

Innovating Behavioral Programming for the Smart Grid Era

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Panelists: Brian Keane, SmartPower; Greg Pal, OPOWER;
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Will Smart Grid Investments Deliver on Promised Payoffs?

- EPRI (2011) estimates that a fully functional smart grid in the US will cost \$338-\$476 billion and net upwards of \$1.3-\$2 trillion in benefits, including:
 - Reliable power delivery
 - Enhanced security
 - Efficiency in grid management
 - Environmental and conservation benefits
 - Lower costs to customers through pricing & energy information

Has the Smart Grid “Paid For” Behavior Change?

- Some policy makers feel that behavioral programs have been “bought and paid for” in smart grid upgrades
 - Is the smart grid alone capable of transforming consumer behavior?
 - Those who say “yes” argue:
 - **Automated conservation** will supplant the need for voluntary action through smart technologies
 - **Rate structures** will change the way consumers use energy
 - **Visibility** into household energy usage will prompt changes in behavior

Are Rates and Visibility the Answer for Sustainable Growth?

- Our past research has shown that information and cost do not necessarily equal behavior change
 - Customers are:
 - Irrational
 - Short-sighted
 - Don't care
- If the smart grid enables greater flexibility and visibility, what else needs to be provided to deliver on its promises?

*What can behavioral programs offer
that smart grid technologies cannot?*



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Let's Get Energy Smart.

Why Behavior Change?

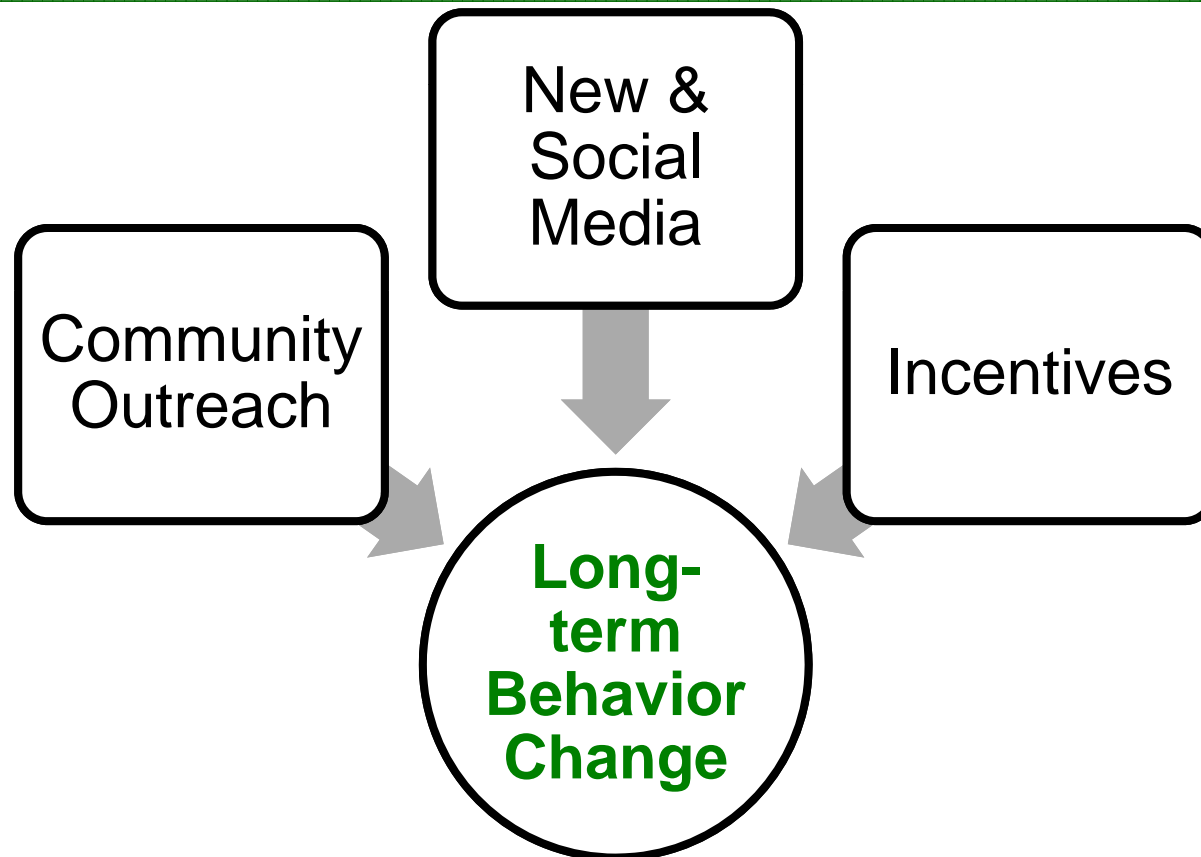
- We all live in more efficient homes than the homes we grew up in;
- Yet, today, we are all using more energy in our homes than the homes we grew up in;
- We need to train people how we live, work and play in our homes, offices and schools.
- This training takes place on-the-ground, on-line and with rewards & incentives



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SmartPower's Three Legged Stool For Behavior Change

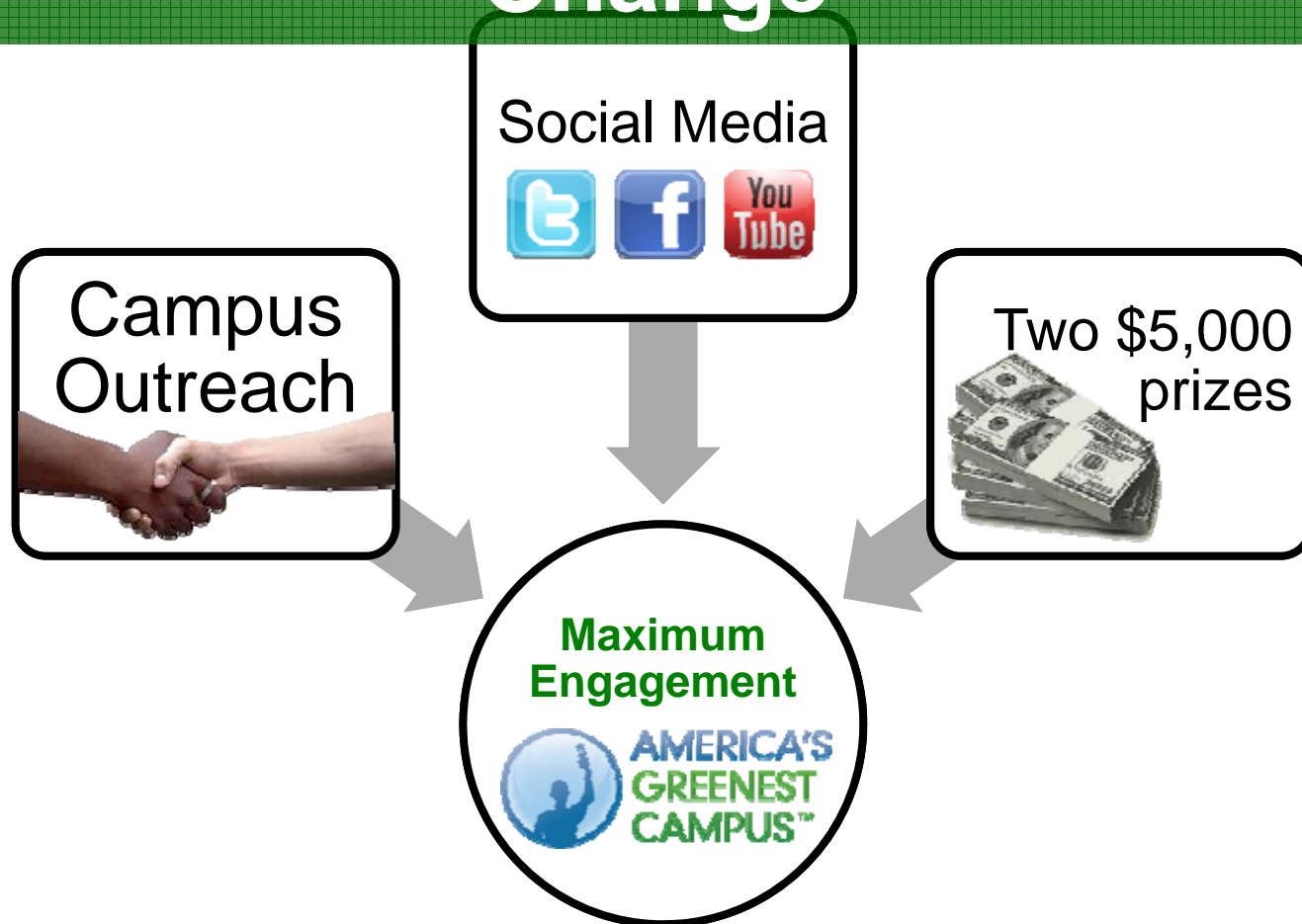




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Let's Get Energy Smart.

Three-Legged Stool For Behavior Change



Does Smart Grid Make Behavior Programs Obsolete?

- Consumers want engagement, not information
- Engagement is achieved via effective consumer marketing, not technology
- Technology can enhance marketing, but is not sufficient in itself
- Smart grid as implemented today is not ready for consumer engagement
- Behavior programs must remain agnostic to smart grid, while still delivering both EE and DR benefits

How Do We Move Forward Today?

Behavior programs do not need smart grid to execute on any of the below consumer marketing applications that have proven effective in other industries and in delivering verified energy efficiency and demand response benefits

Consumer Marketing Insight

- Personalized energy savings information
- Goal-setting and feedback
- Social context & competitions
- Financial incentives for saving energy

Consumer Marketing Application



Smart grid is not necessary for delivering EE and DR benefits.

Smart grid does not in itself obviate the need for marketing applications

How *Could* Smart Grid Supercharge Behavior Programs?

- More granular data is not valuable as an end in itself but as a means to delivering enhanced engagement
- Real-time alerts and recommendations
- Mid-billing cycle budgeting (e.g., daily and weekly thresholds)
- Increased gamification competing against daily and weekly benchmarks, daily neighbor competitions, etc.

Operating Systems vs Applications

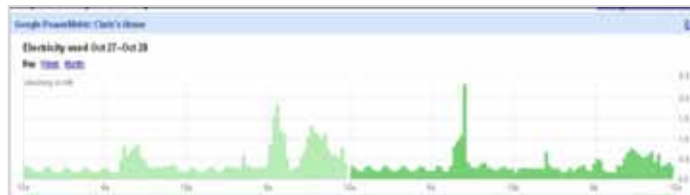


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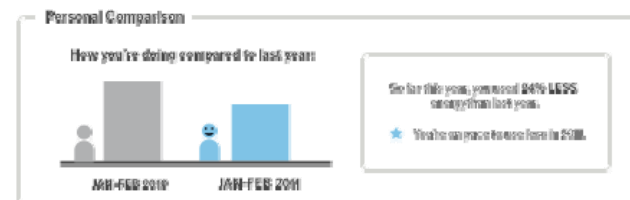
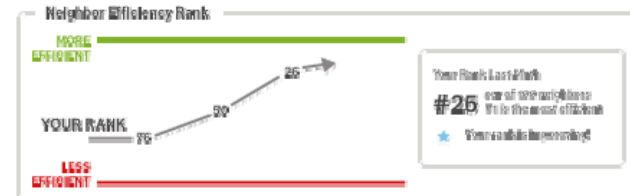


Customers want applications, not operating systems

Raw Data vs Insights

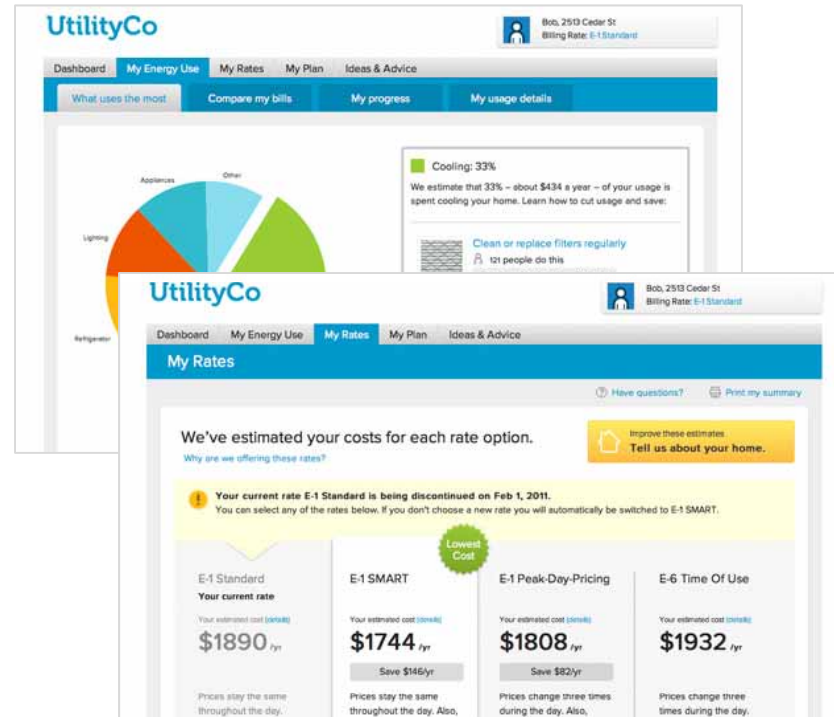
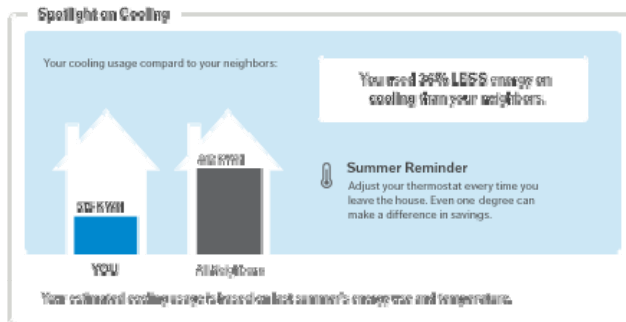


Google powermeter



Customers want insights, not raw data

Delivering Day One Value



Customers need to see the value of the Smart Grid

Save the Date



22nd National Conference & Expo

February 6-10, 2012
Hilton San Diego Bayfront

