. Furthermore, the inclusion of demand-side options presents more possibilities for saving fuel and reducing negative environmental impacts than might be possible if only supply-side options were considered.

An integrated resource plan should include the full range of resource options, ranging from traditional power plants to more innovative sources of electricity supply such as power purchases, independent power plants,

cogeneration, demand-side management (energy efficiency and load management), and renewable energy sources.

A number of states, including California, Iowa, Minnesota, Massachusetts, Connecticut, Maine, Washington, Delaware, Vermont, and Rhode Island have implemented some form of integrated resource planning. Such an approach requires a utility to objectively analyze the potential of all available resources – supply and demand – and identify the mix of resources that produces a least-cost, reliable resource plan. This typically results in energy efficiency being selected as a key utility resource because efficiency measures cost less than other, traditional production resources. This greatly increases the role of energy efficiency in the utility's long-term resource portfolio.

FOR MORE INFORMATION

- National Action Plan for Energy Efficiency, Chapter 3: Energy Resource Planning Processes (PDF) http://www.epa.gov/cleanenergy/documents/suca/resource_planning.pdf
- ACEEE State Policy Database: Learn about current state-level utility policies, including how states use energy efficiency as a resource: <http://database.aceee.org/>
- Hopper, N., Goldman, C., and J. Schlegel. 2006. Energy Efficiency in Western Utility Resource Plans: <http://emp.lbl.gov/sites/all/files/REPORT%20lbl%20-%2058271.pdf>
- Impacts on Regional Resource Assessment and Support for WGA Policies. Lawrence Berkeley National Lab. <http://eetd.lbl.gov/ea/ems/reports/58271.pdf>
- Sixth Northwest Conservation and Electric Power Plan: <http://www.nwcouncil.org/energy/powerplan/6/plan/>

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