Energy Trust of Oregon
Commercial Sector
2015-2019 Strategic Plan

April 22, 2015

I. Commercial Sector Summary

Energy Trust's Commercial Sector provides energy efficiency services and cash incentives for Commercial, Institutional and Multifamily properties. The sector's primary activities are accomplished through three Program Management Contracts: ICF International, ICF, for Existing Buildings, CLEAResult for New Buildings and Lockheed Martin for Existing Multifamily. Energy Trust staff also manages several other sector initiatives directly, including Strategic Energy Management, Lighting Design Lab, and Building Operator Certification.

Sector staff oversee program management contracts, drive program strategy and design, manage relationships with stakeholders and provide strategic direction for marketing and outreach activities implemented by contractors.

Energy savings delivered by the commercial sector have increased significantly since the inception of Energy Trust in 2002. After an aggressive increase in savings goals and funding in 2010 as a result of SB838 funding agreements, savings have doubled through 2014.

Savings per project have been on the decline for commercial programs, partly due to Energy Trust's successes in serving customers. As a result, commercial programs need to complete more projects to reach goals. The energy savings potential in the commercial sector is still significant, but the cost of acquiring these savings is likely to remain higher than historic costs.

Key challenges to reaching program goals in the next five years will be:

- Generating cost-effective retrofit and new construction savings in the face of lower gas and electric cost and reduced savings opportunities
- Large customer limitations or exclusions for electric and gas efficiency
- Working with customers, and local government to proactively support energy efficiency opportunities that arise in response to increased climate change regulation and awareness

In addition the program will be seeking to expand program offerings to reach more small customers and rural customers and to more comprehensively meet their needs with program offerings.

II. Sector Vision and Leadership Statements

To provide long-term vision, guidance, and consistency to the Commercial Sector, the following principles have been established in accordance with the organization's 2015-2019 Strategic Plan:

Vision Statement:

Oregon commercial and institutional customers will enhance their long-term economic and environmental health through energy savings and renewable energy projects.

Leadership position:

Energy Trust remains a national leader in innovative program design and strategy for commercial energy efficiency. Commercial efficiency programs implement these approaches to consistently deliver significant, cost-effective energy savings to Oregon ratepayers; Energy Trust is known and valued by our customers and stakeholders as a responsive and responsible program administrator; is a trusted resource for technical expertise, training and project funding to help customers improve their energy efficiency.

Measures of Success:

Commercial and institutional customers will increasingly utilize Energy Trust programs to achieve deeper energy savings. This will enable Energy Trust to work with partner utilities in meeting the IRP goals for each IOU served. Measureable activities that will support success include:

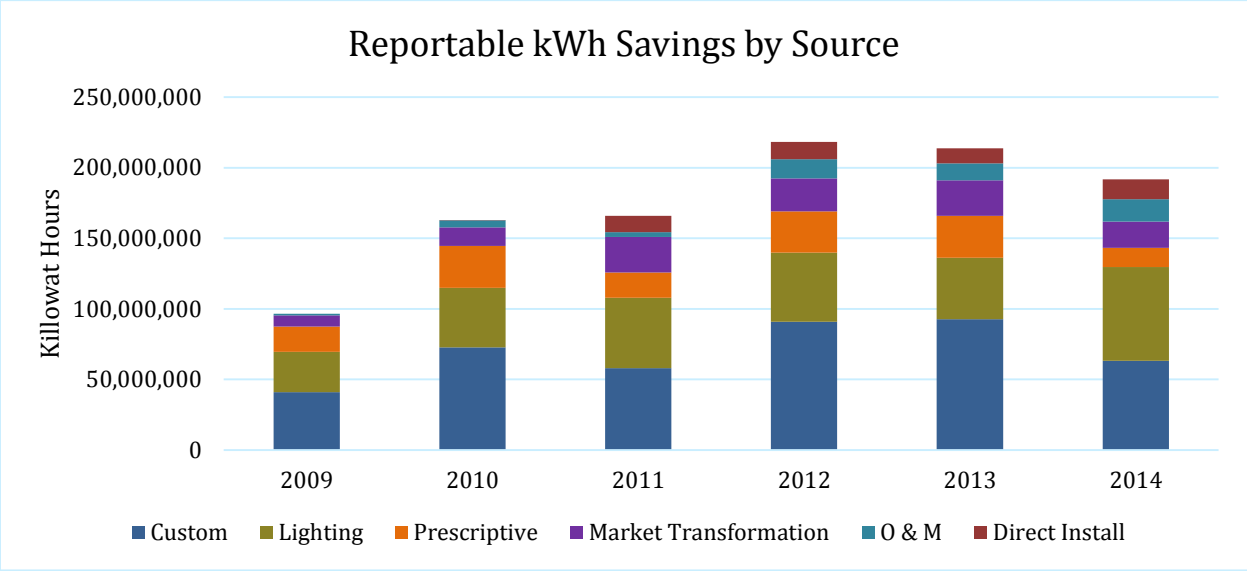
- Expanding customer participation to new customer categories and markets with lower levels of program participation, including smaller customers and businesses located in non-metro areas.
- Replenishing energy efficiency sources of savings with new measures and strategies to engage customers seeking new approaches to save energy
- Improving program design and services to gain efficiencies that control program delivery costs.

III. Sector Level Savings

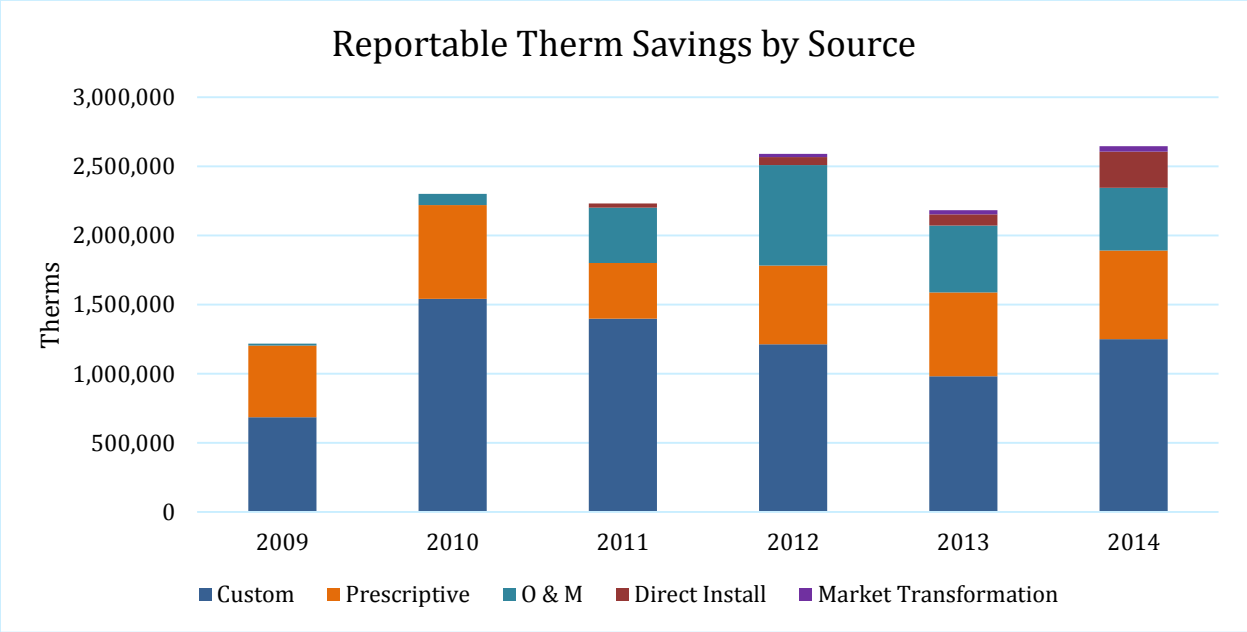
History

Commercial Sector savings grew rapidly from 2009 through 2012 and then leveled off or declined in 2013-2014. Lighting has always been a significant source of savings and it had a large ramp in 2014 with the adoption of LEDs in both indoor and outdoor applications. The sector targets market transformation savings through NEEA as well as some programmatic activity. Market transformation savings expanded in 2011 when New Buildings began to help customers reach aggressive new building codes. Operations and maintenance savings expanded with the launch of Strategic Energy Management in 2011; other O&M savings also increased due to more targeted efforts in existing buildings.

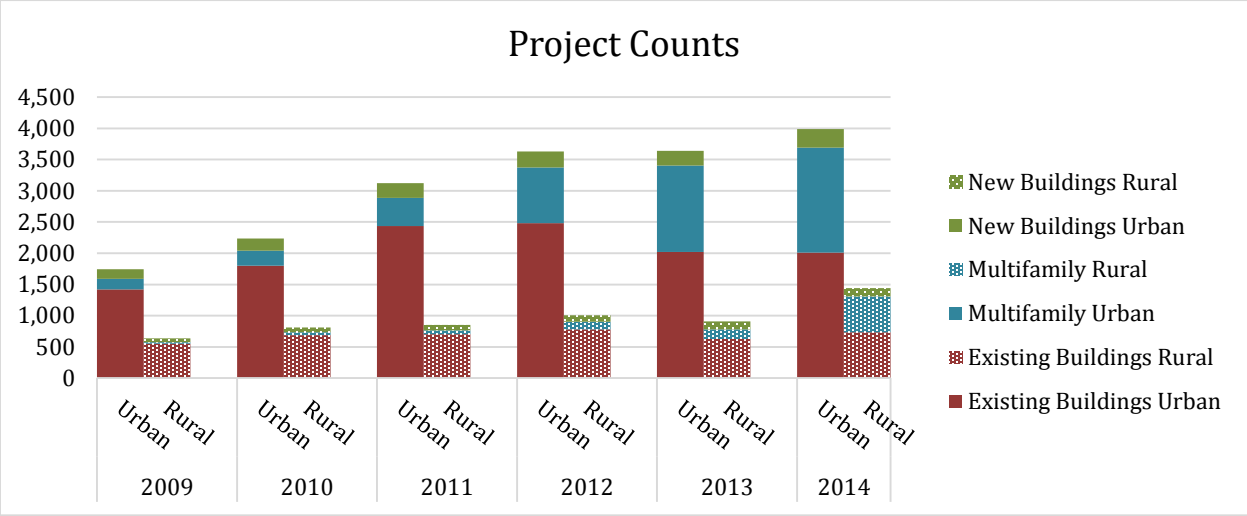
The charts below indicate overall sector savings by measure category, across all programs.



*Note custom and direct install categories also include some lighting savings.



As indicated in the chart below, projects in rural counties have historically made up about a quarter of sector activity. As the overall number of projects have increased, the sector achieved a marked increase in rural activity in the last five years.



Commercial Sector Savings Potential

Approximately one-half of cost-effective electric savings potential for the Commercial Sector resides in Existing Buildings, with New Buildings representing the next largest share. A large bulk of the NW Natural gas savings is expected to come through existing buildings, while in Cascade Natural Gas territory, Existing Buildings and New Buildings are anticipated to have equivalent cost-effective potential.

Cost Effective 20-year Potential				
	PGE	PAC	NWN-OR	CNG
	MWh		mmtherms	
Existing Buildings	697,434	349,602	9.7	1.6
Multifamily	296,787	123,050	1.32	0.08
New Buildings	472,371	175,344	2.1	1.5

Savings potential by market segment looks to be similar to past years, with retail, offices and “other” (which includes buildings such as churches, assembly, transit buildings, telecommunications facilities and postal service) continuing to be the building types with the greatest potential. Warehouses, restaurants, hospitals and groceries make up the next level of savings opportunity. Retail and restaurants have been difficult to penetrate with comprehensive projects in the past. These market segments are now being served with Existing Building’s direct install strategy and New Building’s Market Solutions approach which is designed specifically for smaller businesses.

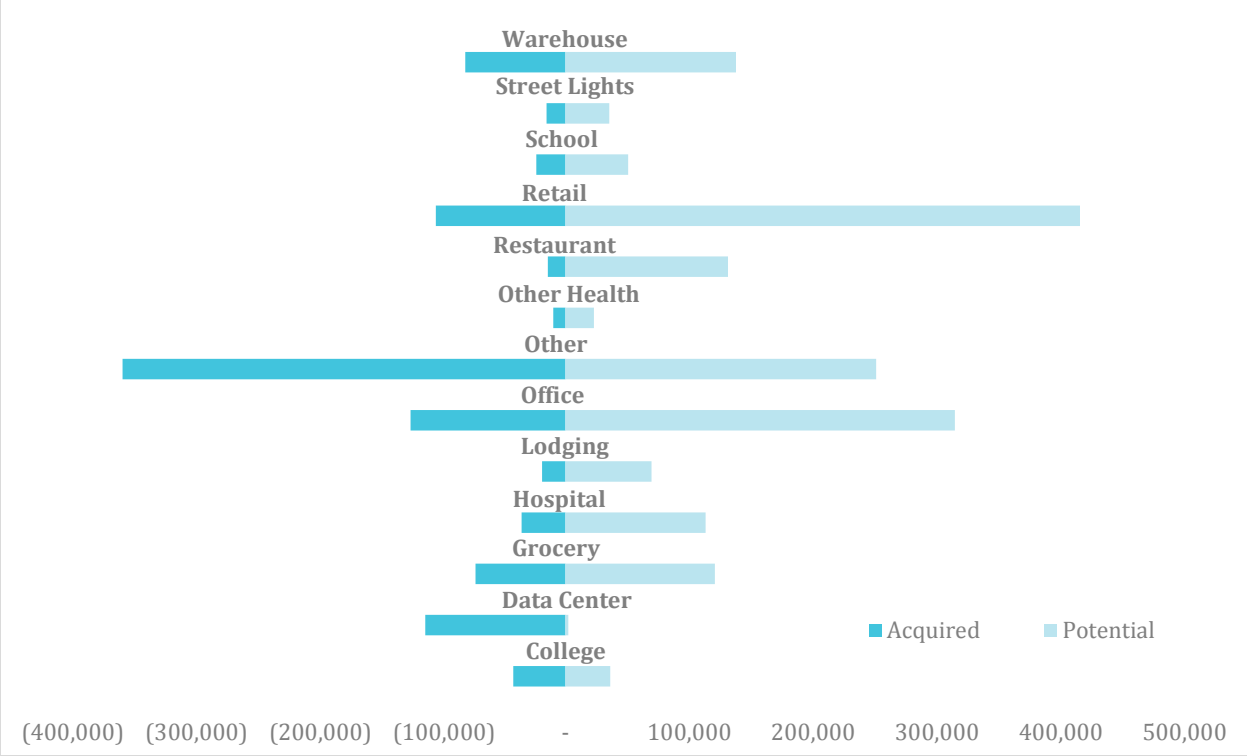
Data centers are not captured in the potential analysis; forecasting data center activity is difficult since projects start and finish quickly and customers tend to be conservative

about sharing their plans. However, New Buildings should see significant savings from this building type, based on past experience and market activity.

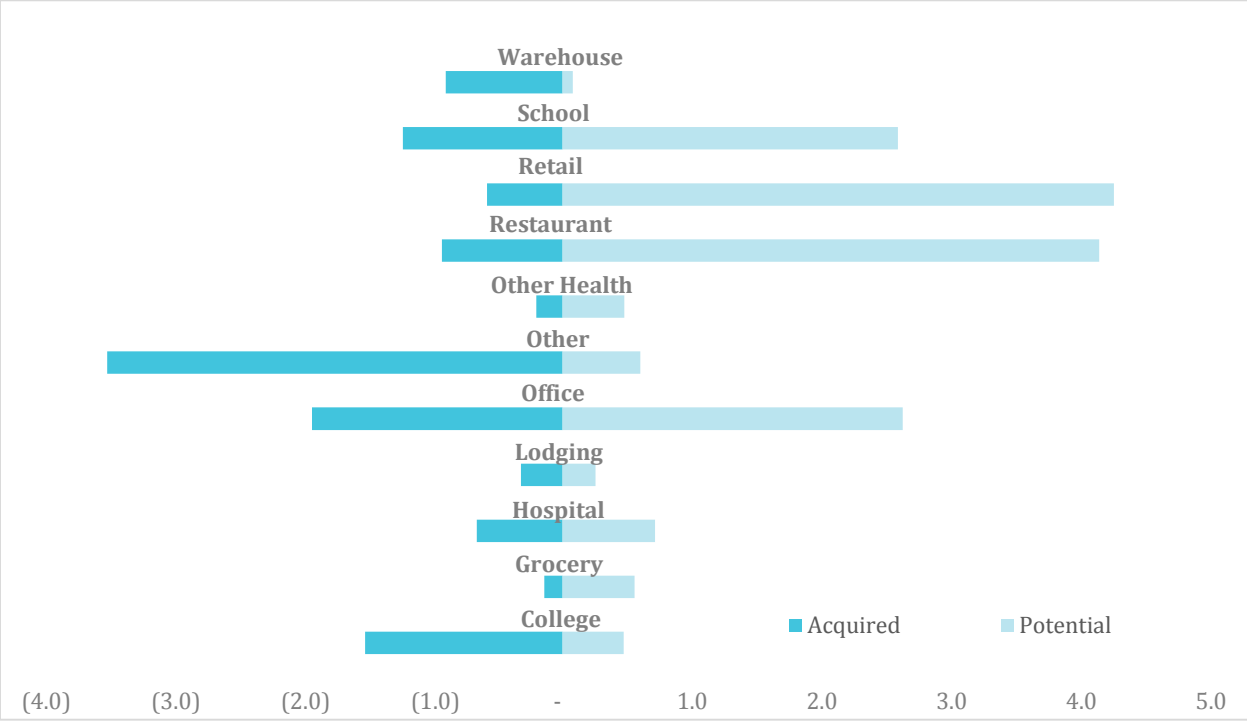
Future gas potential primarily resides in schools, retail, restaurants, office and new construction multifamily. These customer needs are well served with New Buildings Market Solutions packages and Existing Buildings prescriptive and direct install offerings.

The largest growth potential over the next 5 years is O&M savings through Strategic Energy Management participants and data centers, as well as new initiatives to engage smaller customers.

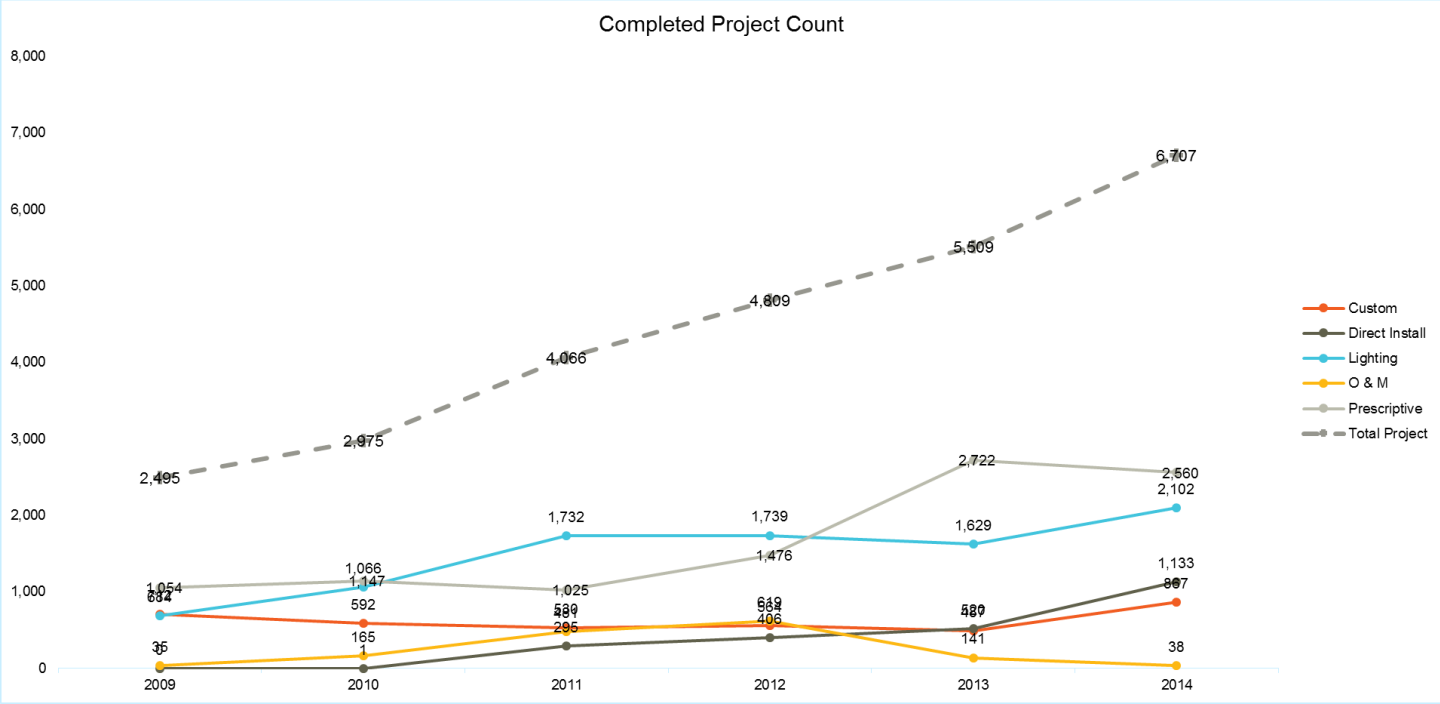
2009 to 2014 MWH Savings Acquired vs 2015 to 2034 Cost-Effective Potential

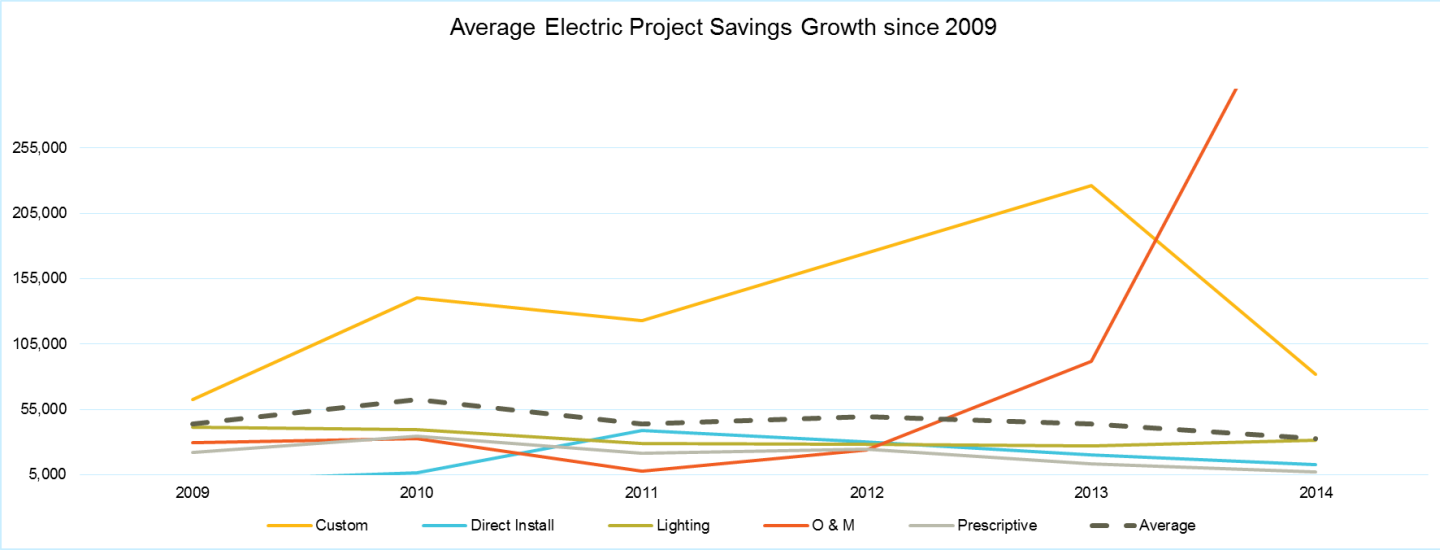


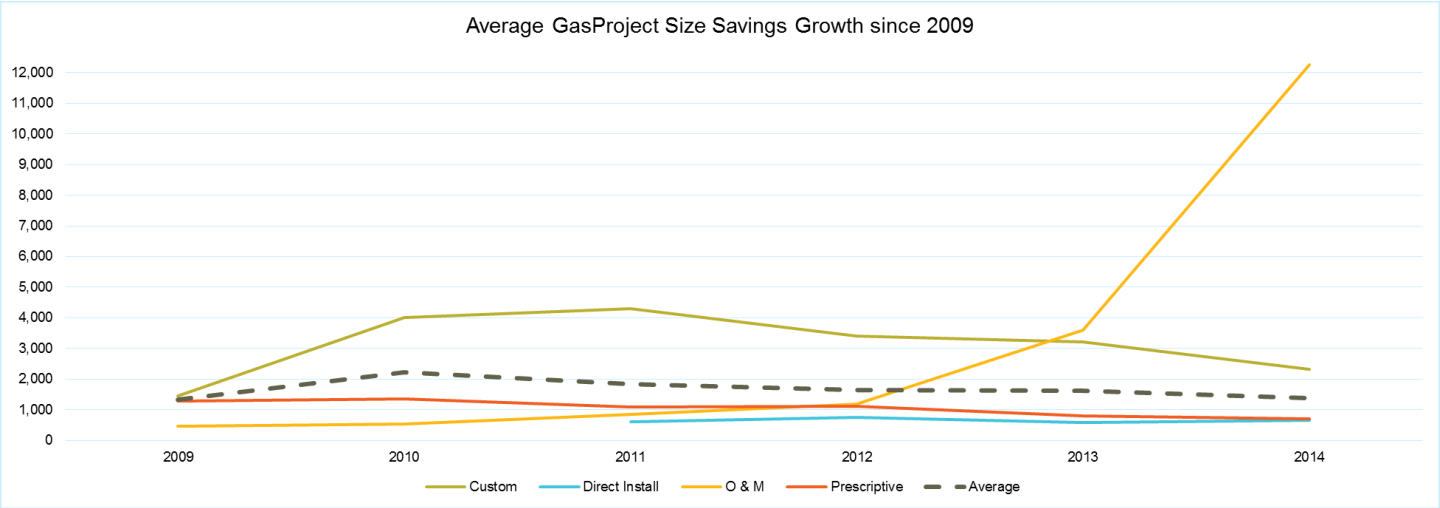
2009 to 2014 MMTherm Savings Acquired vs 2015 to 2034 Cost-Effective Potential



Commercial project volume has grown by over 160 percent since 2009--reaching over 6,700 projects in 2014. Lighting, prescriptive measures and multifamily direct install have shown a marked increase in this time period. Despite this high throughput, electric savings declined in 2014, and gas savings were only slightly higher than 2012. Average electric savings per project are down 48 percent, and average gas savings per project are down 38 percent, compared to 2010. This trend is largely the result of code changes and market saturation with larger customers who have traditionally tapped the Custom track for commercial programs. Program staff anticipate the savings per project to remain fairly level over the next 5 years with a corresponding leveling of the number of projects.







IV. Key Challenges

Oregon is experiencing a dynamic market and a rebounding economy. While there is a renewed interest in energy efficiency, Energy Trust faces challenges in making the business case for energy efficiency projects due to relatively lower fuel costs. New approaches and new technologies may open up opportunities, and there also promises to be heightened interest in energy issues and potential regulatory and legislative decisions in response to climate change awareness that introduce additional uncertainty.

Key challenges and opportunities over the next five years include:

<u>Relatively Lower Fuel Costs</u>

Lower avoided costs are reducing the cost-effectiveness of some measures. With a more limited selection of cost-effective measures, savings opportunities per

project are constrained and there is more time and effort required to reach and deliver services to customers.

Lower costs on the customer's side will continue to reduce motivation to invest in energy efficiency since there would be a less attractive value proposition.

Reduced Savings Opportunities

A maturing retrofit market is resulting in smaller savings opportunities per project as well as fewer large custom projects. Programs must continue to incur higher program implementation costs to reach more projects, or identify new technologies and expand lower cost program implementation strategies such as Strategic Energy Management.

Serving the needs of larger customers (>1 aMW) could become a challenge as we get closer to spending limits. Although Energy Trust is unlikely to exceed the large customer cap in 2015, it remains likely that the programs could exceed the current cap within the next year. Since large customers deliver some of Energy Trust's most cost-effective savings, limiting the ability to serve large customers is a significant risk to future savings and delivery costs.

The table below shows the sector's electric savings and incentives paid for the past 5 years to large and small-medium commercial customers. The column "Rate ($/kWh)" is the average incentive cost for the project's first year savings. This is alternately referred to as "acquisition cost" or "incentive run rate" in annual budget documents, where projections about expected acquisition costs are used to budget incentives to meet annual savings goals. This calculation does not take into account measure life or other discount rates needed to calculate levelized cost.

Comparison of Acquisition Costs

Year	Large Commercial Sites >1 aMW			Small-medium Commercial (<1 aMW)		
	Incentives	Savings	Rate ($/kWh)	Incentives	Savings	Rate ($/kWh)
2010	$4,050,939	36,589,185	0.1107	$19,563,898	162,823,272	0.1202
2011	$2,708,589	13,919,949	0.1946	$21,401,680	165,816,958	0.1291
2012	$3,243,301	36,835,042	0.0880	$25,680,163	217,818,619	0.1179
2013	$3,031,841	59,960,547	0.0506	$23,275,213	213,589,476	0.1090
2014	$2,947,970	21,804,616	0.1352	$27,832,123	191,773,653	0.1451
Total	**$15,982,640**	**169,109,339**	**0.0945**	**$117,753,077**	**951,821,978**	**0.1237**

note: Incentives are summed excluding studies and SEM technical contractor payments

Unknown Effects of Climate Change and New Carbon Regulation

How climate change will affect Oregon's commercial customers is still impossible to predict, but interest in carbon reduction at the Federal, State, and local level could boost activity in energy efficiency. These changes could take many forms, including the City of

Portland's Benchmarking policy, Multnomah County's PACE financing, or changes at the regulatory or legislative level.

Carbon emissions associated with electricity will be regulated at the utility, where they are produced as a side effect of fossil-fueled generation. The effect on the market would be expected to be electric rate increases, which in turn drive greater efficiency adoption by end users trying to keep costs down. In addition, the EPA's draft clean power plan encourages increasing efficiency to meet state targets for carbon emission reductions. Overall, these scenarios are more of an opportunity than a challenge for greater efficiency.

The Commercial Sector must be ready to respond, to work with new stakeholders and to work with current stakeholders in new capacities. In many cases these stakeholders have slightly different goals and measures of success and we will need to leverage others' strengths and also support Energy Trust's mission. The programs will seek to provide information to help impacted customers prepare and reduce carbon emissions through efficiency, and to leverage new opportunities.

The effects of climate change are expected to have a major impact on natural resources and where people and businesses are located. California and Southern Oregon's record-breaking drought is already having a major effects. Simultaneously, scientists studying climate change have called out areas of the Pacific Northwest as less impacted than many other areas of the country. These projections lead to expectations of major population and business growth in the region as climate refugees from drought areas in the Southwest move north. There could also be intra-state dislocation as well, if dry conditions in Eastern Oregon persist or worsen.

V. Sector Level Strategies

Over the next 5 years, the top-level efforts required for the success of the Commercial Sector are to: expand customer participation in programs; develop new measures and approaches to save energy; and, focus on continuous improvement of program design and services.

Expand Customer Participation

The Commercial Sector will focus on aligning incentives with opportunities, refining delivery strategies and developing new sales tools.

- Refining current prescriptive offerings to support greater market adoption of new cost-effective technologies such as LEDs, which would be particularly attractive for smaller business customers

- Expand implementation of delivery methods to provide service to small commercial customers including hassle-free direct installations of energy efficient equipment.
- Developing Strategic Energy Management offerings to cost-effectively bring benefits of SEM to smaller customers.
- Expanding regional outreach strategies to better engage and serve customers in rural, non-metro areas.
- Developing financing opportunities where they can encourage additional program participation and drive cost-effective savings.
- Expand trade ally training initiatives as a way to build a more active trade ally network and increase savings per project.
- Developing new avenues to serve K-12 Public Schools through prescriptive and direct-install approaches.
- Improving the presentation of a compelling business case for deeper energy efficiency investment, supported by tools and services to assist customers with decision-making and setting priorities.
- Regularly re-assessing incentives increases to improve project economics

Develop New Measures and Approaches

The Commercial Sector will continue to introduce innovative new measures as they become market-ready, and to develop new program delivery approaches.

- Developing additional prescriptive incentives and expanding midstream buy-downs where they can drive cost effective savings.
- Targeting O&M incentives to optimize building systems performance for customers of all sizes.
- Implementing a pay-for-performance pilot to assess the market demand and feasibility of longer-term contracts to support capital and operational savings.

Continuous Improvement of Program Design and Services

In other sectors, cost-effectiveness can be a major challenge, but the Commercial sector has not historically had program cost effectiveness challenges. Commercial customer and program interests are generally aligned on what makes a good investment in energy efficiency.

Continuous improvement becomes more critical in the Commercial Sector as we become more focused on the strategy of broadening participation. Resource acquisition from smaller customers or enhanced delivery approaches such as direct install will cost the program almost significantly more than savings from large customers cost. But while these savings will be more expensive, they are still cost-effective, and are included in the resource potential. Given that these customers pay all public purpose and supplemental electric efficiency funds, there is every reason to go after these savings

now. As we do, we will need to adaptively manage program costs and tactics to appropriately scale cost-effective delivery to these customers.

The Commercial Sector will emphasize continuous improvement of program design and services through:

- Expanding Strategic Energy Management to reach more mid-sized customers and to go deeper with customers that are already engaged.
- Deploying strategies that utilize data for more targeted marketing and outreach activities and improve lead capture for future marketing and outreach.
- Improving and streamlining operational processes to make it easier for customers to participate and identify multiple retrofit opportunities
- More directly integrating solar into efficiency projects, to create a comprehensive energy plan at customer sites.
- Continued coordination with external partners to link the program offerings with larger initiatives to leverage other efforts to drive further energy savings.

Many of these planned improvements will make use of changes to Energy Trust data systems that are almost complete and will enable better customer tracking, and long term customer management. Further system improvements will be needed in order to perform more detailed data analysis for targeted customer recruiting, opportunity identification and improved forecasting. System improvements such as integration of modeling tools will also be valuable in streamlining operational processes.

VI. Existing Buildings

Existing Buildings Background

Existing Buildings, launched in 2002, is one of the longest running programs at Energy Trust. The program acquires cost-effective electric and natural gas savings by providing technical assistance and financial incentives for high-efficiency equipment and energy-efficient operating practices in existing commercial and institutional facilities. The program targets building owners, building managers and facility managers/engineers.

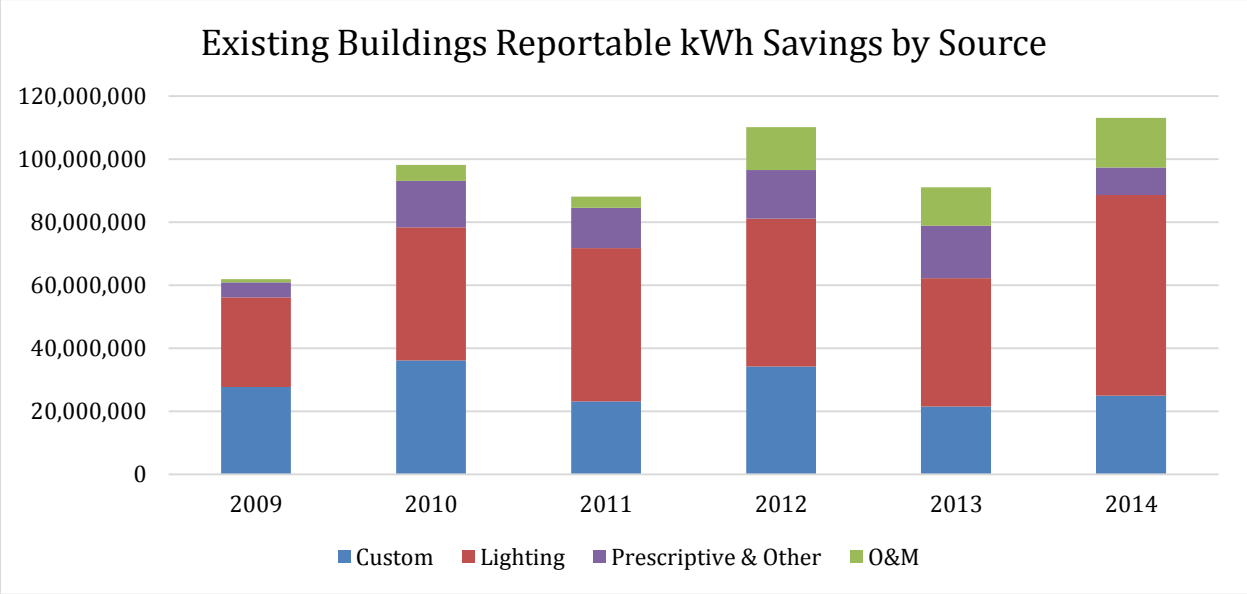
Existing Buildings relies on PMC delivery of custom, prescriptive and lighting tracks. Beginning in 2012 Existing Buildings added a Strategic Energy Management offering delivered by separate program delivery contractors. Building Operator Certification, a training program for which Energy Trust provides incentives to motivated customers, has delivered additional savings.

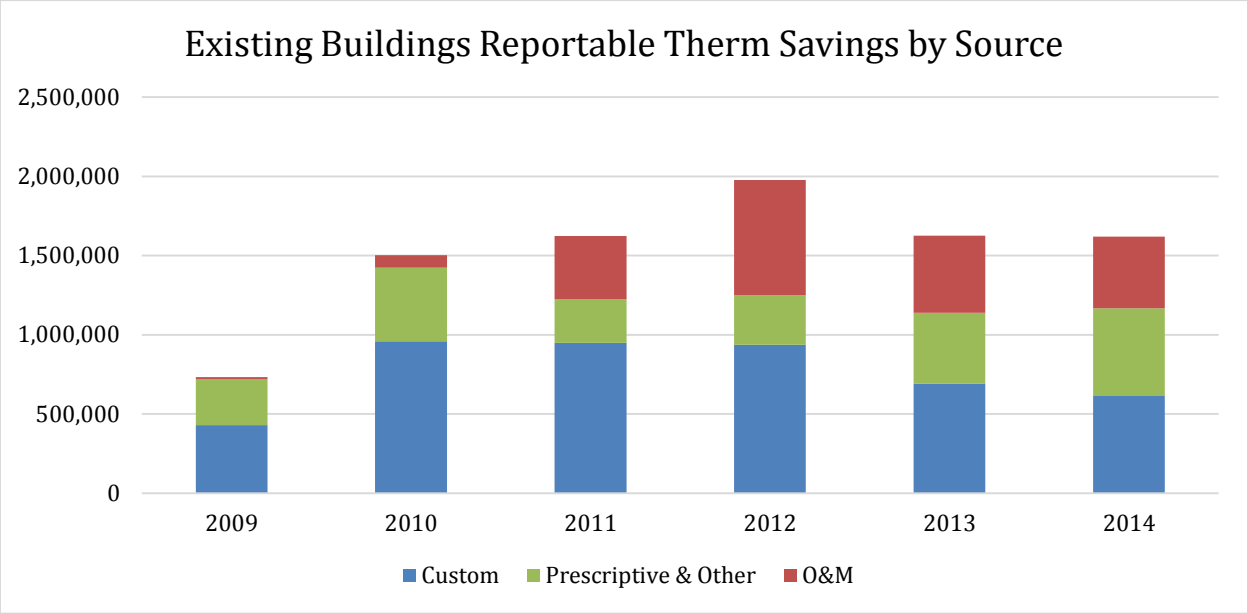
Existing Buildings has brought in high savings by targeting large projects at large customer sites, often located in Oregon's metropolitan markets. The PMC serves large customers using an account management approach. Account Managers build working relationships with customers and help them design and implement energy efficiency measures. The program utilizes a network of Allied Technical Assistance Contractors and equipment vendors and installers to reach customers with projects of all sizes. These allies leverage Energy Trust incentives and technical studies to sell projects that deliver savings. Trade Allies have been an integral part of the go-to-market model for lighting since day one; non-lighting Trade Allies have brought an increasing amount of savings as the program serves more, smaller customers implementing largely prescriptive projects.

The 2012 Existing Buildings Process Evaluation estimates that from 2003-2011 the program has achieved a market reach as high as 43% of the total square footage in Energy Trust territory. This relatively high influence includes 100% in reach in the hospital market, 87% in grocery, 61% in lodging, 59% from schools, 52% in restaurant, 41% in the office market, and 33% in retail. Within these markets, Existing Buildings has already harvested many of the largest most cost-effective projects.

History

Existing Buildings has served an increasing number of customers each year, with the average savings per customer falling over time. Program savings plateaued after 2010 and are fluctuating around a relatively consistent average of over 1.6 million therms and 11.5 aMWs. Since 2002, Existing Buildings has achieved almost 12 million therms and 90 aMWs, representing 29% of Energy Trust's total gas savings and 19% of Energy Trust's total electric savings.





Since 2010 approximately 39% of electric savings has been delivered through grocery, office, and retail sites with the largest share of savings coming from lighting retrofits. Approximately 38% of gas savings has been delivered through universities, schools and offices. The major end-uses for gas savings have been hot water and space heat.

Strategic Energy Management has attained a high level of market traction since 2012 and in 2014 made up 27% of Existing Buildings' gas and 13% of the electric savings.

The 2015 budget for Existing Buildings is $50 million which is 80% of the Commercial Sector Budget.

Existing Buildings Savings Potential

Existing Buildings will serve all existing commercial customers with the most straightforward and efficient delivery solutions. The program will also identify new participants by approaching past participants in New Buildings, working with current customers to identify new, long-term capital projects, helping customers implement renewable energy projects, especially solar, and recruiting appropriate customers in SEM.

According to the organizational Resource Assessment, the biggest sources of savings for these customers are in lighting, heating, cooling, ventilation and refrigeration, and the largest gas savings opportunities are from heating, weatherization, water heating and cooking.

Existing Buildings opportunities represent approximately 20 percent of the total 20 year electric savings potential and approximately 20 percent of the gas savings potential across all Energy Trust programs.

Existing Buildings Areas of Focus

Existing Buildings will engage and serve commercial customers of all sizes whether they rent or own, in all commercial market segments in both urban and rural areas throughout Energy Trust service territory. Services and incentives will motivate customers to identify and understand energy efficiency opportunities. The program will maintain a suite of incentive offerings that are relevant to customers across a variety market segments. Throughout all outreach and marketing, the cost savings associated with energy efficiency projects and how these savings can contribute to a business's bottom line, will be a key message. To better make the business case, the program will leverage NEEA tools and will also develop more specific project analysis tools.

Existing Buildings will continue to use direct program outreach by Account Managers to serve larger customers and key market sectors. To serve smaller customers, the program will enhance support and services for trade allies and other vendors to help them in selling energy efficient equipment. The program will also develop new methods such as the Advanced Power Strip leave-behind and direct-install for lighting which was introduced in 2014.

Existing Buildings will continue to coordinate with organizations such as the utilities, NEEA and ODOE to build a market delivery infrastructure that leverages each organization's strengths to influence customers. The program may also collaborate directly with organizations that can provide attractive financing options such as on-bill and PACE financing.

With the challenge of higher project counts, Existing Buildings will identify and implement operational efficiencies to automate and accelerate processes and reallocate resources to increase program outreach. The program will also add Trade Ally and ATAC training and services to enhance their capabilities and combine this with incentive offerings and study funding that will reward them for expanding their businesses to support program outreach.

Strategic Energy Management, launched in 2012, targets large commercial customers with the organizational capacity to institute behavioral and operational changes that result in energy savings.

SEM is proving to be highly cost-effective in achieving operation and behavior savings. The program uses Program Delivery Contractors (PDCs) with specialized engineering capabilities. As the program grows, Existing Buildings may consider a PMC model for delivery. Regardless, customers will continue to receive SEM training in cohort groups and SEM opportunities will be expanded to smaller customers. The SEM implementation structure will be standardized to streamline engineering methodologies for quantifying savings and to ensure that the customer experience is of a consistent, high quality.

Lighting projects constitute the largest and potentially most cost-effective electric savings potential. Existing Buildings will continue to cultivate the lighting Trade Ally network to engage customers. LEDs are evolving quickly and are increasingly affordable. LEDs represent the future of the lighting for customers of all sizes. The

program will continue to update lighting incentives to promote LED technology. Marketing and outreach will promote holistic lighting projects, including controls and interfaces with plug load controls and building controls. The program will provide training to educate contractors on how to sell and install these technologies. Strategies such as mid-stream incentive buy-downs will be implemented to move customers not targeted by trade allies.

While fewer in number, large custom projects are relatively easy to target, engage and influence. Market intelligence indicates that there are still a significant number of chillers, controls and boilers that could be replaced with more efficient options. However, these project types will be more difficult to influence because they are technically challenging or face internal barriers within the customer's organizations. The program will continue to build internal sales capabilities and develop a sales team in-tune with the needs of a specific industries and large customers in order to leverage large projects whenever possible.

Prescriptive non-lighting projects will continue to be the primary track for smaller customers who are less like to realize the financial savings from comprehensive energy efficiency upgrades. The program will work with market actors, including trade allies and PGE and PAC 838 outreach staff, to serve these customers, and will develop additional cost-effective leave-behinds, such as advanced power strips, and other low-cost measures.

VII. New Buildings

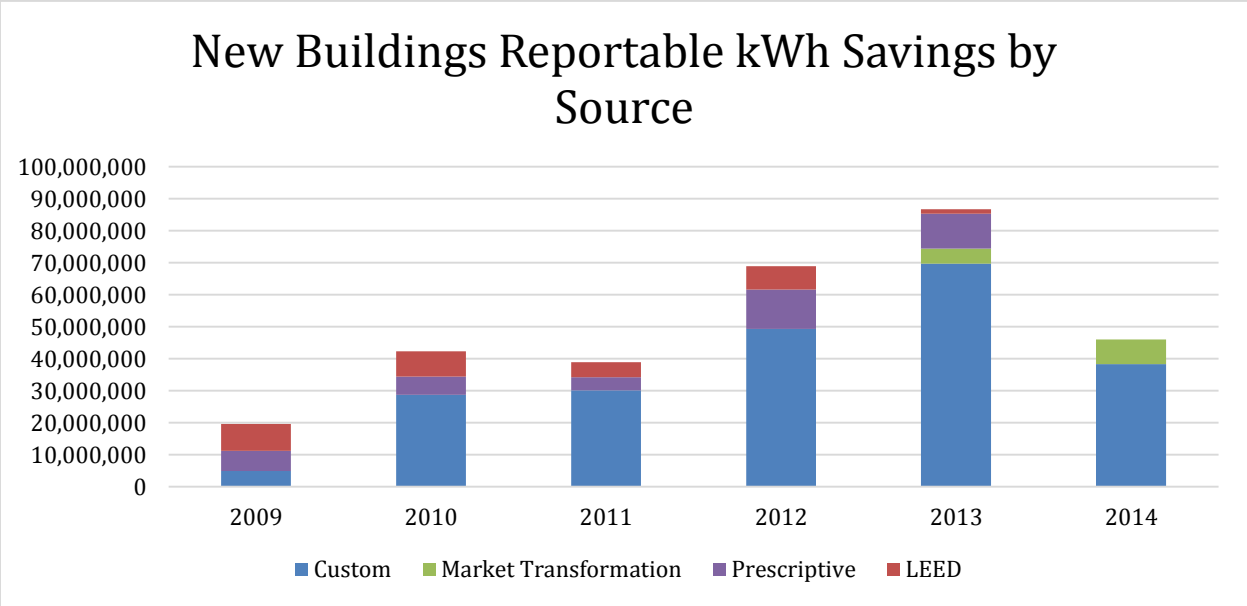
New Buildings Background

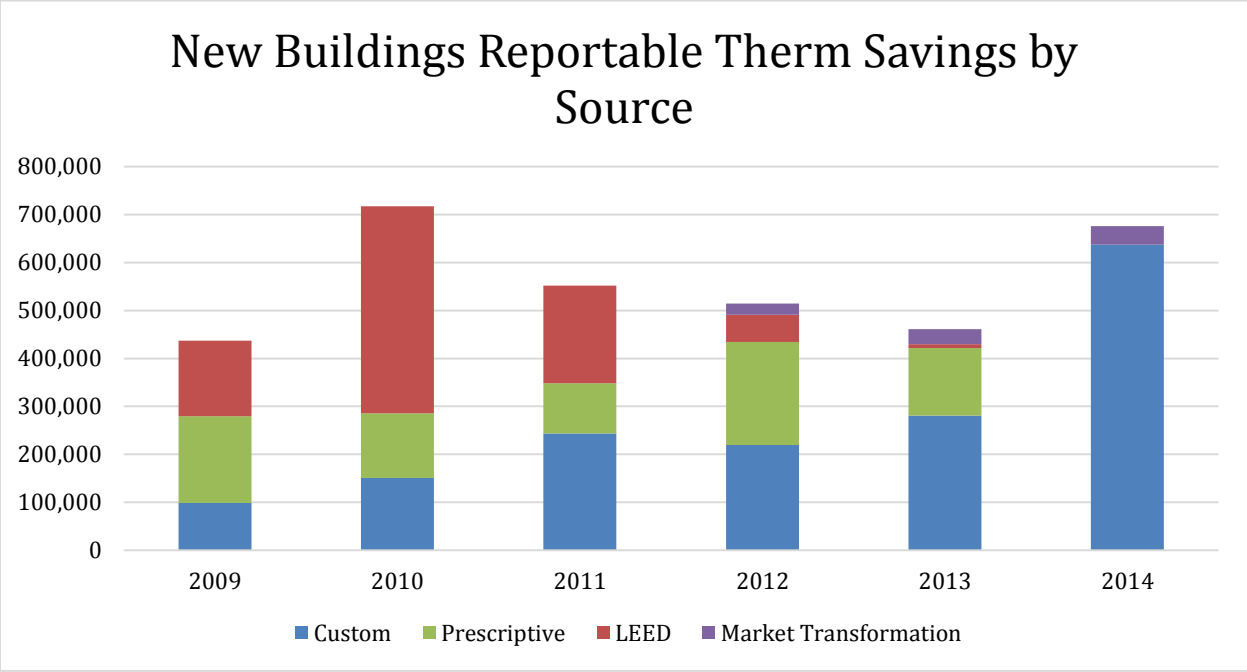
Energy Trust New Buildings provides incentives for energy-efficient design and equipment to support construction of high-performance commercial new buildings, major renovations and tenant improvements of all sizes and types of buildings. Participants can leverage a comprehensive set of services and incentives to advance their energy goals. Net Zero design, launched after the successful Path to Net Zero pilot, is a standard project delivery approach. New Buildings also provides training and education to allies to advance design and construction practices and broaden the application of new energy-savings strategies. Advanced technologies and design practices learned through early stage program development and identified as cost-effective are streamlined – and launched as Market Solutions – for small, independent building owners and Oregon's small commercial market.

New Buildings History

New Buildings has been successful with engaging a majority of the market, helping customers achieve savings by introducing simple pathways, deploying direct market engagement strategies targeting early design and supporting building owners and project teams.

Energy efficiency is often one of the most cost-effective ways for a business to achieve sustainability goals which creates a significant market advantage for New Buildings. There's also heightened interest in advanced building design to drive deeper savings opportunities, helped by the program's increased training and education initiative delivered through Allies for Efficiency. The program's regional outreach strategy has been critical to achieving sustained program awareness, steady participation rates and high customer satisfaction. Market interest in advanced design practices and technologies is leading to increased uptake of energy efficiency across market segments.





From 2002 to 20014, New Buildings achieved 41 aMWs of electric energy savings, representing 9% of Energy Trust's total, and almost 5 million therms of savings since inception, representing 12% of Energy Trust's total gas savings. The majority of electric savings have been achieved through lighting; most gas savings have been achieved through HVAC, both across a wide range of market segments. The 2015 budget for New Buildings is $12.5 million, 20% of the Business Sector budget, and program savings are very cost-effective.

In the last few years, the program increased core electric savings through offerings targeting the small commercial market, and had success working with large projects and data centers (a segment largely unregulated through building codes). Similarly for gas savings, the fluctuation in large projects is tied closely to commercial construction trends but is largely sustained through targeted equipment-based offerings for small commercial and large savings from institutional customers.

New Buildings Savings Potential

Aggressive energy savings targets are cost-effective and feasible in today's new construction market, creating a substantial market advantage for programmatic initiatives that will advance best practices, drive future resource acquisition and build up positive pressure – creating a leverage point in the market for NEEA.

Though New Buildings has been successful with market reach and measure penetration, building owners can miss opportunities for greater cost savings and deeper efficiency by focusing on incremental efficiency gains rather than designing to minimize load and thus reducing mechanical equipment. This is the case for promoting net zero design strategies as a core offer, known to enable wider market adoption of energy efficiency, but many perceptional risks can hold back rapid market adoption of net zero. New Buildings will focus on supporting the market to build capacity and advance best practices, and will leverage lessons learned in the program's Path to Net Zero pilot, which demonstrated cost-effective net zero savings that moved projects 50% beyond baseline. A key objective in the next couple years is to define many more net zero measures to aggressively build up our library of solutions that will cascade through a majority of projects entering New Buildings, making net zero attractive, simple and applicable to a majority of building owners.

New Buildings Strategies & Areas of Focus

<u>Full deployment to enable uptake of advanced design and measures</u>

New Buildings will continue to drive significant changes to how buildings are designed and constructed, resulting in sustained market practices that promote high-performance buildings and the benefits of energy savings. To accelerate market transformation, advanced building design practices will be broadly deployed through program outreach, training and education initiatives and targeted offerings. This may lead to changes in Oregon energy codes or create positive pressure in the marketplace for NEEA to further leverage. New Buildings will expand market segments served by Market Solutions and

build market demand through targeted offerings that reward for higher savings; eight good/better/best incentive packages will be available starting in 2015.

New Buildings has successfully engaged building owners and will continue to work directly with building owners to identify and set robust energy savings targets and align the project team with resources and design tools to achieve their savings targets. New methods for reducing measure drop that occurs in a project's value engineering phase are beginning to emerge and New Buildings may begin to engage with building owners about setting energy related requirements in their plans and contracts – a tactical step the program will take toward enabling outcome based building design and outcome based energy codes that focus on performance.

Regional outreach and market engagement will address the objective of achieving high penetration rates statewide and expanding best practices for efficiency and early design.

Sustaining market transformation by building market capacity

New Buildings will continue to build a market position for allies and accelerate market transformation by strengthening ties between owner-driven decisions and ally-driven solutions, as allies increasingly propose advanced energy goals to their clients. This will build on the idea of empowering allies and delivering approaches to them to enable rapid, consistent deployment of energy efficiency. New Buildings will expand delivery of educational program content through our Allies for Efficiency trainings, provide high-quality, actionable content and professional development licensing and credentialing for a wide range of allies including designers, contractors and ensure delivery of content statewide. Building design strategies and emerging technologies are increasingly difficult to codify, but the market increasingly is valuing energy efficiency and eying performance-based approaches. As market reaches readiness for outcome-based codes, new mechanisms to sustain market transformation will be needed to strengthen emerging performance-based standards. This will allow us to diversify long-term market transformation strategies and provide pathways to advance various policies where codes may not have the desired impact.

Over the next five years New Buildings will diversify approaches for sustaining long-term savings and best practices, this will be accomplished through leveraging policies and tools brought by other stakeholders.

- Prioritizing building energy use benchmarking as a strategy that enables the market to overcome barriers to design strategies that rely on building performance.

- Leverage national initiatives, including American Institute of Architects Challenge tools (A2020) into the ally network to track their firms' actions toward implementing A2020 goals in building designs.

- Leveraging high-value brands like U.S. EPA's ENERGY STAR® to strengthen outcomes with building performance after buildings are constructed and operational.

- Collaborating with NEEA to gain regional leverage with training and education.

The program will also monitor future actions and policies that will increasingly call on energy efficiency as a climate action solution, and gage how customers and commercial real estate investors view carbon reduction goals from their perspective. Regional plans and actions that have direction connections to Energy Trust (Regional Collaborative, Regional Climate Action Plans) will be leveraged by New Buildings to test-out viable implementation tools.

VIII. Existing Multifamily

Existing Multifamily Background

The Existing Multifamily program serves all existing multifamily structures with two or more units in Energy Trust of Oregon territory. Property owners and managers have a menu of offerings available to them, including incentives and services, for both in-unit and common-area improvements. The program provides expertise to help customers identify a comprehensive set of savings opportunities for multifamily properties, including lighting site analyses, customized energy analysis studies, and tablet-based walk-through surveys. The largest share of program savings is achieved through direct installation of LED light bulbs, showerheads and faucet aerators in tenant spaces. Four other measure tracks comprise the other major sources of savings – buy-down promotions, common-area lighting, custom financial incentives and prescriptive measures. Prescriptive measures include appliances, insulation, windows, foodservice equipment and HVAC equipment and systems.

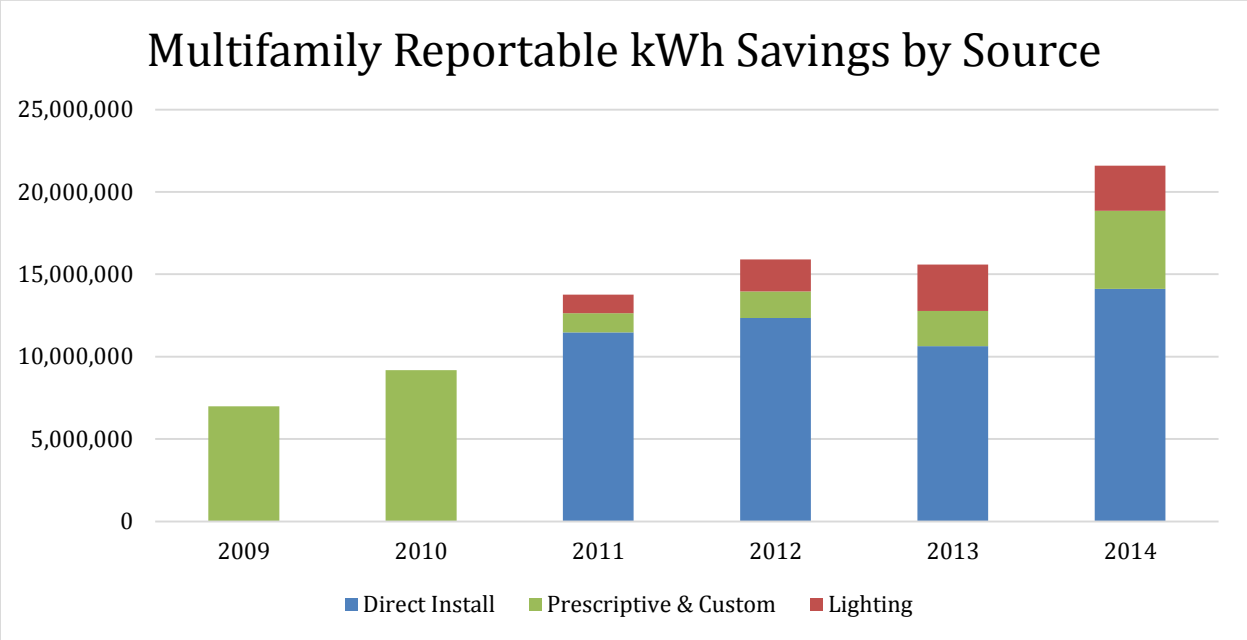
The program is designed to reach six types of market ownership/use segments – affordable, assisted living, attached residential owners (condominium and townhomes), campus living, home owners associations and market rate. The program utilizes an account manager approach to cultivate and maintain long-term relationships with larger customers by providing coordination services and fostering participation across tracks.

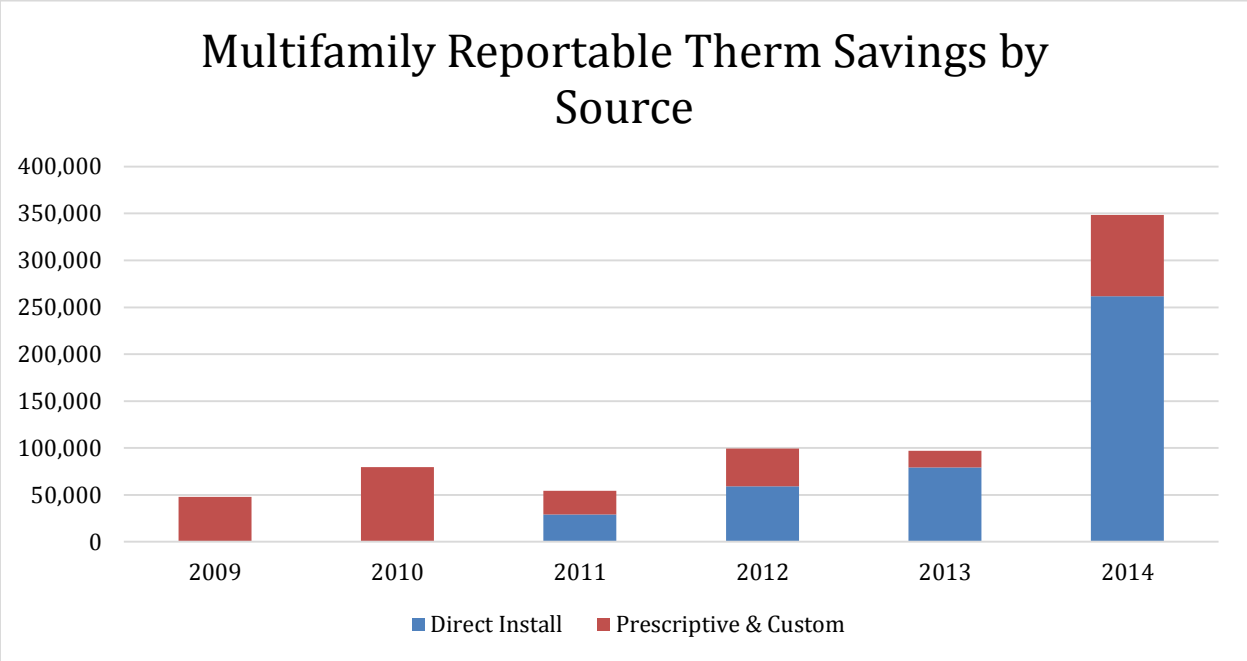
Existing Multifamily History

Energy Trust began serving the multifamily market in 2003 and through 2009 the program was delivered through the residential sector. In 2010 Energy Trust transferred the program from the residential sector to the commercial sector to focus on property owners and managers. Since 2003, the program has delivered more than 105 aMWs of electric savings and 870,000 therms of gas savings and served over 7,000 multifamily properties. Market assessment data shows that 15-17% of existing multifamily properties have participated in the program over the last five years.

As of 2007, savings have steadily increased year-over-year, with a dramatic increase in 2014. In 2015, savings are expected to level off near 2014 levels and remain relatively

constant or decline over the next five years. Savings opportunities are heavily weighted towards electric. Gas opportunities have been achieved through hot water heating and central system heating upgrades as well as direct-install measures.





Existing Multifamily Savings Potential

Most multifamily buildings in the Northwest are heated by electric zonal heating, and the market is ripe for the replacement of equipment installed when the majority of the building stock was constructed in the 1970s and 1980s. Domestic hot water is primarily in-unit electric water heaters that have potential for upgrades. Significant savings remain in common-area lighting where older technologies and a lack of lighting controls are prevalent. Multifamily is lagging behind the residential market in weatherization and windows, and savings opportunity remains in appliances.

Over the next 5 years the majority of electric savings are expected to come from direct-install and common area lighting, followed by custom projects and prescriptive measures. Direct-install savings are also expected to comprise the majority of gas savings, with custom projects and prescriptive measures making up the remainder. While the majority of savings is anticipated to be direct-install over the next several years, the program aims to increase the proportion of savings from other measure types.

Existing Multifamily Areas of Focus

As the program faces cost-effectiveness challenges due to lower avoided costs, changing codes and standards and increased market penetration, identifying new savings opportunities is key to maintaining a robust portfolio. Reassessing baselines specific to multifamily properties will help identify appropriate incentive offerings and services.

Multifamily is seeing a larger volume of smaller projects, similar to other commercial programs. While the program offers an account management approach for owners of larger and multiple properties, program design will need to support trade allies and other market actors such as distributors to conduct outreach and drive program participation. Furthermore, there will be a shift in focus from acquiring new participants to developing longer-term relationships and re-engaging with past participants.

Multifamily serves diverse market segments and regions with a wide range of decision makers and motivations for energy efficiency improvements. To maximize participation in rural and historically underserved customer segments, the program will require an increased understanding of specific barriers and motivations for each group

Affordable housing and condominium owner markets have been historically difficult to serve. The condominium market is comprised of complex decision-making structures of owners and HOAs. In the affordable housing market, decision makers are often highly motivated but have limited budgets. The exploration of enhanced incentives for this market, proven successful in the single-family market, could serve as a model. Enhanced coordination with other organizations, such as OHCS, could help overcome these barriers.

Renters have been hard to reach and could be an untapped customer type in the multifamily market with the ability to bridge the gap between property managers and tenants. The program currently serves dwelling units through direct-installation of instant savings measures; however, renters still represent a potential missed opportunity. Behavior-based initiatives have proved effective in other markets involving low-cost and no-cost actions, and may be an avenue to pursue.

Increased feedback on energy usage through benchmarking initiatives has also proved interesting to customers and are becoming more prevalent in the energy industry nationally. The program currently offers an online tool to help property owners and managers monitor energy savings results and identify energy-savings opportunities. Leveraging the momentum from both the commercial and residential markets may be effective in driving continued engagement and deeper energy savings.

V. Alignment with Energy Trust Strategic Plan

The Commercial Sector strategies and activities described above are intended to respond to the changing market, meet the needs of customers, and align with Energy Trust's Five Year Strategic Plan completed in 2014. The table below lays out how the sector's key strategies and activities align with Energy Trust's overall organizational plan.

	Energy Trust Strategy Plan Objective			
	Continuously improve program designs to provide excellent customer service and support customers with energy solutions	Manage the total cost of efficiency to maximize cost-effective conservation potential	Broaden participation by serving people and businesses we have not yet reached	Replenish energy conservation resource through new technology, strategies, and innovations
Overall Commercial Sector				
Regional Outreach Strategies	x		x	x
New Measure Development	x		x	x
New Delivery Strategies	x	x	x	x
New Sales Tool Development	x	x	x	x
Rebid PMC Contracts on regular schedule	x	x	x	
Trade Ally Engagement and Training	x	x	x	
Comprehensive Long Term Customer Engagement	x			
Stakeholder Engagement	x		x	
Existing Buildings				
Expand Upstream Offerings	x	x	x	x
Expand Direct Install Offerings	x		x	
Expand Strategic Energy Management	x		x	x
Develop New Prescripitive Incentives	x		x	x
New Buildings				
Expand Market Solutions Packages	x	x	x	x
Refine Data Center Offerings	x		x	x
Refine Net Zero Offerings	x		x	x
Multifamily				
Continue Direct Install Offerings	x		x	x
Expand Upstream Offerings	x	x	x	
Expand Behavior Based Savings Strategies	x	x	x	