Scenario: Third Party Customer Face

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Background

Ted and Alice Boomer are well off empty nesters with a social conscience. They want to be green, and are willing to pay for it, but they do not want to pay attention to it. They read about a new service offered by their security monitoring company Lots-O-Alarms offering Green Energy Management.

Lots-O-Alarms (LOA) manages home energy use for many of its customers. Customers can select from a variety of programs: Lowest Cost, All Renewable, Nearly Green (Renewable unless cost exceeds baseline by 15%) etc. LOA contracts directly with a number of energy producers to provide an energy pool for each of its programs.

LOA directly reads the electric meters to get real time energy use rate throughout each day.
LOA re-uses the internet connection that it already has on its customer premises for security alarm monitoring verify the operating posture of each house.

To get the best prices, LOA performs load management within each house. Customers can log onto to a web site which queries their house for manageable service profile for the systems in that house. The customer can then set, as frequently or as rarely as they wish, which services they are willing to degrade to maintain load profiles. Although each house is different, LOA uses web services based on oBIX to operate house systems while hiding the complexity and diversity of different systems from its operating center.

LOA hopes to expand its offerings to support near-grid scenarios, including local generation and storage of energy for some of its customers. The customers like the social implications, but again, do not want to run it. LOA is looking for higher premiums from both sides when it can (1) guarantee load shedding target in advance to producers and (2) guarantee greater reliability to its customers.

LOA is looking in the future to partner with efficiency and maintenance organizations to manage this for its customers as well.

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Interoperability Category	Tools, Systems, Key Actors	Examples of interoperation across organizational boundaries where agreements must be reached
Organizational		
Economic/Regulatory Policy Political and economic objectives as embodied in policy and regulation	State Regulators Market Participants BI Providers	• Live customer access to direct metering data using e-commerce protocols • Third-Party Classification of power generation by various green categories, metadata available over web • Independent parties to audit performance and sales • Open Market in Power production and congestion information • Regulatory framework to enforce signatures and non-repudiation on business deals that may result in power outages for signatories
Business Objectives Strategic and tactical objectives shared between businesses	State Regulators Market Participants BI Providers ISPs	• Aggregators can assert rights to meter data (if from Utility side (premise side preferred) • Develop brand-able mixes of power technologies to meet customer social and financial concerns • Power Generators can produce and share classified power along with pricing menus and alerts. • Buyers get different QOS based upon energy profiles selected. • Generators can enforce power limits on individual customers based upon agreements in place • Producers can receive different prices depending upon branding and characteristics of their production process. • Market in customer face will drive flexibility of services and responses

Business Procedures Alignment between Operational Business Processes and Procedures		• Aggregation of power producers in virtual companies to meet similar consumer requirements • Third Parties audit and verify quality assertions from individual producers • Clearing market for differing mixes of Power Generation, Producer may simultaneously be in multiple aggregates.
Informational		
Business Context Awareness of the business knowledge related to a specific interaction	Standards Organizations System Suppliers Consultants	• Standard oBIX contracts, perhaps based on NBIMS for managing diverse building systems • Ontology to classify power sources to align/sort for "social" buyers • Market Pricing infrastructure
Semantic Understanding Understanding of concepts contained in the message data structures	System Suppliers Controls Integrators Consultants Standards Organizations	• NBIMS classification of building systems • OASIS ebXML ontology • OASIS oBIX contracts • Ontology of Power Production Described (Green factors, reliability, …)
Technical		
Syntactic Interoperability Understanding of data structure of messages exchanged between systems	Integrators Consultants Standards Organizations	• OASIS EBXML • W3C SOAP syntax • WS-security and business protocols sufficient to enforce signatures and non-repudiation • OASIS oBIX • WS-Federation
Network Interoperability Mechanism to exchange messages between multiple systems across a variety of networks	Consultants Home Installers	• SOAP • TCP-IP
Basic Connectivity Mechanism to establish physical and logical connections between systems	ISPs Telecommunication Companies	• Any commercial data connectivity