New Buildings 2013

New Buildings **Jessica Rose | Karen des**

Goal

- Achieve 50,088,371 kwh in electric savings and 458,790 therms of gas savings.

Summary

The core program is designed to meet the needs of a diverse market, ranging from small commercial to large custom buildings, including schools, retail, office, and data centers. The program provides technical assistance, design consultation and review, modeling analysis, and a range of custom and prescriptive incentives. In 2013:

- Even after an aggressive shift in Oregon's code the program was able to offer participants over 100 measure options.
- Continue to grow enrollments: In 2012, 362 new projects enrolled and over 700 projects were actively managed.
- Implement two new offers for data centers and small commercial with pre-calculated packaged options for office, retail, restaurant, multifamily, grocery and schools.

Oregon has some of the most stringent energy building codes in the United States. As higher building energy codes are adopted, the program's purpose is to raise projects to the next level in energy savings to exceed code. New Buildings has focused on achieving the next level through an integrated design process rather than exclusively through technologies. That's why the program is going to:

- Continue to position the program as a technical and educational resource in the market, focusing on influencing market transformation.
- Continue to target the small commercial market with simple, straight-forward solutions through our Market Solutions initiative to offer prescriptive measures, immediate actions and pre-defined packages for savings.
- Continue to prepare the market for the next new code cycle and support the Reach Code, currently a voluntary code expected to be adopted into the next code cycle, but it could potentially be a mechanism to encourage early market adoption of a future code. This will be investigated further in 2013.
- Integrate and streamline the program's delivery of solar options with the goal of increasing solar installations in New Buildings projects. The program will also launch a Solar Ready initiative to build a pipeline of solar projects to design into the building the capability to deploy solar options in the future.

Program Themes

- **Educate & Provide Resources**. Position the program as a resource for the design and construction community. Provide code training as the new Oregon energy code requirements emerge in mid-2013 while we continue to offer design assistance and tools that help the market to design beyond code and make the financial case for efficiency.
- **Target**. Provide market-specific messaging and offerings to ensure participation from target markets in office, retail, restaurant, multifamily, grocery and schools.
- **Lead & Collaborate**. Champion and reward high energy performance leaders and advocates in the Oregon construction market. Collaborate with and support other Energy Trust programs.

Bringing together these themes, the program has two main goals that will be achieved through specific strategies, objectives, and tactics as outlined below.

Goal #1

- Implement long-term market transformation strategies in preparation for baseline changes that advance the market with each code cycle. Gas savings are estimated at 169,944 therms over the three-year code cycle. Estimated electric savings claimed through NEEA are anticipated to be about 1.2 aMW.

Strategy

- Advance New Buildings as a key resource for code education and high energy performance in design and construction.

Objectives and Tactics

1) Support a shift in focus to the broader spectrum of opportunity with the goal of transforming the way buildings of all sizes are designed and championing critical energy decisions through early design, engineering, and post-occupancy.
   a) Expand early design assistance by 50%, which was found to have market transformation benefits as indicated in the 2011 process evaluation.
   b) Enhance the platform of tools used to work with the owner and project team as they evaluate energy use intensity depending on a building's site, features, system design, and selection criteria. The tools will be updated to build the business case for efficiency, contain a specific list of potential energy efficiency measures and have the ability to compare and contrast a variety of strategies depending on building-specific attributes and the owner's goals.
   c) Continue to educate and inform the design and development community on successful net-zero design strategies and technologies through design reviews, scoping meetings, and trainings.
   d) Deepen lighting savings by helping customers reach 20%-40% beyond code – possibly the last increment of cost-effective savings – by providing technical consultation from a Lighting Design Specialist to select projects to inform layout and take advantage of daylighting opportunities.
   e) Support code compliance by offering a simple plan review to bring them into compliance and leverage this engagement to identify additional opportunities, including no-cost savings or low-cost savings.
2) Innovate by providing enhanced services that promote integrated design approaches.
   a) Launch the Solar Ready offering to encourage design strategies that promote future installation of solar PV panels.

b) Re-launch a commissioning offer, designed to increase uptake of commissioning activities for a broader segment of the market.

c) Provide targeted outreach and marketing to projects that could strive to build a net-zero or net-zero-ready building. Inspire projects to pursue these goals by promoting the programs offerings aimed at high performance buildings: enhanced early design, enhanced technical assistance, tiered incentives, commissioning, and the Solar Ready initiative.

3) Leverage outreach managers in new ways to provide training and support beyond specific projects to broaden the program's reach.

a) Expand the Regional and National Account approach to engage with chain stores, engaging them in a design plan review with the objective of changing prototypical design plans that are often directed by corporate level decision-makers and difficult to influence for just individual, local sites.

b) Target Building Energy Simulation Forum meetings to change best practices for modeling energy savings.

c) Launch a series of formal interactive trainings for allies, owners, and contractors to inform best practices for conducting early design charrettes, using energy modeling as a design tool, applying integrated design strategies, and approaches for building to net zero.

d) Expand the Solar Design Ally network to support solar outreach efforts.

Goal #2

- Resource Acquisition: Capture approximately 50,088,371 kWh and 458,790 therms.

Strategy

- Broaden and deepen program participation through targeted and simplified program offerings.

Objectives and Tactics

1) Continue high-quality delivery of program offerings that enriches the participant experience and maximizes program resources.

a) Implement effective outreach strategies that target participants for the best-fit offering and simplify the process.

b) Continuously improve program delivery, ranging from forms to technical requirements, review procedures, and outreach touch-points, to ensure streamlined delivery and a positive customer experience.

c) Ensure high realization rates by continuously updating prescriptive measures, calculators, and technical guidelines.

d) Enhance existing tools and resources, such as early design templates, to optimize usability and improve the customer's experience.

2) Implement a new set of incentive offerings developed in 2012 (Market Solutions) to reach small retail, office, restaurants, grocery, multifamily and schools. More detail on the offers is below.

a) Deploy six packaged offers that are building-type specific and provide varying levels of achievement. Depending on the building type, some pay incentives on a per square foot calculation to drive quick decision making.

b) Continue to target design-build firms to increase savings opportunities in the small commercial market segment and boost enrollments in rural areas.

c) Encourage early design reviews for small commercial projects, using our new Market Solutions offers, to design-in deeper savings.

d) Revise measures as needed to respond to updated avoided costs and the new, emerging 2013 energy code.

e) Leverage the New Buildings Design Ally network (architects and developers) to build a robust 2014-2015 pipeline, creating more of a market-driven approach for project enrollments.

3) Implement the new offers established in 2012 targeting data centers, a large and growing share of program savings. More detail on this new offer is below.

New Initiatives – Detail on the new Small Commercial and Data Center Initiative

Small Commercial Market Solutions

Based on the successful results of the 2009-2011 Small Commercial Efficiency Pilot, a mainstream small commercial offering was developed to more comprehensively serve the needs of the small commercial market, building less than 70,000 square feet.

The offers – called Market Solutions – are comprehensive packages of measures with modeled savings meeting three main objectives:

- provide simple, achievable bundles of measures that encourage incrementally higher savings;
- allow flexibility for buildings that have a variety of operating characteristics or want to make measure substitutions or select additional elective measures;

- incentivize more efficient HVAC design choices. This builds from current prescriptive measures, where historically, small buildings install two to three measures.

By driving high efficiency HVAC and lighting at the core and offering 11 elective measures, program staff can help customers do more that are estimated to generate savings of 12 – 20% for retail and 4 – 8% for office, (restaurants are being analyzed). Incentives will be paid on a per-square-foot basis and savings step up depending on the customer's appetite--Good, Better, Best, Very Best. The expected near-term impact will be in the number of enrollments in 2012.Increased savings are expected in 2013 and 2014 as projects close. For perspective, the program closed 270 projects in 2011 that were less than 50,000 square feet, office and retail are some of the major building types program staff can influence.

Data Center Solutions

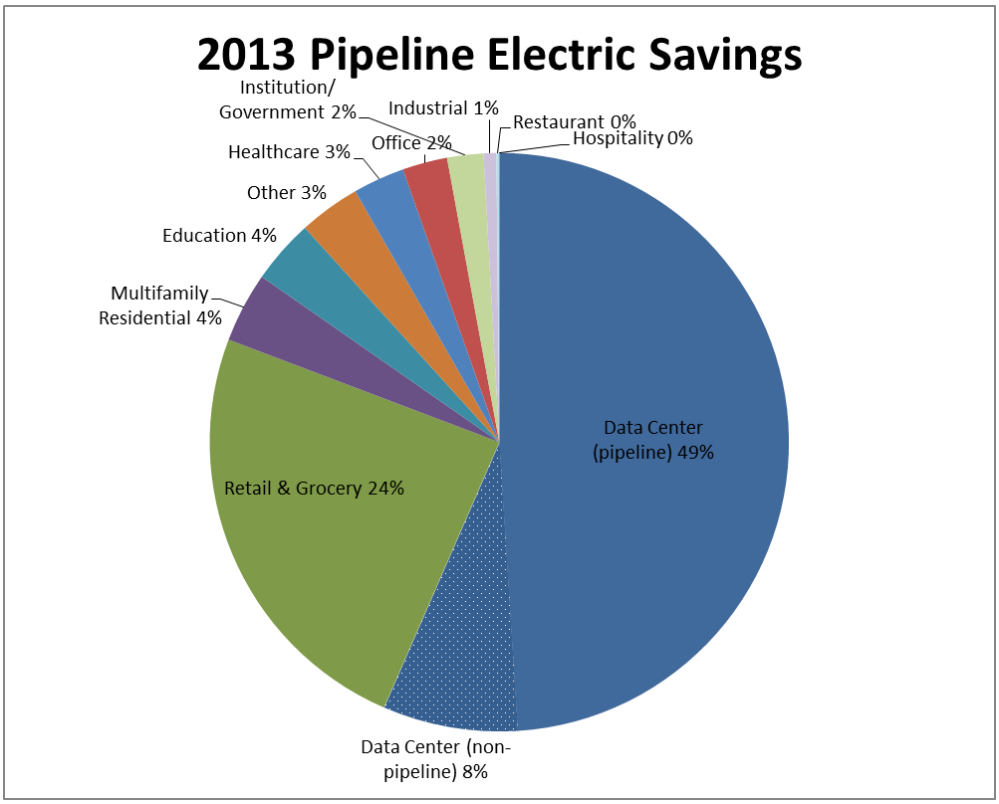
Oregon has seen unprecedented growth in data centers over the past few years, a trend we see continuing. While this affords the New Buildings program with the opportunity to capture large savings through custom analysis, the full savings potential may be missed without a specific program offer that scales with the market potential. The new offer is a series of incremental changes that will streamline the process, is scaled to meet the needs of large enterprise, mid-tier, localized and small that range in size anywhere from >10MW load data server "farm" to an office building with a <10kW load.

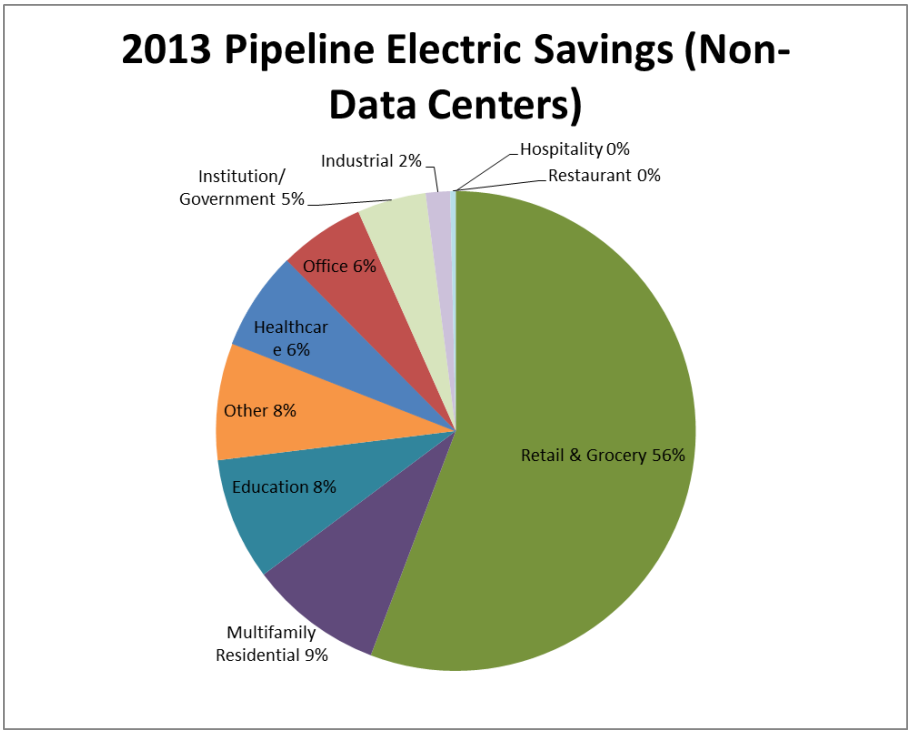
The new offer emphasizes early involvement through design assistance, focuses heavily on IT design, and introduces new measures like power supply and power distribution. In cases where early design assistance is not warranted due to the limited scope of a project, such as with an office data closet or room, standard measures will be available. The expected near-term impact will be building awareness with market actors, working with project teams to set high goals, and initiating design and engineering processes where professional design incentives will be leveraged to maximize savings results. In 2013, results are expected to be significant and drive down program levelized cost with a few completed projects.

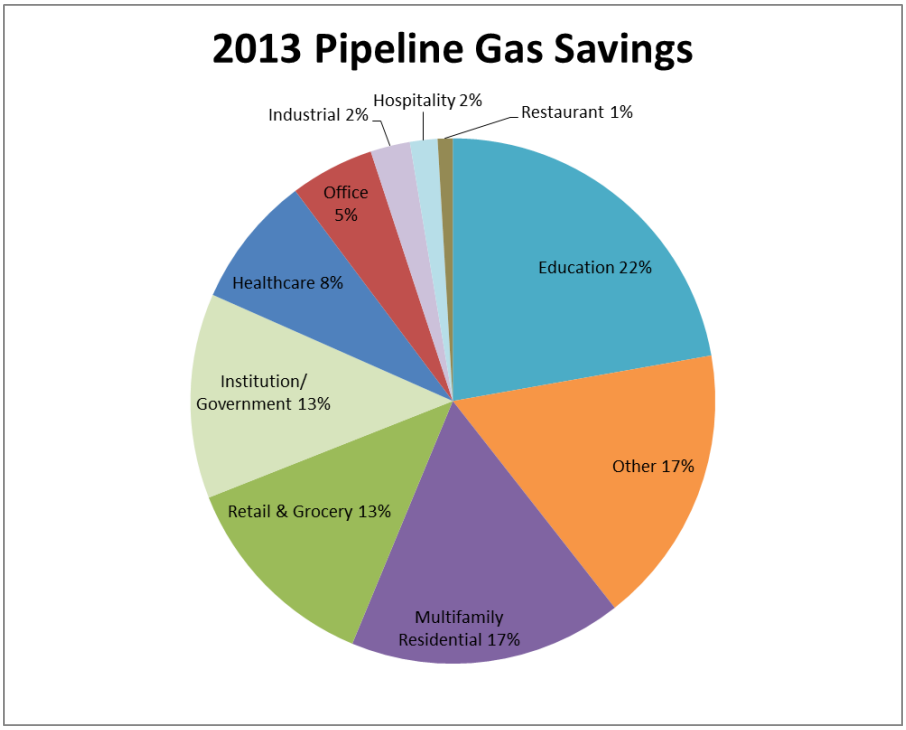
Total annual savings goals.

Utility	Savings (kWh or Therms)
PGE	26,015,437
PAC	24,072,933
NWN	425,934
CNG	32,856

Pipeline projects plus non-pipeline data centers.




2013 Pipeline Electric Savings (Non-Data Centers)
Industrial 2%
Hospitality 0%
Restaurant 0%
Institution/ Government 5%
Office 6%
Healthcare 6%
Other 8%
Education 8%
Multifamily Residential 9%
Retail & Grocery 56%


2013 Pipeline Gas Savings
Industrial 2%
Hospitality 2%
Restaurant 1%
Office 5%
Healthcare 8%
Institution/ Government 13%
Retail & Grocery 13%
Multifamily Residential 17%
Other 17%
Education 22%