

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

What is the Trust Required in New Smart Grid Uses and Applications?

TCIPG Annual Industry Workshop

November 7, 2011

RELIABILITY | ACCOUNTABILITY



- Trustworthy:
 - Deserving of trust or confidence; dependable; reliable
- Trust:
 - Reliance on the integrity, strength, ability, surety, etc., of a person or thing; confidence.

Not just security –
Trustworthy is a state of mind

Dictionary.com Unabridged. Random House, Inc.

- Customer expectations
 - Data Accuracy
 - Data privacy
 - Reliable service
- Industry expectations
 - Accurate data
 - Customer behaviors
- Suppliers
 - New technologies

- Data Accuracy
 - Time of use pricing
 - Off-peak
 - Centrally directed
 - Price-driven
 - Demand-driven
 - Time driven
 - Service-type pricing
 - Resistive loads
 - Harmonic loads
 - Incentives (PHV)

- Data Privacy
 - Usage Patterns
 - Vacation
 - Intermittent occupancy
 - Spoofing (data to utility)
 - External manipulation (data to home)
 - Third-party uses of data
 - Marketing
 - Load / Smart Appliance Registration info

- **Reliable Service**
 - Demand driven price/curtail commands
 - How Long?
 - Which loads?
 - Assurance of return
 - Customer override
 - Safety
 - Electrical
 - Mechanical

- Accurate Data
 - Customer tampering
 - Transducer drift
 - Automatic calibration
 - Billing
 - Time of use
 - Load type
 - High-resolution usage
 - By load type
 - By demand type

- Customer Behaviors
 - Follow directions
 - Disablement
 - Moving loads
 - New load registration
 - Legacy appliances
 - New appliances
 - Automatic registration
 - Automatic detection

- Smart House
 - Detect new loads / types
 - Coordinate with utility
 - Communicate with smart appliances
- Smart Wiring
 - Detect location and circuit of loads / types
 - Manage loads by circuit
 - Legacy loads
- Smart Appliances
 - Registration of loads / types
 - Coordinate with smart house / smart wiring
 - “Customer proof”

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Questions

Scott Mix, CISSP
scott.mix@nerc.net
215-853-8204

RELIABILITY | ACCOUNTABILITY

