A New Approach to Valuing Energy Savings and Peak Demand Reduction

2019 Southwest Utility Energy Efficiency Workshop

11/8/19
Our Utility World is Changing

• Customer Expectations
  – Level of service
  – Holistic experience (Comprehensive solutions)
  – Green aspirations

• Utility Operations
  – Lower carbon generation
  – Non-dispatchable generation
  – Localized demand constraints
  – Balancing gas and electric system constraints
Our DSM World is Changing

• Avoided costs are dropping
  – Combustion turbine construction costs are going down
  – Natural gas costs falling
  – Increasing hours of zero or negative marginal energy cost
    • Renewable curtailment
    • PLEXOS modeling
• More variability in real time pricing
  – Ramp rates more important
Marginal cost per kWh
March is Blue, August is Red, 2018
Marginal cost per kWh

2020 is Blue, 2022 is Red, August
Our DSM World is Changing

• We need GOOD kWh savings at the RIGHT cost
• High net benefit savings lead to lower customer bills and higher Company earnings
• Low (negative) net benefit savings lead to higher customer bills, lower Company earnings and the potential end of DSM
Value Alignment

• To be successful, we need to align the value streams among all stakeholders
  – Customers
  – Trade Partners
  – Implementors
  – Utilities
Changes in Progress

• Apply savings shapes to each measure
• Hourly marginal energy savings applied to each individual custom project
• Rebate framework
  – Prescriptive, Custom, Modeled
• Pay for performance contracts based on net benefits
  – CO Small Business Lighting: ARR-ICC based payments
What is NOT changing:
What is Next

• Continued Progress to 100% Carbon Free Electricity by 2050
• Reducing Customer Bills by Reducing Cost to Serve
• Offering Holistic Customer Solutions
• Shift from DR to DM
• More precise application of grid assets
  – Timing and Duration
  – Location
• Beneficial Electrification