Protecting Vulnerable Customers in a Changing Utility Industry

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Agenda

• Introductions
• Changes in the industry
• Vulnerability to changes
• Remedies
About VEIC

• Mission to act with urgency to enhance the economic, environmental, and societal benefits of clean and efficient energy use for all people

• Energy efficiency, renewable energy, and transportation

• Innovative program design, planning, and implementation; policy, advocacy, and research

• National and international clients: government agencies, regulators, utilities, foundations, and advocates
About Elizabeth

Elizabeth Chant, Principal Consultant, VEIC

- 23 years EE program and policy for low-income people and multifamily buildings
- Part of creation of Efficiency Vermont and DC Sustainable Energy Utility
- Board member, NEAUC, National Housing Trust, Home Performance Coalition, Three³
Utility Industry Transformation

- Utility revenue base is changing and declining (plants, poles & wires)
- Consumption is decreasing in many places (efficiency is working!)
- Decentralized generation must be integrated in the grid management
- Utilities must invest in smart grid technology while maintaining conventional grid infrastructure
Changes for Customers on the Horizon

• AMI / IoT
• Integrating distributed generation
• Prepaid service
• Customer data
Advanced Metering Technology

- Digital meters have 2-way communication capability with data storage
- 2-way communications and storage features enable dynamic pricing and pre-payment
- Data storage allows utility to collect and track power usage and outages remotely - meter-readers no longer needed
- Digital readings enable:
  - Time-of-use rates
  - Usage notifications to your smart phone
  - Pre-payment based on usage patterns
  - Automatic disconnection and reconnection
Dynamic Pricing

• Utilities set rates based on peak and off-peak usage – also called Time of Use and Time of Day rates
• Peak hours are typically defined in relation to day-shift schedule
• Assumes all customers can shift usage based on peak pricing
• Who’s at risk of paying peak rates:
  • Workers with second- and third-shift schedules
  • Seniors aging in place
  • People with disabilities, especially those reliant on 24-hour medical equipment
Pre-Payment

• Payment deposited in account before service is turned on
• Remote, automatic disconnect if bill credits run out
• May not come with in-home device to monitor usage and credits
• Numerous service fees may be required:
  • Monthly program fees
  • Transaction fees
  • Reconnection fees if disconnected
• National Consumer Law Center found that customers of one electric co-op paid 11% more for electricity due to transaction fees
The Value of Big Data

- Uncertainty
- Robustness
- Trustworthiness
- Accountability

- Statistical
- Correlations
- Prediction
- Hypothetical

- Structured
- Semi-Structured
- Unstructured
- Multi-factor

- Real time
- Online Acquisition
- Sustainability
- Processes

- High-Dimensional
- Terabytes
- Transactions
- Tables, Files

Big Data Technologies
Who is Vulnerable?

- Low income
- Moderate income
- Medical needs
- Less “control over schedules”
- Not part of digital world

Meet ALICE!
- New United Way initiative to shine light on “asset-limited, income-constrained, employed”
- Some 66% of jobs in the US pay less than $20 an hour
What’s at stake?
How can we protect vulnerable customers?
How can regulators and the utility industry protect customers?

Pre-Paid Billing

- Opt-in policy
- Reduced deposit and discount for advancing capital before service
- If bill credits depleted, return to post-paid and lose discount; retain traditional billing & payment services
- Incorporate transaction or program fees into rates – not itemized on bill

Thanks to continued work by John Howat & others in NCLC Energy group!
How can regulators and the utility industry protect customers?

Dynamic Pricing
- Opt-in basis only
- Percentage of income payment plan (PIPP)
- Deliver demand responsive energy efficiency services
Protections from Remote Disconnects

• Retain all notice provisions, including in-person visit to home
• Retain / introduce restrictions for days, temperatures, and health
• Reduce power to “basic needs” provision (e.g. 1 kWh / day, with increases as bills are paid)
• No or minimal disconnect and reconnect fee for remote reconnection
Link Efficiency Services to Low-Income Billing & Payments

- Auto-enroll in EE programs through electronic requests for home energy visit
- Deliver targeted savings tips through home energy apps

- Pilot LIHEAP renewable projects offer chance to test new billing & payment approaches
- System for tracking
Ensure that Utilities Offer Comprehensive EE / RE Portfolio

- Renters and owners
- All building types
  - Single & multifamily
  - Public & private
- Full range of measures
  - Electric, gas, and fuel
  - New construction & retrofit
  - LEDs, electronics, major appliances, behavior, weatherization
Thank you!

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