RESIDENTIAL BUDGET CONCEPTS 2015

Sector: *Residential*
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Sector Overview

Energy Trust's Residential Sector provides energy efficiency services and financial incentives to residential consumers. Primary sector activity is accomplished through two Program Management Contracts (PMC), New Homes and Products (NH&P) Program and Existing Homes (EH). In addition to PMC activity, the sector delivers energy savings through pilot efforts and work with Northwest Energy Efficiency Alliance on market transformation savings.

2015 Sector Themes and Key Directions

There has been significant and steady growth in the residential sector 2009–2012, with electric and gas savings increasing by 89% and 105%, respectively, during that time period. Despite this impressive growth, the sector has seen electric savings level off from 2012–2013 and gas savings have declined over this same period. Program staff expects to see savings continue to level off or even decline over the next few years. In fact, it will take significant innovation in program designs, as well as the continued growth of emerging technologies, in order to maintain the current savings levels. Gas weatherization savings are impacted by lowered avoided costs and are operating under an exception with the PUC. A PUC docket is in process that will inform Existing Home's program direction for 2015–2016.

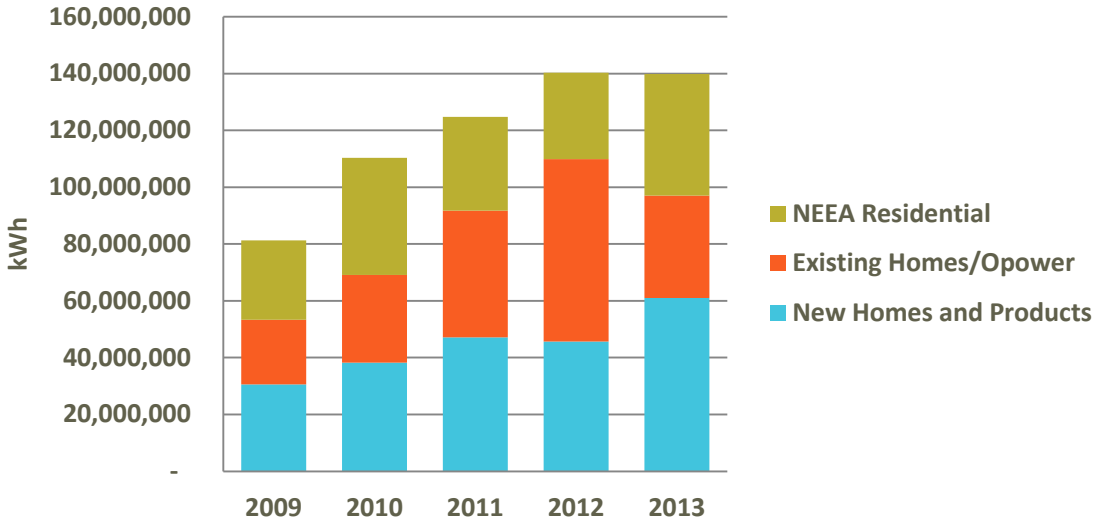
The primary objective of the Residential Sector is to make investments in program design that will deliver cost effective savings. This is accomplished through services and financial incentives that enable customer to invest in energy efficiency projects. Themes to achieve savings in 2015 and lay the foundation for 2016 will focus on:

- Making it easy for customers to participate
- Empowering contractors to serve customers
- Designing innovative programs; including upstream and midstream strategies for equipment and products measures
- Expanding EPS adoption and its compliance with HB 2801
- Targeting communications to bring the right offer to consumers (geographic, usage, past participation)
- Leveraging partnerships with third-party organizations and market participants
- Developing program and administrative efficiencies
- Utilizing information technology to bring efficiencies in data processing and administrative tasks.

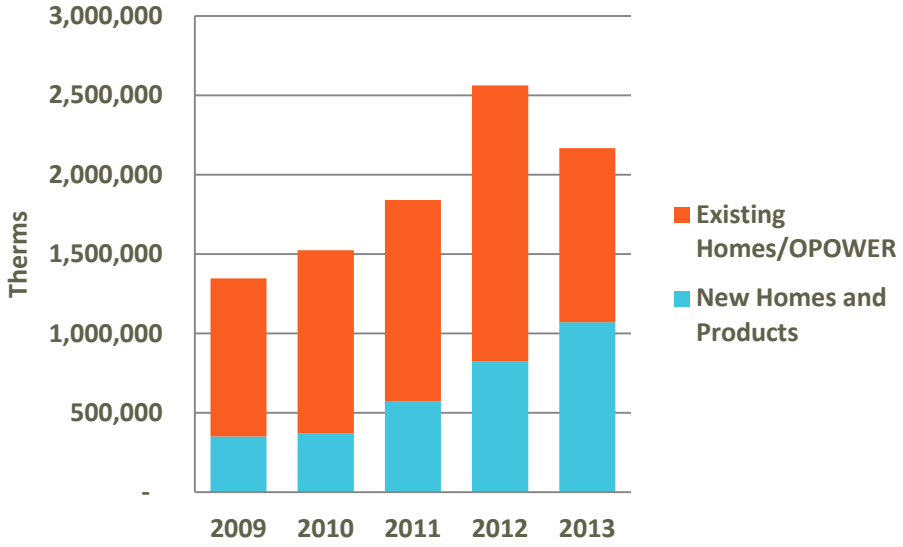
2013 Recap

Overall, the Residential Sector had a successful year in 2013, delivering savings from a variety of programs and offerings this mixed portfolio approach. However a combination of adjustments to address cost effectiveness and a design that reduced energy savings kits quantities dramatically affected savings achievements in Existing Homes. New Homes and Products experienced an increase in savings.

Sector Savings - Electric



Sector Savings – Gas



Existing Homes

2013 savings came from three main segments for Existing Homes

- Prescriptive track measure installations, including heating/water heating equipment weatherization
    - This track served more than 12,909 customers in 2013 and expects to serve a similar number of customers in 2014
- Instant savings measures (lighting, aerators and showerheads)
    - Contractor install, Home Energy Review install or an Energy Saver Kit
    - Just over 14,000 customers received Energy Saver Kits in 2013. By design, more kits will be delivered in 2014.
    - Planning increased market engagement to support contractor and program ally direct installation
- Whole home savings through Home Performance with ENERGY STAR® track (includes Clean Energy Works projects)
- The other areas of savings include manufactured homes duct sealing, savings from solar thermal installations and Opower behavioral savings.

New Homes

Overall, 2013 was a successful year for the New Homes Program—housing starts in Oregon were up over 40% from 2012 to 2013 and continued growth is expected in the next couple of years.

- Market share of EPS homes in 2013 was 21 percent.
    - Despite increasing energy codes, the program was able to complete more than 1,540 homes receiving an EPS score, representing 40 percent more homes than budgeted for 2013 and a 17 percent increase in EPS homes from 2012.

Products

Lighting savings exceeded goals in 2013 due to the addition of general purpose CFLs and LEDs in Q4. Strong lighting savings came from end of year promotions.

- Lighting comprised 70 percent of the products electric savings and showerheads and energy savings kits comprised 95 percent of the gas savings in products.
- Over 2 million bulbs were delivered into the market almost doubling the savings from 2012.

- While lighting savings continue to increase, appliance volumes and savings continue to decrease. As the overall selection of appliances becomes more efficient, there are fewer savings available to efficiency programs.

2014 Current Situation / Market Conditions

Basic program designs from 2013 continued into 2014 for the major programs but with a strong emphasis on cost reductions to remain cost effective. Behavioral savings continue to be monitored for NWN and PGE. A test of behavioral savings targeting high energy users in Pacific Power territory launched in August 2013 and will continue through August 2015.

Existing Homes

A new PMC, CLEAResult, began implementing the Existing Homes program in 2013 with a strategy designed to significantly reduce the volume of kits while focusing on increasing savings through major measure installations. This approach was too ambitious and savings goals were not achieved. In 2014 more kits were included in the program design and a Savings Action Plan to drive increased savings earlier in the year was launched in February.

CLEAResult added the following elements in 2014 and continues to refine and evolve program designs while bringing process improvement.

- Utilized campaign functionality in CRM and consumption data to target customers with specific offers
- Developed a Trade Ally portal for contractors to self-serve customers and provide contractors project visibility
- Improved customer experience through enhancement to incentive application process, including: significant improvements in the on-line forms usability, improved audit control procedures and reductions in the occurrence of missing information.
- Established a customer engagement strategy with follow-up messaging
- Expanded the quality management framework and associated tools among contractors

New Homes

The new construction market is rebounding. New Homes has streamlined program participation with improved systems and processes, making the program more scalable. The program launched a third phase of an air sealing pilot with subcontractors. In addition, the program continues to leverage existing infrastructures such as regional training entities and existing rating companies, as well as key stakeholders such as OHBA, NEEA, Earth Advantage, and ODOE. In 2014 the program became fully integrated with NEEA's Axis database allowing real time generation of EPS scores and the elimination of paperwork required for processing EPS new homes.

Products

New refrigerators & freezers, clothes washers, lighting and refrigerator recycling continue to drive savings.

As appliance efficiency baselines continue to increase, the program is seeking more cost effective ways to work with retailers other than the traditional mail-in rebates. Innovative retail program designs being tested in 2014 include:

- Instant rebates with Sears
- Involvement in the Western Regional Utility Network (WRUN) and Northwest Regional Retail Collaborative (NWRRC) to learn what other programs are doing and leverage the collective strengths of NW and West Coast utilities to garner retailer interest in collaboration
- On-line lighting buy downs
- Midstream appliance pilot
- Innovative third party relationships—partnering with Oregon Food Bank for refrigerator recycling—offering consumers the opportunity to donate their $20 or $40 incentive to Oregon Food Bank

These new and innovative retail program designs offer the benefit of improving customer experience, reducing program administration costs, removing up-front cost barriers, and strengthening retailer relationships.

2015 Key Actions and Initiatives

Leveraging relationships with market actors for effective collaborations to advance industry codes, transform home energy use and bring innovations in retail products are important themes that will require greater investments in delivery.

New Homes

With the rebound in new home construction, the program is targeting a goal of 20–25 percent market share of EPS homes built within Energy Trust territory. New Homes activities will continue to utilize market actors for program activities.

- Leverage NEEA's Efficient New Homes initiatives, as well as the network of independent verifiers.
- Continue to make it easier to enroll program homes by leveraging NEEA's verifier portal to allow automatic generation of EPS and continue to refine it so there are efficiencies in data processing and reporting.
- Work with real estate agents, appraisers, and lenders to increase understanding and use of EPS.

- Expand EPS to newly constructed low rise multifamily
- Expanded focus on affordable housing, solar ready and major remodels
- Set the stage for energy code improvements over the next 10–20 years. Work with NEEA, OHBA, and other industry stakeholders to identify cost effective strategies to reduce the energy consumption in new homes.
    - Goal: submit a joint proposal to Building Codes Division for the 2017 energy code update.
    - Energy Trust and NEEA will support builders with training and incentives in order to prepare for upcoming energy code changes.
    - Continue to drive home builders toward net zero homes through the Live Net Zero initiative
- Continue to increase homebuyer awareness, understanding, and purchase of EPS homes.

To support higher standards beyond ENERGY STAR for manufactured homes, the program is collaborating with Bonneville Power Administration, NEEA and other regional stakeholders to work with manufacturers to incorporate the High Performance Manufactured Homes specification[1] into their manufacturing processes. Energy Trust is planning on providing retailer incentives for inclusion of ductless heat pumps and heat pump water heaters as a way to support the adoption of these measures.

Products

Even though savings for major appliances are decreasing and new Federal lighting manufacturing minimum efficiency standards (EISA) are reducing deemed savings for lighting measures, there are still significant opportunities to increase savings acquired through retail channels by improving the way we work with retailers. The products program will continue to build upon the innovative retail program designs being tested in 2014.

- Increase retail field services and educational materials in order to better leverage this opportunity - Evaluation results consistently point towards the sales associate being one of the most influential aspects of the decision to purchase energy efficient options.
- Expand field services to cover any product sold at retail that other Energy Trust or NEEA initiatives
- Expand online and instant incentives to additional retailers
- Continue to test mid-stream appliance approaches

[1] This specification is similar to Energy Star with an improved shell, a ductless heat pump, and heat pump water heater.

- Improve market research and data acquisition to more accurately identify the true savings
- Leverage program structure to collect valuable information on local markets
- Expand LED offerings through support of a wider variety of products and more retail locations
- Strategically implement and monitor the program around more specific KPIs to improve the overall impact of the program
- Coordination with community action programs to provide energy saving products for distribution to their clients
- Continue support of refrigerator recycling with a focus on older refrigerators and closer coordination with retailers

Existing Homes

A number of proposed program design innovations will continue to be rolled out.

- Expand tools for trade allies to aid them in quality management practices
- Improve ease of project data submission through instant incentives, electronic forms, and trade ally portal use reduces program administration and results in faster incentive payment
- Improve customer engagement strategies through strategic customer targeting based on usage and demographic information
- Increase trade ally inclusion of direct install measures (CFLs, showerheads, aerators) as part of bidding and project installations practices, including mobile application submission through enhanced contractor tools
- Expand savings penetration of key product categories through midstream engagements with equipment distributors and retailers

For gas weatherization projects, the focus will be on responding to PUC direction resulting from the gas cost effectiveness docket.

- Energy Trust will continue to improve upon a consumer facing tool to aid customers in understanding the savings information related to Existing Home measures.
    - Customers can enter variables from a contractor's bid, like square feet of insulation, and see associated energy savings based on Energy Trust's evaluated deemed savings results.
- Expansion of trade ally installed instant savings measures will aid in achieving cost effectiveness by maximizing the savings potential for this measure class.

Ductless heat pumps will be a driver of savings with steady growth. The program will continue to;

- Expand measure occurrence through targeted marketing, field support services, and midstream efforts, as well as collaboration with NEEA's Northwest Ductless Heat Pump initiative
- Target outreach to focus on upgrading inefficient electric heating systems (housing characterization, promotions with electric utilities and existing mobile homes).

Savings Within Reach will continue to support moderate income customers while maintaining program cost effectiveness goals.

- The program will closely monitor the uptake and success of the moderate income loan product, which includes on-bill repayment, no participant fees, and no upfront costs to Savings Within Reach participants with PAC, PGE, and NW Natural as the primary heat source.
- The program will continue to offer instant incentives for SWR customers provided through their contractor's invoice as a reduction in the total project cost.

EPS will take an increased role as an Existing Homes tool for homeowner education and efficiency in leading to project installation action.

- We will continue coordinating with ODOE to play a complementary role in supporting market awareness and activity as a result of House Bill 2801.

Energy Trust will continue to support real estate professionals through the Real Estate Ally network, with the goal of leveraging their interactions with home buyers and sellers to drive energy efficiency improvement.

- Look to Real Estate Allies to raise awareness and understanding of EPS in the marketplace including lenders, appraisers and home inspectors.
    - Provide seminars for Real Estate Allies - tying energy efficiency and renewable home improvements to increasing home value.

A Lending Ally initiative will better incorporate lending products into options consumers have when making energy efficient improved to their homes.

- Support Trade Ally groups utilizing lending products to increase customer follow through.
- Lending products will also be integrated into customer engagement processes.

Water heating savings continue to be an important part of long term savings goals and will be a focus area for expansion.

- Increase ENERGY STAR gas tank water heaters installations.

- Expand on NEEA's efforts with manufacturers and installers to foster growth in heat pump water heaters.

Pilots and Tests

Programs will continue to conduct pilots to test delivery strategies, investigate new technologies and better understand the best way to incorporate innovations into programs.

- Complete a pilot, started in 2014, to test prescriptive air sealing specifications combined with ceiling insulation to determine energy savings.
- Energy Trust is continuing to work with Opower to deliver Personal Energy Reports to customers of Pacific Power.
    - The Pacific Power effort launched in 2013 with reports to15,000 Pacific Power customers with higher-usage and electrically heated homes - first reports August 2013 and will continue through August 2015
    - The program is exploring additional behavior options for 2015
- The NEST pilot currently in evaluation stages may lead to a list of qualified measures to support efficient heat pump controls. A follow-up test of smart thermostats in gas heated homes is planned for later 2014, so continuation and/or a second-stage evaluation to test on gas equipment may be planned for 2015.
- Conduct a midstream appliance pilot with major retailer such as Home Depot, Lowes, or Sears as part of the transition away from large consumer rebates.
- Test a home energy monitoring system pilot in new homes in order to engage with homeowners buying EPS new homes.

2015 Anticipated Challenges

- Introducing new technologies and savings levers for the Existing Homes portfolio while transitioning away from energy saver kits savings requires discipline and strategy incorporating near and long term criteria.
- Gas weatherization avoided costs have required the program to reduce incentives, eliminate measures, and change measure level requirements to the point that fewer projects qualify, impacting therm savings. The results of the PUC docket will be an important component to program response.
- Few new gas savings strategies are ready for market—the program will explore new, low cost ways to acquire gas savings.
- Ductless heat pump average installed costs are close to the maximum to support TRC cost effectiveness test requirements. New strategies are in place to segment costs.

- We have limited experience using consumption data to target customer homes for priority measures; since high users are key to increased savings per measure, we need to be careful to not over target high users with offers.
- Retailers are slow to move away from the traditional consumer rebate for major appliances. With declining savings the program needs to move to a midstream model. Consumers may lose awareness of efficient products and of Energy Trust's involvement.
- With EISA coming into full effect and Halogens and LED's rapidly coming to market, the lighting market is in a period of transition and the impact on the market conditions and true savings is uncertain.