

PROJECT DEVELOPMENT AREA for TRANSACTIVE ENERGY / MODELING AND SIMULATION

<p>Title: Business/Regulatory Models</p>	<p>Brief Description: Write 2-3 sentences/bullets to describe the project development area and the necessary partnerships</p> <ol style="list-style-type: none"> 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 	<p>Challenges: Identify the anticipated challenges for creating a workable demonstration or testbed for the concept</p> <ol style="list-style-type: none"> 1) Untested/untried 2) Power generation/distribution is an existing market 3) Regulatory/legislative resistance 4) Balkanized markets 5) Resistance by potential losers 6) Consumer resistance 7) Disruptive technological change/business models
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PROJECT APPROACH

<p>Major Tasks: Describe a possible approach to developing the project, including 3-5 major tasks</p> <ol style="list-style-type: none"> 1) Survey/summarize existing initiatives 2) Look at current / past experience 3) Explore additional models 4) Identify legislative/regulatory features for each model 5) Characterize/define interfaces 6) Describe/formulate application of transactive energy system to models 	<p>Major Milestones with Dates: Define 3-5 milestones that can be used to measure progress.</p> <ol style="list-style-type: none"> 1) A draft of models (December 3) 2) A draft of TE approach interfaces, business models (March) 3) Recommended demonstration projects 	<p>Performance Targets: Identify 1-5 (quantitative) performance targets that define a successful outcome.</p> <ul style="list-style-type: none"> • 1) Economic feasibility. Positive payback for participants • 2) Achieve vital clean energy/reliability goals at lower cost than alternatives <p>Limits: What parameters should be used to define the realistic limits to use of the system/platform</p> <ul style="list-style-type: none"> • None identified
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PROJECT IMPACTS and DEMONSTRATION

<p>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</p> <ul style="list-style-type: none"> • 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 	<p>Demonstration Vehicle: Describe how you might demonstrate the project concept (physical or virtual)</p> <ul style="list-style-type: none"> • One model through entire process <p>Status of Commitment: Please advise on the current status of the CPS idea detailed on this worksheet (underline/circle one):</p> <p>Launched</p> <p>Ready for Public Announcement</p> <p>In Deliberations / Negotiations</p> <p><u>Concept only Stage / No partners yet</u></p>	<p>Team Lead:</p> <ul style="list-style-type: none"> • John Caldwell <p>Participants and Roles:</p> <ul style="list-style-type: none"> • Microgrids • Distribution • Storage (Professional, consumer[pro-consumer]) • Energy producer (control station, distributed) • Aggregator/broker/intermediary • Billing/settlement • Market operator • Balancing Operator <p>Participants and Roles:</p> <ul style="list-style-type: none"> • Passive Consumer • Active consumer • Telecom/metering/sensor (RD, DR) • Regulators/ Legislators • Distributed energy supply chain • Transmission on operator <p>Worksheet Authors:</p> <ul style="list-style-type: none"> • John Caldwell, EEI • Jeff Price, Bluewave Resources • Robert Stewart, Pepco Holdings • Scott Andersen, CGI • Randy Wedin, Wedin Communications • Ronald Melton, PNNL • Arnand Kandaswamy, NIST • Ed Cazalet, TeMix, Inc. • Robert Hershey, Consultant
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