

DEMAND-SIDE PROGRAM IMPACT MEASUREMENT AND VERIFICATION

Using measurement and verification to enhance demand-side management program performance as well as quantify impact

Stakeholders want to know: Are demand-side management strategies and programs delivering anticipated benefits?

North American utilities are coming to grips with the fact that the supply of energy and capacity will be tighter in the future than it has been historically. Many are establishing demand-side management programs for commercial, industrial, and residential customers to help manage energy and capacity risk and cost.

The value of demand-side management programs changes over time with changes in energy and capacity markets, building construction codes, and customer loads and technologies, to name just a few. Periodic impact measurement and verification (M&V) can serve an important role, helping utilities to validate the feasibility of various programs and identify program-specific improvement opportunities.

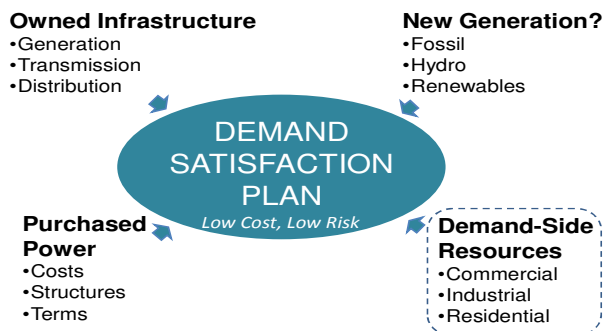
In addition, stakeholders are understandably interested in knowing if the demand-side management programs for which they are paying are delivering the benefits anticipated in approved business cases.

The Wired Group helps utilities estimate the impact of demand-side programs and identify improvement opportunities

The Opportunity

Periodic demand-side management program impact measurement and verification can help a utility:

- Document program value to stakeholders
- Identify opportunities to increase the impact of specific demand-side programs
- Identify opportunities to increase demand-side management program participation
- Better prioritize and manage a portfolio of demand-side management programs



(Demand Response Program Impact M&V, continued)

The Wired Group's M&V Process

The Wired Group's M&V process is in full compliance with California Standard Practice Manual policies and approaches:

Program Categorization

Measurement Perspectives and Methods

- Participant Test
- Ratepayer Impact Measure Test
- Total Resource Cost Test
- Societal Benefit Test
- Program Administrator Test

Input Variable and Modeling Considerations

- Marginal energy and capacity cost forecasts
- Time-differentiated inputs
- Weighted average rate determinations
- "Gross vs. Net"
- Sensitivity analysis

In addition, the Wired Group's experience in demand-side management program marketing qualifies us to go the extra mile for our clients. Optional *marketing* M&V services help utilities understand how their demand-side program marketing performance compares to other utilities:

- Customer acquisition cost
- Program participation levels
- Best practices in program design and marketing

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 demand response impact measurement options, contact Paul Alvarez at 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-side management rates and programs. From lighting and interruptible rate programs for industrial and commercial customers to residential AC compressor cycling programs, 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**