

## Outline – “Economic Value of Demand Response In the Electric Energy Market”

Purpose of paper: To describe an integrated economic framework of both supply and demand alternatives. The paper will include a general overview, introduction of key economic drivers, state of technologies, barriers, scope and benefits of demand response in providing solutions in the energy market. Paper will included an extensive review of other industry work and analysis on the topic.

The following outlines the attempts to address the topic:

- I. Overview of key elements and fundamental drivers
  - a. Energy prices established by cost of resources operating on the margin
    - i. customer cost of service
    - ii. real time pricing
  - b. Economic viability of demand side options - Describe in detail and provide examples of each
    - i. purchase or decline energy– purchase decision based upon value to consumer for specific use.
    - ii. energy deferment - economic value based savings or displacement to offset by cost implementation and value of time preference.
    - iii. Combination of deferment and total energy taken
- II. History and market transition
  - a. Traditional Utility - limited saturation/ primarily under utility control and initiative
    - i. Obligation to serve
    - ii. Regulated/Utility Pricing
      1. Inclusive of contracts and resource entitlement to utilities which can adjust prices up or down from corresponding market energy prices.
      2. Energy component based upon the average cost over prior period, not reflecting of “real time” conditions.
  - b. Market Trends; US and International
    - i. Changes in Economic Horizon
      1. RPS requirements
        - a. Increasing requirements of RPS resources that provide inconsistent energy supply result in greater variability in energy prices.



- VI. Implications and Potential Scope of benefits - based upon cursory assessment of prices in specified region
- VII. Barriers to full implementation
- VIII. Summary of Results
- IX. Next steps