

Connecting climate change, smart grid, and consumer attitudes

DESIGN EXERCISE TOOLKIT

December 3, 2014
Prepared by To the Point



 A NATIONAL SUMMIT ON
SMART GRID AND
CLIMATE CHANGE | DECEMBER
2-3 2014
WASHINGTON, DC

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DESIGN EXERCISE

1. Choose a partner and discuss your personal energy worldviews. What is the table mix?
2. Discuss likely characteristics of your location
3. Determine the goals for your initiative to connect Climate Change, SG, EE, DER, etc.
4. What would be the measures of success?
5. Identify the strategy for your approach
6. Select, modify, or “design” new tools
7. Report back to the larger group

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Vision Drivers = Big Picture

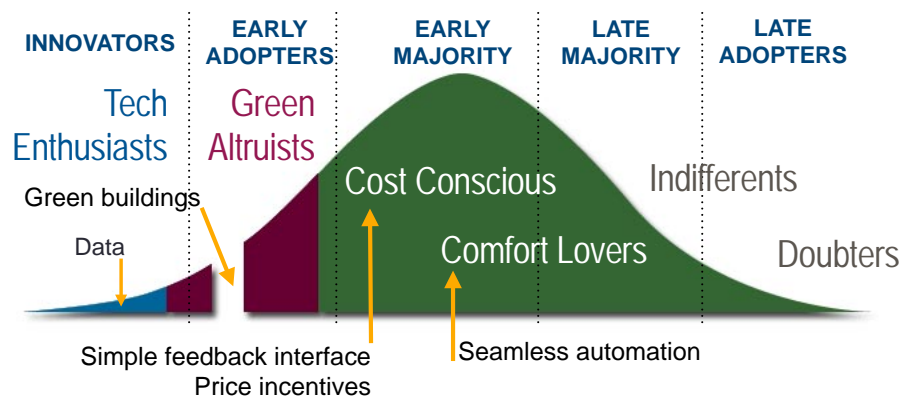
Priorities vary across the country

- Energy independence & security
- Climate change and carbon footprint reduction
- Population growth
- Proliferation of consumer electronics
- Competitive, sustainable energy economy
- Green jobs and manufacturing
- Resale value of property
- More precise and efficient use of limited resources
- Empowering customers to be part of cost mitigation
- Make it easier for individuals to control their bills
- Infrastructure is aging to the point of unreliability
- Concern for future generations
- Respond to extreme weather events

Source: NAPC Communications Umbrella Action Guide

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Energy Worldviews



Source: To the Point

Diffusion of Innovations: Everett Rodgers
Crossing the Chasm: Geoffrey Moore
Worldview triggers: Judith Schwartz

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Value Propositions by Segment

Medically-frail	Cost-conscious	Tech enthusiast
New technology will enable quicker responses and fewer outages in extreme weather, faster restoration of service for at-risk residents (after first responders), and pro-active contact with loved ones and EMT response teams.	Digital technology on the grid will allow you to know your current balance, get pricing feedback to allow simple actions and automation to keep your bills as low as possible. Frugal use of electricity will be rewarded financially.	The smart grid platform will allow you to know how your home is using energy and control usage anywhere from the device of your choosing. New and innovative tools and apps are hitting the market all the time.
Indifferent	Green altruist	Comfort lover
Whether you choose to take any action or not, you will receive system-wide benefits including faster repairs and better customer service. You will be able to control who sees your usage information.	The smart grid makes it possible to support more varied renewable generation, electric vehicles, and energy-saving devices and appliances. Your smart energy choices reduce the need to build new power plants.	You'll stay comfortable with set and forget automation. You won't even be aware that your home energy management system is adjusting your AC, pool pump, and smart appliances to keep your bills manageable.

Source: NAPC Communications Umbrella Action Guide

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Combine Choice + Analytics

Offer simple program bundles



Illustration from IEE White Paper on Smart Meter Costs & Benefits, based on ideas from SCE and To the Point. Concept validated by research from Accenture, SGCC, DEFG

Photo Credits: © 2012 Marshall Cetlin

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Allow Varied Levels of Commitment

Combine technology with incentives

Customer Engagement

		PASSIVE	ACTIVE	SET & FORGET	UTILITY AUTOMATION	ENERGY PARTNERS
Customer Segments	BASIC	●	●			
	COMFORT	●	●	●	●	
	SAVER		●	●	●	●
	GREEN		●	●	●	●

- Motivational context
- Daily routine or occasional attention?
- AC or not?
- Willing to share control?

Illustration from IEE White Paper on Smart Meter Costs & Benefits

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Commercial & Industrial Segments

Choices align with business impact



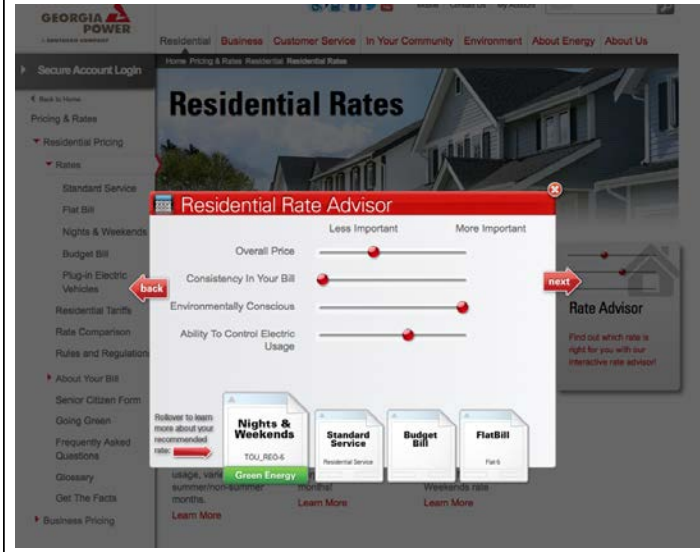
Customer Engagement

		PASSIVE	ACTIVE	SET & FORGET	REMOTE AUTOMATION	ENERGY PARTNERS
STEADY	●	●	●			
COOL	●	●	●			●
ADAPTABLE		●	●	●		●
SUSTAINABLE		●	●	●	●	●

- Sustainability viewed as asset by employees/customers. Building automation and commercial-scale generation readily available.
- Biz/org. location serves as **cool destination** on hot days. Creative solutions need to be customized.
- Adaptable operation (warehouse, factory, nursery) where **peak use can be shifted** for savings.
- Operation with **flat usage** or labor constraints, where meaningful savings would come from overall efficiencies, not peak reductions.

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Customer Self-selects Priorities Georgia Power Rate Advisor Tool



What makes this tool so useful is that people can adjust their priorities privately and voluntarily to research which programs match their priorities and leads them to relevant info. It also gives them a common language if they have further questions for a rep and could be used as part of a selection app.

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People Choose Plan to Fit Living Situation Salt River Project (SRP) in Arizona



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Offer Programs Within Common Context

DTE Interactive Energy House

Various rebate, other programs, and tips are accessible from here.

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Customers Will Volunteer Information

EnergySavvy Online Audit

How Efficient Is Your Home?

Take our free and easy survey to find out. You'll get a home energy report that tells you how much you can save and how to get the biggest bang for your buck. It takes less than 2 minutes and there's no signup required.

Home type

- Single-family home
- Townhome
- Apartment or condo
- Other

Floors

Don't include your basement, garage or attic unless they're heated living space.

Occupants

The number of people that normally live in your home.

Size in Square Feet

Don't include garages or patio areas unless they are finished and heated.

Year Built

Enter the year that your home was built even if it's been remodeled since then.

Location

Your home's Zip Code.

Continue ➔

Detailed drawings make the experience both educational and entertaining.

Do you cook with natural gas or electricity?

Natural Gas Electricity

Tip: If your stove has gas burners, choose natural gas.

What fuel does your water heater use?

What best describes it?

Natural Gas Electricity Oil

Standard Tankless

Tip: Choose which best fits your home's water heating system.

Social Media: Targeted, Two-Way Exchange

- Leverage where people already are congregating around a shared vision or interest
- Which partners and community groups already have thriving online networks?
- Outage and restoration updates during extreme weather provide incentives for customers to share contact details
- Staffing: pair digital natives with experienced experts
- Rapid response cycles needed
- People need their own reasons to participate in your online forums



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Reinforce Collective Impact Portland General

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- Self-selection + volunteered + account info + public databases = personal energy profiles
- Analytics for content serving
- Requires staff participation
- Opportunities for residents to monetize data and behavior
- Relevant Green Button apps



<http://operationswitch.tumblr.com/>

What We've Done So Far

- 26,294 kWh installed
- 488,033 kWh not delivered
- 439,334 pounds of CO2 saved
- 121,766 kWh of solar installed
- 41 homes powered
- TOTAL kWh SAVED: 487,067

Go you, part deux

Cold Shoulder

Mission: Give your fridge the cold shoulder.

Time for this mission: Mission Goal: 14 Days, 20 Hours

Mission #1: Get a thermostat

Mission #2: What are your settings?

Mission #3: Shut Out of Your Home

Mission #4: Mission Close

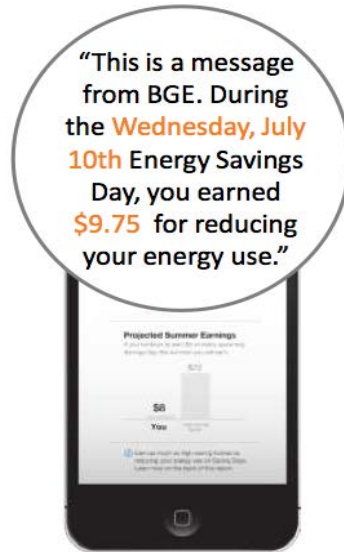
Mission #5: Victory Shout

Timely Reinforcement of Personal Action

One of the techniques that proved effective in the BGE peak time rebate program* was to follow the request to reduce usage on an event day with a reinforcing message letting people know how much they saved.

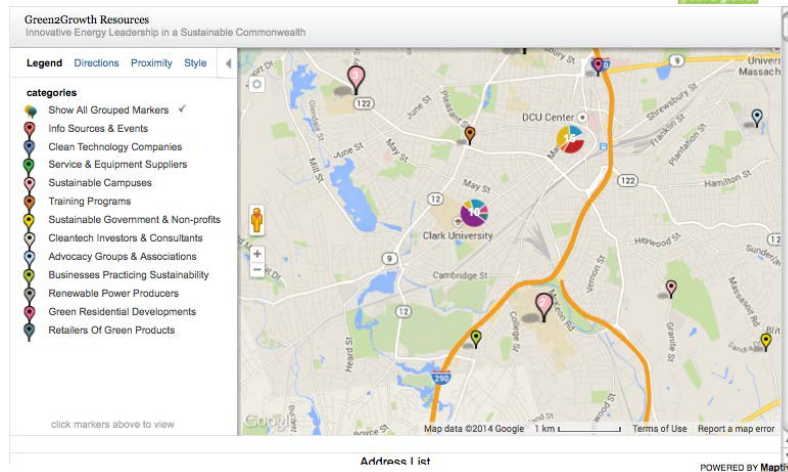
Timely visibility to one's energy budget or prepay account typically results in 14% reduction in usage.** Imagine how one could show the impact of personal and collective contribution to GHG reduction.

Sources: *BGE (Opower) 2013 rebate program
** DEFG Prepay studies



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Sustainable Resources Map National Grid + Community

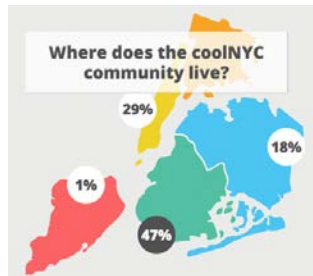


Source: green2growth.com

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Integration of Automation, App, \$ Incentives Con Edison + ThinkEco

This program allowed NYC residents to control their room A/Cs remotely and reduce consumption on event days by as much as 27%.



<https://coolnycprogram.com/>

Do you want to have a cool summer?
Learn more about coolNYC and sign up today!

Sign Up Reconnect

How does coolNYC work?

- Become a coolNYC member
- Control your AC from anywhere
- Keep your community cool
- Get cash at the end of the summer

@coolnycprogram

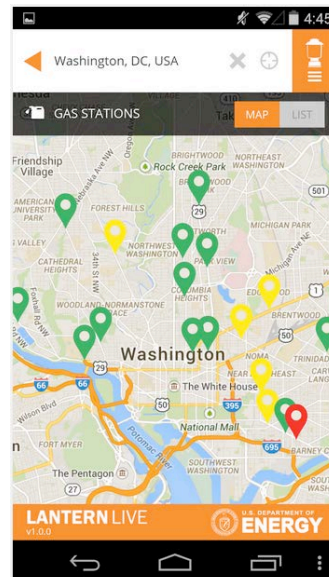
September 9
@ThinkEco Thanks! Enjoy your @coolnycprogram!

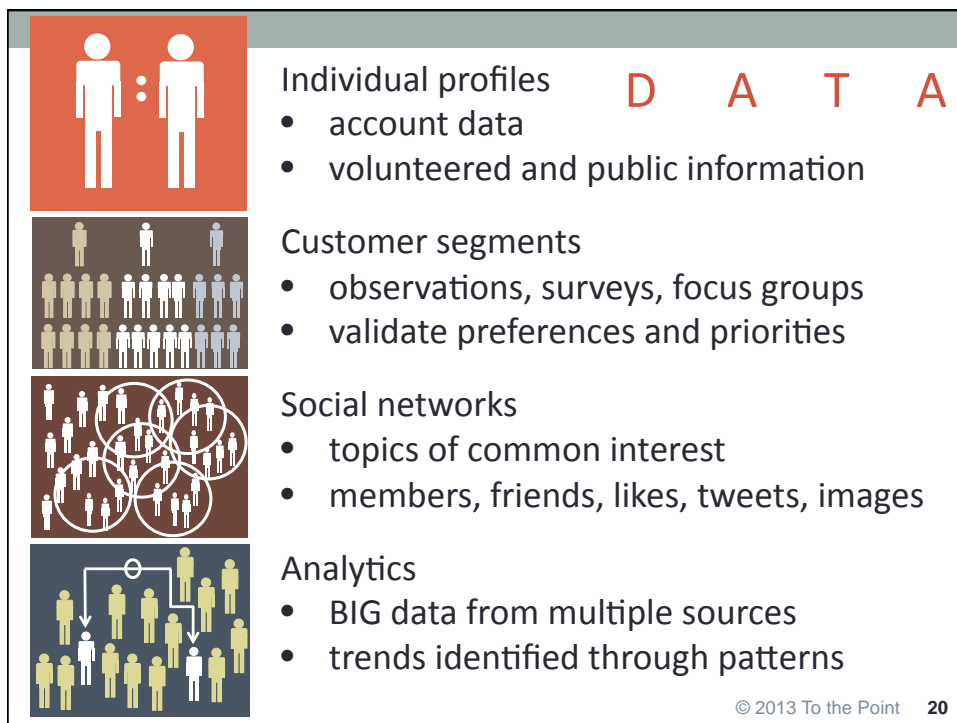
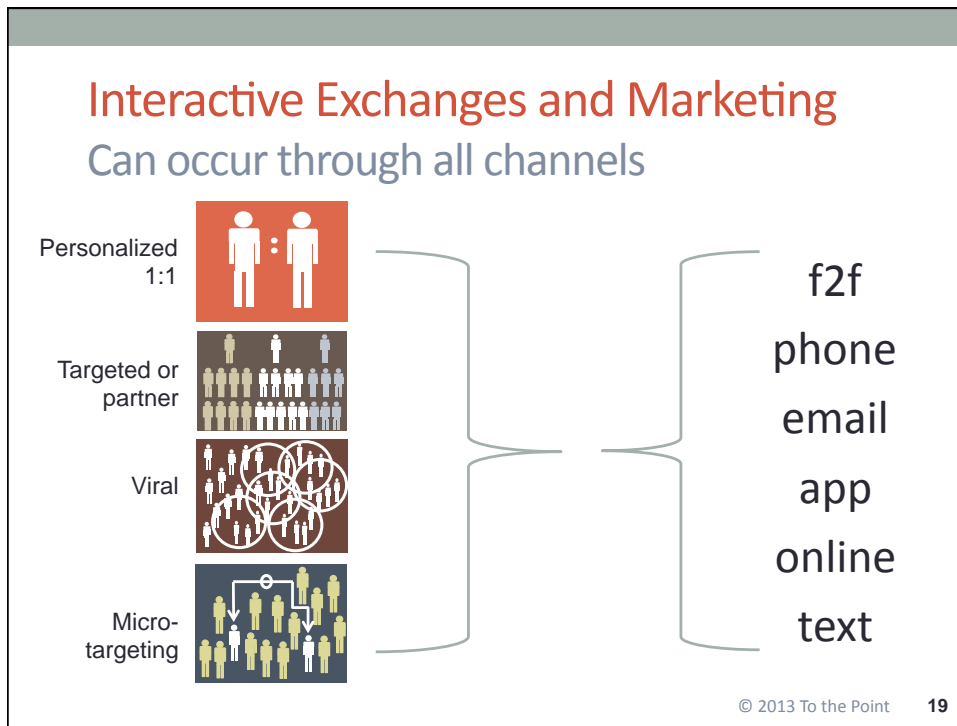
Download the app

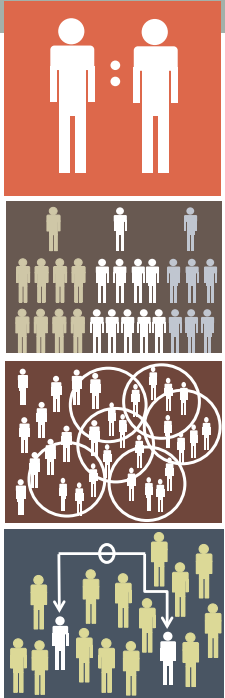
Lantern Live Mobile App Department of Energy

This new app “helps consumers quickly find and share critical information about nearby gas stations and power outages during energy emergencies. The app builds on the Obama Administration’s commitment to improve national energy preparedness in the face of extreme weather and other events that can result in power disruptions.”

Lantern Live is currently available free for Android devices through Google Play.







Profiles

- household
- individual residents

Targeted content

- self-selected information paths
- delivery through channel partners

Integrated story or big vision

- multi-faceted narrative for everyone
- fluid self-selection within experiences

Analytics-driven content

- meta/detail data from multiple sources
- selections inferred from patterns
- dynamic, computer-generated output

RELEVANCE

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MyUtilityCompany.com

Home Customers Rebates Careers Bill

Home > My Account Page > Programs & Services Logout

My Account
[Account Summary](#)
[Start/Stop Service](#)
[Programs & Services](#)
[Outage Information](#)

Paying Your Bill
[Auto Bill Pay](#)
[Pay Bill Now](#)
[Your Payment](#)
[Accounts](#)
[Payment History](#)
[Payment Options](#)

Paperless Bill
[Paperless Billing](#)

Welcome Mr. Jones
Pick Your Plan

Select or rollover the square to learn more about each

- Choose the plan that fits your home and priorities
- Compare your options MORE>

No frills, no extras. Just pay your bill in full every month.

SAVER **GREEN**
BASIC **COMFORT**

This page generated when the account holder comes to the site and has not yet picked a plan. Once they've made a selection, they then have to choose it from the sidebar "programs & services" Source: Rubbervines +To the Point 22

MyUtilityCompany.com

Home Customers Rebates Careers Bill

Home > My Account Page > Programs & Services > Green Plan Selection Logout

My Account
[Account Summary](#)
[Start/Stop Service](#)
[Programs & Services](#)
[Outage Information](#)

Paying Your Bill
[Auto Bill Pay](#)
[Pay Bill Now](#)
[Your Payment](#)
[Accounts](#)
[Payment History](#)
[Payment Options](#)

Paperless Bill
[Paperless Billing](#)

The Green Plan

The smart energy choices you make today will reduce the need to build new power plants and help your family better manage your energy use.

Here is our utility's vision for a better energy future for all of our customers:



Watch the video to learn more >

The Green Plan

Letting us know your preferences will help us offer you the best options for your home. Please check all that apply:

- We want information to manage our electric use on a routine basis
- We are willing to help out and use less energy at critical emergency times
- Our home has central air conditioning
- We have a swimming pool
- We have or plan to install rooftop solar
- We have or plan to buy an electric vehicle
- We have or plan to buy smart appliances
- We would pay a premium for electricity generated from renewable sources

Source: Rubbervines +To the Point 23

MyUtilityCompany.com

Home Customers Rebates Careers Bill

Home > My Account Page > Programs & Services > Green Plan Options Logout

My Account
[Account Summary](#)
[Start/Stop Service](#)
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[Outage Information](#)

Paying Your Bill
[Auto Bill Pay](#)
[Pay Bill Now](#)
[Your Payment](#)
[Accounts](#)
[Payment History](#)
[Payment Options](#)

Paperless Bill
[Paperless Billing](#)

Manage Your Account

John Walker
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 Sacramento, CA 95814
 Email: john@rubbervines.com

Appointment scheduled with Best Buy Geek Squad for March 1, at 10:20 AM (add to calendar)

Community Sustainability Summit is being planned for next June. Interested in joining the steering committee? Sign up here >

Watch the video of the Worcester, MA Sustainability Summit



If utility or public records show the person lives in a single family dwelling the a video like the one below would be relevant. It would not be shown to an apartment renter.

Watch the Green Yards for Green Homes Video>

Your current balance MTD is \$120

TRACK YOUR USE



Targeted content is served to the person. System tracks which items are selected. Use of A/B testing is straightforward to do.

Source: Rubbervines +To the Point 24