



Data Access, Use, and Privacy



California Public Utilities Commission Policy & Planning Division (PPD)

Pecan Street Inc. Quarterly Meeting

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Opening Statements

- **We are collecting a lot of information from a lot places**
 - Usage
 - Operations
- **Challenge for privacy**
 - Changing cultural norms?
 - \$7+ billion investment in AMI
- **How to encourage innovation and open data sets while protecting customer privacy**
 - Privacy policies paired with data sharing policies
- **An informed customer means _____.**
 - Awareness
 - Understanding
 - Ability to act/share
- **What are the uses for the data?**





Advanced Meter Deployments

- **2004**: CPUC directs electric utilities to file AMI applications
 - Be able to support various pricing tariffs
 - Collect data at an interval to allow customers to understand usage
 - Allow customers to access their usage
 - Be compatible with customer education and management applications
 - Be compatible with utility systems and applications
 - Be compatible with load control technology
- **2006**: PG&E first utility approved to begin installing AMI
- **2009**: Both SCE and SDG&E have approval to install AMI
- **2011**: PG&E get approval for revised AMI application
 - Provision of Home Area Network capability
- **2012**: Southern California Gas Company receives approval to install AMI
- **2012**: Electric utilities basically complete AMI installations
- A total of over 11 million electric/gas meters have been installed at a cost of over \$7 billion.





Brief History of Data Access and Privacy

- **December 2008**: Issued Order Instituting Rulemaking (R.08-12-009)
- **December 2009**: Issued Decision addressing Energy Independence and Security Act requirements and identified customer access issues for next phase of OIR (D.09-12-046)
 - Declines to adopt PURPA standards as directed by EISA
 - Sets schedule for providing customers with retail and wholesale price information by end of 2010, access to usage data through an agreement with a third party by end of 2010, and provide access to usage information on a near real-time basis for customers with AMI by end of 2011.
- **July 29, 2011**: Final Decision adopting privacy rules and policies on customer access to data. (D.11-07-056)
 - Adopts framework for protecting customer privacy
 - Primary purpose needs without customer consent
 - Secondary purpose needs require customer consent
 - Directs utilities to allow customers to share usage information with third parties with consent
 - Directs utilities to use a standardized method for third party access with customer consent
 - OpenADE
 - Customer access form must also be standard
- **August 31, 2012**: Final Decision adopts privacy rules and policies on customer access to data for natural gas companies. (D.12-08-045)





California Actions on Customer Access

D.09-12-046

- Sets timeframe for IOUs to provide certain information to customers:
 - SCE, SDG&E, and PG&E must be capable of providing an authorized third party with access to the customer's usage information that is collected by the utility by the end of 2010 should the customer desire that information.
 - SCE, SDG&E, and PG&E must be capable of providing a customer possessing an advanced meter with access to the customer's usage information on a near real-time basis by the end of 2011.
- Sets the following policy goals:
 - Customers be provided retail and wholesale electricity prices in a uniform manner by end of 2010
 - Provide access to usage data through an agreement with a third party by end of 2010, and
 - Provide access to usage information on a near real-time basis for customers with AMI by end of 2011.
- **Did we meet these goals? Not quite.....**





Customer Access Actions in D.11-07-056

- **All three electric IOUs should make information available to customers in a consistent manner.**
- **Provide customers with approximate electricity price, actual usage and bill estimate, updated daily.**
- **Also provide bill-to-date, bill forecast data, projected month-end tiered rate, and notification of crossing tiers; all prices should be “all in” price for electricity.**
- **Utilities must allow third party access via the utility’s back-haul when authorized by a customer.**
- **Directs utilities to develop a process to allow customers to utilize the Home Area Network to access meter data**
- **D.12-08-045 extends same requirements to natural gas operations of PG&E and SDG&E**
 - Rules also apply to Southern California Gas Company, but tied to their AMI roll-out schedule, which starts this year.





Green Button

- **Utilities and CPUC Staff have been active in development of OpenADE 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)**
- **D.13-09-025 adopts utilities applications to implement OpenADE (aka Green Button Connect My Data)**
 - First phase expected to be ready next summer.
- **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.





So, what were the issues?

- **Consent Forms**
 - How much information should be provided to the utility
 - Expiration date?
 - Consistency across utilities
- **Who decides when to shut off access?**
 - Upon notice of customer
 - Upon order of CPUC
 - But what if Utility believes third party in violation of requirements???
 - Utilities propose temporary suspension of access, will notify customer and third party, and third party can appeal to CPUC
 - Third Parties propose utilities notify CPUC of potential violation and wait for CPUC determination before suspending access.
 - The real issue is.....
- **Utility Liability**
 - Privacy rules do not hold utilities liable for third party violation of rules where third party has customer consent
 - EXCEPT!!! If utility acts “recklessly” regarding sharing of customer data.
 - Rhetorical question: If utility is aware of third party actions in violation of privacy rules, but third party has customer consent, is utility acting “recklessly” by continuing to provide access?





Implementation Questions for Green Button

- **How to leverage OpenADE/Green Button for uses other than conservation?**
 - Solar installers
 - Energy Efficiency providers
 - On-Bill Financing
 - Demand Response Providers
- **What type of data is provided?**
 - Billing quality (validated, estimated, and edited (VEE'd))
 - Unvalidated
- **How much historical data will be made available?**
 - 2 California utilities proposed 13 months, 1 proposed 24 months
- **Processing of customer consent forms and making access available**
 - For California, these processes and procedures need to be timely and consistent across utilities.
- **What other information is available that can be shared**





California Actions on Privacy

- **California has a long history of promoting privacy**
 - California Constitution, Article 1, Section 1 includes right to privacy
- **SB 1476- signed into law on September 29, 2010**
 - Utilities and their contractors must maintain customer privacy
 - Utilities and contractors do not need customer approval for “system, grid, or operational needs, or the implementation of demand response, energy management, or energy efficiency programs...” (i.e., primary purposes)
 - BUT...customer information cannot not be used for “secondary purposes” without customer consent
- **CPUC issued D.11-07-056 on July 29, 2011 to implement SB 1476**
 - D.12-08-45 extended privacy and access rules to natural gas companies





CPUC Privacy Rules

- **Based on Fair Information Practice Principles**
- **Applies to utilities, utility contractors, and third parties that obtain data from the utilities**
 - To be enforced via utility tariffs
- **Development of rules mostly result of consensus amongst parties (notably, utilities, privacy advocates, and consumer advocates)**
- **Goals of rules are both to protect customer privacy, but also enable customers to access usage data and share that data with authorized third parties to promote future conservation and grid management activities**
- **Primary Purpose/Secondary Purpose structure**
 - Primary purposes are provision or billing of electricity or gas, provide for system, grid, or operational needs, provide services required by state or federal law or as directed by the CPUC, and “plan, implement, or evaluate” demand response, energy efficiency or energy management programs
 - Secondary purpose is anything that is not a primary purpose
 - Primary Purposes do not require customer consent





On-going Privacy Issues

- **Smart Grid Rulemaking Phase 3 currently considering ways to make more usage data available in ways that protect privacy**
 - CPUC rules says that data removed of identifiable characteristics not subject to privacy rules, and can be made available without customer consent
 - Define “aggregated” and “anonymized”
 - What is sufficiently aggregated?
 - What is sufficiently anonymized?
 - Considering about 10 use cases to develop data needs, means to make data available, and what can be made available in aggregated/anonymized formats
 - Participants include utilities, third parties, local governments and privacy advocates (EFF)
- **Access to other customer data**
 - Energy Efficiency program data
 - Aggregated building data
- **Growing pains**





Balancing Competing Public Interests

- **Privacy and Data Use should not be viewed in opposition to each other**
- **State needs to support use of data generated by AMI (and other investments) to realize additional savings from investment**
- **There are a lot of uses for data**
 - Removal of PII
 - Data Minimization
 - New services!
 - Research
- **Use of data to support operational planning**
 - Load planning
 - Maintenance planning
 - Sizing the grid
- **At its most basic, utilities and regulators are responsible for both protecting customer interests and trust, as well as ensuring that electricity is provided in a safe, reliable and secure manner**





What is this really all about?

- **Utilities still have a huge problem with trust.**
- **The meter isn't a piece of equipment on the side of a house; it means something**
- **Customer understanding of electricity and their utility still needs work**
- **Rates, rates, rates**
 - They may be a changin'
- **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**
- **Ironies**
 - Automatic bill payments
 - Paperless bills
- **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?**





Customer Wants

- **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
 - 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 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





Data and Risk

- **Risk averse**
 - Customers
 - Utilities
 - State commissions
- **Trials**
 - Show worthiness
 - Accept failures
 - Flexibility
 - Learnings
- **Data helps better manage risk**
- **Data helps better prove success, identify failures and supports progress**
- **Utilities Smart Grid Deployment Plans provide details around future development, but still reliant upon GRC for full funding**





Final thoughts

- **What about companies not under state PUC jurisdiction?**
- **On going efforts on developing best practices and self-certification for non-jurisdictional third parties**
 - TRUSTe and Future of Privacy Forum Privacy Seal Program
 - DOE's Voluntary Code of Conduct effort
- **AB 1274**
 - Pending legislation covering companies that provide home area network products that obtain data from the meter
 - Generally mirrors SB 1476 on privacy requirements
 - Provides for injunctive relief via courts
 - Addition to California Civil Code, not Public Utilities Code
 - “A customer harmed by the release or unauthorized use of ...data ... may bring a civil action to recover actual damages in an amount not to exceed \$500 for each willful violation.”
- **Finally, is Baylor the best team in Texas?**





For Further Information

CPUC's Smart Grid page

<http://www.cpuc.ca.gov/PUC/energy/smartgrid.htm>

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