Transactive Energy Challenge Kickoff Meeting

September 10-11, 2015 National Institute of Standards and Technology Gaithersburg, MD Campus

POTENTIAL TE PROJECT WORKSHEET

PROJECT DEVELOPMENT AREA for TRANSACTIVE ENERGY / MODELING AND SIMULATION

Title:

Business/Regulatory Models

Brief Description: Write 2-3 sentences/bullets to describe the project development area and the necessary partnerships

1) Define fundamental business/regulatory model types
2) Characterize/define interfaces among the participants (physical/financial)
3) Identify legislative regulator features applicable to each model

Challenges: Identify the anticipated challenges for creating a workable demonstration or testbed for the concept

1) Untested/untried
2) Power generation/distribution is an existing marker
3) Regulatory/legislative resistance
4) Balkanized markets
5) Resistance by potential losers
6) Consumer resistance
7) Disruptive technological change/business models

PROJECT APPROACH

Major Tasks: Describe a possible approach to developing the project, including 3-5 major tasks

1) Survey/summarize existing initiatives
2) Look at current / past experience
3) Explore additional models
4) Identify legislation/regulatory features for each model
5) Characterize/define interfaces
6) Describe/formulate minimization of transactive energy system to models

Major Milestones with Dates: Define 3-5 milestones that can be used to measure progress.

1) A draft of models (December 3)
2) A draft of TE approach interfaces, business models (March)
3) Recommended demonstration projects

Performance Targets: Identify 1-5 (quantitative) performance targets that define a successful outcome.

- 1) Economic feasibility. Positive pay/?? for participants
- 2) Achieve vital clean energy/reliability goals at lower cost than alternatives

Limits: What parameters should be used to define the realistic limits to use of the system/platform

- None identified

PROJECT IMPACTS and DEMONSTRATION

Impacts: Describe the anticipated economic benefits (new products, jobs, economic growth, exports, tax base, etc.) as well as impacts on energy, health, safety, environment, and other quality of life aspects

- Positive economic impact
- Reduced GHG emissions
- Increased innovation
- Improved reliability/resilience
- Increased national energy security, diversification
- Increased cybersecurity challenges
- Increased system complexity problems
- Emergence of new markets
- Safety

Demonstration Vehicle: Describe how you might demonstrate the project concept (physical or virtual)

- One model through entire process

Status of Commitment: Please advise on the current status of the CPS idea detailed on this worksheet (underline/circle one):

Launched

Ready for Public Announcement

In Deliberations / Negotiations

Concept only Stage / No partners yet

Team Lead:

- Non identified

Participants and Roles:

- Microgrids
- Distribution
- Storage (Professional, consumer[pro-consumer])
- Energy producer (control station, distributed)
- Aggregator/broker/intermediary
- Billing/settlement
- Market operator
- Balancing Operator

Participants and Roles:

- Passive Consumer
- Active consumer
- Telecom/metering/sensor (RD, DR)
- Regulators/ Legislators
- Distributed energy supply chain
- Transmission on operator

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