

Efficient Use of Power

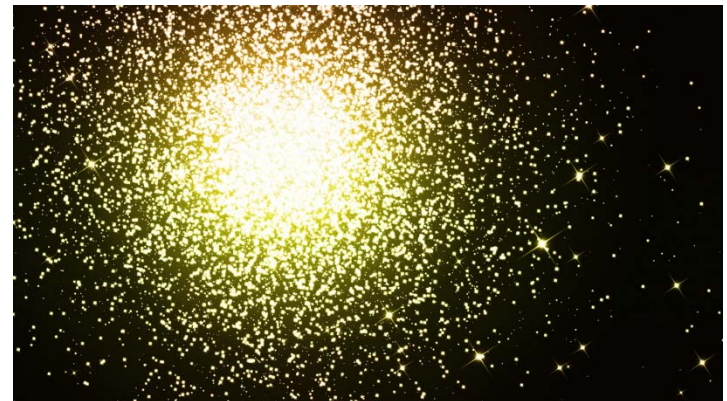
Demand Response from the G&T



How It All Began



- 2012 - looming wholesale rate design change
- Intended to “close the gap” in average rate



Goals of the Program



- Provide a way for coops to differentiate themselves
- A product for everyone
- Value to Tri-State, Member System and member owner

Timeline



- August 2011: Membership meetings on load-related Products and Services
- December 2011: Board Policies 120 Demand Response (DR) Policy, and 121 Energy Shaping (ES) Policy were adopted
- June 2012: Board review of 25 DR and ES Products completed & authorized
- July/August 2012: Member feedback on DR & ES Products
- October 2012: Board adoption of 2013 Product changes
- Fall 2012: 1st DR & ES Product User Group conference call
- Now Annually in Fall we review all products with our Advisory Council and then submit changes for Board approval

Development



- Used avoided cost modeling based on Simple CT cost inflated to estimated build year (2022)
 - Applied seasonal weighting (rate design) based on when program was available
 - Applied notice requirement weighting
 - Applied weighting based on annual availability
- Built full cash flow models based on
 - Estimated load curves for product
 - Estimated market penetration
 - Value flow to member owners
 - Value flow to Member Systems
 - Value flow to Tri-State
- Decisions on incentive levels were based on 1, 5, and 20 year NPV analysis
- Developed 25 Demand Response and Energy Shaping Products

The First Year



- Products became available in 2013
- Wholesale rate design change had decimated the energy shifting price signal
- No quick uptake
- Marketing, Marketing, Marketing

Year 2



- Enrollment into Energy Shaping Products picked up significantly at the end of year 1
- Developed mechanisms to allow for more member input and feedback
- Incorporated as much as possible
- Development of Capacity Commitment

Where We Are Today



- 15 Member Systems – 10 Products
- Demand Response Products – 23.5 MW's
 - 3 Member Systems using 4 DR Products
- Energy Shaping Products – 53 MW's
 - 10 Member Systems using 3 ES Products
- Performance Products – 259.0 MW's
 - 7 Member Systems using 3 Products
- 5 Member Systems using multiple Products

Where We Are Today



- Air Conditioning – 2 days – 8 hours during the afternoon and evening hours in June and July
- Water Heaters – 1 day – 6 hours during afternoon hours in June

Improving the Customer Experience



- Demand Response adds flexibility for the G&T
- Adds value in the form of cost reduction for the Coop and the consumer
- Not our primary driver at this time
- Energy Efficiency Program!

