

Integrated Resource Planning Today – Challenges and Opportunities

Integrated resource planning has been a fundamental part of the utility landscape for decades. Despite regulatory and technological changes that have transformed the industry, the basic purpose of integrated resource planning has remained largely unchanged. Its goal is to provide analysis-driven long-term planning that ensures sufficient resources to meet forecasted customer needs at the least cost, taking into account the variety of supply and demand resources and applicable environmental mandates.

While the core purpose has not changed, integrated resource planning has clearly evolved over time. Today, integrated resource planning reflects several key trends: 1) numerous and diverse filing requirements; 2) a focus on non-wires alternatives to traditional grid investments (NWAs) and distributed energy resources (DERs); 3) the need to weigh complex and nuanced policy questions; and 4) increased uncertainty regarding key cost drivers. These trends embody significant challenges for utilities. They may also represent an important opportunity, however, if utilities employ an approach that is comprehensive, strategic, and proactive.

This article discusses these challenging trends and key elements for transforming them into opportunities.

Variety of required elements in Integrated Resource Plans (IRPs)

A salient element of integrated resource planning today is the increased complexity and breadth of IRP filing requirements. A traditional utility IRP will include forecasts and analyses, with numerous interdependent scenarios and sensitivities, in order to determine the required resources at the lowest cost. In addition, an IRP may include elements such as certificates of public convenience and necessity (CPCN) or need (CON), or proposals for cost recovery mechanisms such as infrastructure trackers. An IRP may involve procurement processes, with requirements related to the evaluation of bids, fairness of the process, and market-based pricing. A utility may need to comply

with requirements regarding self-selection, including competitive bidding waivers, a demonstration of the benefits of utility-owned generation, and/or economic development benefits. Independent evaluation or monitoring may also be required.

NWAs and DERs

The increased focus on NWAs and DERs adds to the increasing complexity of integrated resource planning and the independency of integrated resource planning and transmission/distribution system planning. The breadth of NWAs and DERs is wide and may include energy efficiency, distributed generation, demand response and interruptible load management, storage resources, and intermittent resource integration technologies. The complexity related to NWAs and DERs is compounded as their integration may depend on actions and investments by customers and third parties (i.e., not the utilities) and may involve significant regulatory proceedings and stakeholder engagement processes. In several states, the focus on such resources is part of a larger process to examine and assess the functions of the utility and the electric grid; such processes often include potential changes to utility business models as well as steps to bolster pricing and markets for DERs.



Weighing Nuanced Policy Questions

IRP processes may also involve nuanced policy questions that require the weighing of non-economic benefits and detriments. This is typified by the assessment of nuclear generation in many jurisdictions. Due to factors such as low natural gas prices and increasing regulatory costs, many nuclear plants face challenging economics. However, utilities, regulators and others may attribute significant value to benefits of nuclear (or other types of) generation, which are not internalized in market prices. Such benefits may include fuel diversity, price risk mitigation, energy security, and a source of carbon free power.

Uncertainty

High levels of uncertainty represent another challenge in IRP processes today. This is exemplified by forecasts of natural gas and carbon prices, which are two main drivers of the cost-effectiveness of many electricity resources. Recent years have seen dramatic declines in natural gas prices, often beyond what was projected only a year or two earlier. Similarly, it is difficult for utilities and others to assign values to the benefit of low-carbon or carbon-free resources, given uncertainty in carbon policies and laws, as illustrated by the recent stay of the Clean Power Plan by the Supreme Court.

Challenges and Opportunities

Regulators, policy-makers, and other stakeholders have unique priorities related to integrated resource planning that include cost, reliability and sustainability, to name a few. Utilities must develop a strategic approach to integrated resource planning that balances these priorities by considering the full spectrum of technical and regulatory requirements in its IRP process. This requires not only a rigorous analysis to support an IRP, but also an execution strategy that implements the IRP in a manner that will withstand regulatory scrutiny and ensures that the obligation to reliably and cost-effectively serve customers is met.

These challenges represent opportunities for utilities to engage in stakeholder discussions. In this forum, an exchange of ideas regarding the most effective type of IRP and the utility's ultimate role as the entity that must invest in and provide safe, reliable, and low cost service for customers can be undertaken.



Concentric Energy Advisors' team of experienced experts provide a unique combination of technical expertise in assessing and integrating traditional supply-side resources with DERs and NWAs, and extensive regulatory experience in the execution of IRP strategies to achieve optimal outcomes for utilities, regulators and consumers in the integrated resource planning process.

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