Next Generation Information Feedback and Behavior Change Programs

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Fort Collins Utilities provides electricity, water, wastewater, stormwater and financing services.

Citizen-owned, electric utility established 1935, ~64,000 customers.

Highly educated, environmentally aware customers.
Fort Collins Efficiency Portfolio

- 16 or 17 of the 18 best practices programs from SWEEP’s new study (The $20B Bonanza)
- 2011 results, 20 GWh annual savings, 1.4% of sales, 3.8 cents/kWh
- Details at fcgov.com/what-we-do
Energy Policy Goals

- Top down “inventory” approach
  - Carbon emissions basis
  - Everything counts
  - 20% below 2005 by 2020

- Bottom up “DSM” approach
  - Attribution drives what counts
  - Portfolio savings at least 1.5% of community electric use
Where are the opportunities?

- Efficiency
- Technology grows new low-hanging fruit
- Replacement cycles are long
- Conservation
- Saving 10% or more is “easy”
  but,
  - can we spend money on it?
  - can we prove that it works?
Experience and Lessons Learned

• Program
• Type
• Measurement
• Experience
• Lessons

- Home Energy Reports
- Business Energy Challenge
- FortZED Community Challenge
- Poudre School District
- And a few more
Program: Home Energy Reports

- Delivered in partnership with O-Power
- Type
  - Residential neighbor comparison
- Measurement
  - Statistical sample comparison
- Experience
  - Three years
- Lessons
  - It works
  - Leaves many customers out
  - Sampling become increasingly difficult over time
Program: Efficiency Challenge

• AKA Employee Engagement
• Type
• Short-term conservation challenge for businesses
• Measurement
• It depends
• Experience
• Approximately 10 projects
• Lessons
• Businesses like it
• Can be adapted for large and small
• Typically can’t measure savings
Program: FortZED Community Energy Challenge

- Grassroots effort
- Type
  - Pledge plus house parties plus neighborhood competition
- Measurement
  - In theory
- Experience
  - 2 year project, 2000 pledges
- Lessons
  - No data collection plan
  - Unsustainable grassroots model
  - No apparent savings
Poudre School District

- How does a public high school built in 1973 compare to a new LEED-certified high school in the same district in the same town?
- High schools competing for bragging rights

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More Programs

- Colorado State University
- Staff position
- Dorm challenges
- Greek life energy challenge
What’s Next?

• Home Energy Reports “for all”
• AMI web portal tools
• Mobile applications and information feedback
• Performance based incentives
• Pre-pay
• Game-based programs
Home Energy Reports “for all”

- All residential customers with data will receive reports
- Approximately double recipients
- Deemed savings from Fort Collins specific model of energy savings based on home characteristics, energy use and demographics
- Starting January 2013
  - Link to new web portal in April
- Issues
  - No precedent for the deemed savings approach?
AMI Web Portal Tools

- Bill comparison to similar homes
- Where do energy dollars go in the home?
- Goal setting with self-identified demographics
- Posting to community portal
- Bill analysis, AMI data (yesterday)
- Starting April 2013

Issues
- Generating web traffic
Mobile & 3rd Party Apps

• Your phone should be an in-home display
• Most everything from the AMI web portal
• Green Button Initiative
• Starting August 2013
• Issues
  • “Near real-time” data is harder than it seems
Near real time information feedback
Performance Based Incentives

- New construction and deep retrofits
- Bundles behavior, operations and retrofit measures
- Multi-fuel, performance based
- Total energy use performance period
- Target EUI vs. actual
- Piloting in deep retrofit program
- 6 projects in pilot
Pre-pay or Pay as You Go Programs

- Operational, customer satisfaction and conservation benefits
- Leverage investment in AMI systems
- Savings of 5-15%
- Ask Debbie from SRP
Game Based Programs

- Social, fun, simple
- People
  - like to play
  - can’t be expected to act rationally
- Define your own social groups, competitions, prizes, no jargon
- Impact energy use and demand (event driven)
- Starting August 2013
- Issues
  - Models need to change frequently to maintain engagement
Where we’re headed

Good old fashioned conservation

• Large potential savings from behavior based programs
• May be hard to measure
• High tech and low tech
• Use social norms, shoot for going viral
• Results show up in inventory type goals/metrics
• Customer satisfaction, engagement and community benefits
Thanks!
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