

Transactive Interface Valuation Study

Intro

Economist opinion of most efficient system

Consumer purchase price tied very close to cost of generation, transmission and distribution

Real time rates

Real time markets (this might include markets not accounted for in RTP such as DR)

Markets and ISOs (PAP19? and B&P DEWG Systems and Devices sub-committee)

5 minute LMP

24 hour day ahead

Demand Response market

Reserve Markets – Frequency, Operating, Replacement

Capacity Markets (?)

Megawatts not Kilowatts

Bidding constraints

ISO commonalities / differences

Effects of Wind and Solar

Public Utility Commissions

Tariffs and Rate Making

Aggregator's business case

Aggregators and bidding

Utility as aggregator (What are the obstacles to residential loads?)

Private business aggregators (What are obstacles to residual loads for private aggregators?)

Historic loads vs potential loads

Historic issues with consumers and direct load control

Direct load control vs probabilistic modeling of responses

(Is load running? Will consumer override?)

Retail Energy Providers (Texas / Ohio / Michigan)

Trend toward REPs

The whole home as a participant

Limited number of different types of loads

Broadband access exists for majority of residences

Greenbutton initiative (Greenbutton + pricing?)

Residential sector limitations

Too small to play

Predictability issues

Rewards and rate structures

Participation Confirmation (how to confirm participation in real time events and make financial transactions)

Interface to make it all happen

Easy to use interface

What does it mean (cost vs comfort)

Set it and forget it except when I have guests...then what?

Barriers to this approach

Consumer concerns

Too complicated for the consumer to understand

Is it Big Brother?

Is privacy a concern?

What's in it for the consumer?

Aggregator concerns

ISO concerns

Utility concerns

PUC issues

FERC?

Benefits to this Approach

Ability to have a negative pressure on electric rates

Consumers pay the actual cost of electricity

Improved asset utilization

Etc.

What Standard is needed?

SEP 2.0 enabled

What's next?