

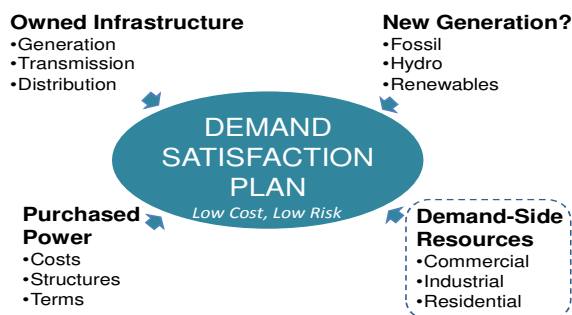
DEMAND RESPONSE VISIONING AND ROADMAP DEVELOPMENT

Understand the potential value, drivers, and limiters of a successful demand response program as the first step to improved capacity cost and risk management

Customers want cost control options. Utilities need to manage capacity risk. Demand Response rates and programs can help with both.

North American utilities are coming to grips with the fact that the supply of dispatchable capacity will be tighter in the future than it has been historically. This will give IPPs an edge at the bargaining table, exposing utilities to higher capacity prices, shorter contract terms, and undesirable features like demand ratchets. What can utilities do to satisfy customer demand at the lowest risk and cost?

Utilities traditionally buy or build the capacity required to meet customer demand. But increasingly, utilities are turning to demand response as part of a comprehensive approach to managing capacity cost and risk. The savings and rate reductions are generally larger than most utilities suspect, and the benefits are likely to be even larger in the future.



Though demand response may not be right for all customers, none will criticize a utility for offering energy cost management opportunities. Even residential customers, through time-varying rates, can participate in community-wide efforts to avoid plant construction, reduce environmental impact, reduce electric bills, and improve the payback from large investments in advanced metering infrastructure. The first step is to estimate the potential value of demand response given a particular utility's resource plan, PPAs, customers, and regional capacity markets.

The Wired Group helps utilities understand the opportunities demand response programs offer

The Opportunity

Through demand response, all types of utilities have the opportunity to improve customer satisfaction while reducing capacity cost and risk. Before considering demand response options a utility must know the answers to many questions:

- What cost-saving potential is associated with various levels of demand response?
- Which customer segments offer the greatest potential? The least cost?

(Demand Response Vision and Roadmap Development, continued)

- What competitive offers are/will be available from energy service, facility management, and energy controls companies?
- What tools and capabilities are necessary for functioning demand response programs?

The Visioning Process

The Wired Group's demand response rate and program visioning process delivers a roadmap and strategy to guide program development. The roadmap includes:

Economic Benefit Projections

- PPA examination and analysis
- Regional capacity market analysis
- Program and incentive cost ranges

Load and Customer Research

- Load profile component investigation
- Customer segmentation and prioritization

Minimum Requirements and Characteristics

- Program policies and standards
- Minimum benefit-cost ratios
- Levels of customer engagement

Available Technologies and Options

- Advanced Metering Infrastructure
- Home energy management
- Real-time meter communications
- Residential load controls (AC, DWH)

About the Wired Group

Wired Group principals and associates have decades of experience in distribution utility businesses, including smart grid, demand response, and renewable energy. Our consulting services support visioning, planning, execution, and evaluation. Visit www.wiredgroup.net for more information. Or, for a no-obligation consultation on your utility's demand response options, contact Paul Alvarez at 303.997.0317, x-801, or palvarez@wiredgroup.net.

Experience-Based Best Practices

Wired Group principals and associates have decades of experience designing, implementing, operating, and evaluating the impact of demand response rates and programs. From interruptible rates for industrial customers to residential AC compressor cycling programs to real-time meter communications technologies, we know what works and what doesn't. We also understand the strategies and tactics most likely to engage customers and maximize behavior change. As just one example, our quantitative and qualitative residential customer research indicates that saving money is only one of many messages utilities can use to motivate customers to shift loads from coincident peak periods.

Thought Leadership

Wired Group perspectives on distribution business value creation are sought and circulated by the most influential industry conferences and media outlets in the US, including:

- **Public Utilities Fortnightly**
- **DistribuTECH**
- **Association for Demand Response and Smart Grid**
- **Smart Grid News**

Wired Group clients include leading utilities, regulators, advocates, industry suppliers, and associations including Xcel Energy, Duke Energy, the Ohio Public Utilities Commission, the Edison Electric Institute, the Smart Grid Consumer Collaborative, and other industry leaders.