Opening Statements

• Customers are an integral part of meeting the various energy and environmental goals of California

• Smart Grid is an important step in allowing the utility to operate in a more efficient manner

• Are customers willing to be part of this effort and what if customers do not respond?

• How to move beyond the “status quo bias”

• Customer segmentation strategies

• Technology is changing the way customers, utilities, and the market will consume, deliver, and sell electricity.
We are expecting more from customers

- **Future rate designs**
  - TOU
  - CPP
- **Demand Response**
  - Aggregators
  - Wholesale markets
- **Distributed Energy Resources**
  - NEM
  - Storage
  - Solar
- **Energy Efficiency**
  - Codes and standards
  - Utility programs
- **AMI and Data Access**
  - Green Button
We are expecting more from utilities

- **DER Integration**
  - Reliability
  - Resilience

- **New market participants**
  - Revenue collection
  - Platform for innovation

- **Demand Response**
  - Moving to making DR procured resource

- **Energy Storage**
  - Requiring utilities to procure 1.7 GW of energy storage

- **Business Model implications??**

- **Still must be cost-effective**
  - GRCs
  - Risks
• **We think a customer wants:**
  – To take control of their usage
  – Be part of a movement
  – Save money

• **Smart Grid provides all of that, yet…..**
  – Slow sign-up for time of use rates or CPP
  – Low use of a lot of EE programs
  – Low participation in DR programs

• **How do we get customers more involved?**

• **How do we educate customers about Smart Grid investments?**
  – Especially beyond AMI
  – Customer segmentation

• **Status quo bias**
  – Customers may not act rationally
What did we learn?

- Utilities still have a huge problem with trust.
- The meter isn’t a piece of equipment on the side of a house
- Customer understanding of electricity and their utility still needs work
  - Reliant on bill inserts
- Rates, rates, rates
- Rate Cases
  - Delays innovation
  - Must be cost-effective (as determined by the regulator)
  - Occurs every 3 or more years
  - Reliant on the record
- There is no one “average” customer, and many don’t want to be bothered
- Customer acceptance of investments vital for success
- Go back to the basics: reliability and safety
- Customer segmentation
  - No one message will resonate with all or even most customers
  - No one medium will resonate with all or even most customers
  - Need to target message and medium
- What is the story?
What does this all mean?

• We still know very little about what a customer wants.
• We have a better idea of what a customer expects.
  – Electricity to be available all the time
• But we have a lot information about a customer.
  – AMI
  – Financial info
• How do we bridge this gap and begin to use this information to provide better service?
  – Smart Grid is needed because ______.
• Perhaps the utility is not best entity to provide this information and education?
  – Moving beyond traditional utility services
  – Allowing customers to share their information with others
• Need more risk takers
  – Reject the status quo
  – Take the plunge
  – Failures will happen and should accept that
Where to go from here?

• **Think products and services, not programs.**
  – Programs are what utilities offer to customers
  – Products and services are what customers want to purchase

• **Changes utility interest**
  – Manages reliability
  – Procures products
  – Like an ISO

• **Change is coming**
  – NEM
  – Microgrids
  – Renewables
  – Use of data for EE and DR services

• **This also applies to regulators**
One example of change: Access to Data

- Utilities and CPUC Staff have been active in development of ESPI and Green Button
  - NAESB REQ 21 and REQ 22
  - SGIP PAP 20
- October 2011: PG&E, SCE, and SDG&E agree to implement Green Button Download My Data
  - Up and running by January 2012!
- October 2012: PG&E and SDG&E announce Green Button Connect My Data live (beta)
- September 2013: Approved utilities applications to implement ESPI (Green Button Connect My Data)
- Remember!! CPUC Privacy rules do not apply to third parties that obtain data directly from customer
  - Tariffs implementing CPUC Privacy Rules, which will cover third parties obtaining customer data via Green Button Connect My Data, still pending.
For Further Information

CPUC Smart Grid webpage: http://www.cpuc.ca.gov/PUC/energy/smartgrid.htm


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