

Conservation Advisory Council Agenda

Wednesday, April 10, 2019

1:30 p.m. – 4:30 p.m.

421 SW Oak St., #300, Portland, OR 97204

Follow-ups from previous meetings:

- Residential net zero specification survey results from CAC and RAC are appended to the February notes.
- Updated operating principles are included in this meeting packet. The final version accepts the tracked changes from February, and now includes changes to provide remote participation options and include a feedback loop on any topics the board takes up. Does CAC want to further consider documenting expectations of members?
- The suggestion to have a guest speaker present on the state's [10-year energy burden in affordable housing plan](#) has been added to the list for a possible future meeting.
- The market research study on the energy and water nexus in water/wastewater treatment plants will be available online soon, and an email sent to CAC with the link.

1:30 Welcome, Old Business and Short Takes *(Hannah Cruz; information)*

Introductions, agenda review and approve February 27 meeting minutes
Review previous meeting follow-ups

1:40 Residential Pay for Performance Pilot Update *(Mark Wyman; discussion)*

Staff will provide background on the Residential Pay for Performance pilot that launched in Quarter 2, 2019, including design principles, portfolio types and pricing, research questions, and risks and unknowns.

2:10 Industrial Strategic Energy Management Initiative *(Kati Harper; discussion)*

Staff will present on changes underway in the industrial Strategic Energy Management initiative. Staff is looking for CAC input on the four identified focus areas that will be prioritized for implementation by the end of 2019.

2:40 Multifamily Program Assessment Introduction *(Kate Wellington; discussion)*

Staff is delivering an early update on challenges facing the Existing Multifamily program, and an assessment staff will conduct this year to identify possible changes to make to the program in 2020. Staff is looking for early input from CAC and will return at a later CAC meeting with more information.

2:55 Break

3:10 2020-2024 Strategic Plan Development Update *(Debbie Menashe; information)*

Staff will provide an update on the process and development of Energy Trust's 2020-2024 Strategic Plan. The board will consider the draft plan at its upcoming Strategic Planning Workshop on May 16 and 17; CAC is welcome to attend.

3:30 Update on Energy Trust Gross Reporting Transition *(Fred Gordon; information)*

Staff is coming back to CAC with an update on changes that will be implemented starting in 2020 on how Energy Trust reports savings. This agenda item follows up on a previous CAC discussion; to see the original presentation and paper, refer to the June 2018 meeting packet online (starting on page 62) <https://www.energytrust.org/wp-content/uploads/2018/06/CAC-Packet-June-2018.pdf>.

3:45 Update on Energy Trust Avoided Costs (*Spencer Moersfelder; information*)
Staff is delivering on update on electric and gas avoided costs, with forecasted values increasing for both. These values will be used for developing the 2020 budget.

4:15 Public Comment

4:30 Adjourn

Meeting materials (agendas, presentations and notes) are available [online](#).

Board public strategic planning workshop: Thursday, May 16 and Friday, May 17 at Energy Trust

Next CAC Meeting: Wednesday, May 22, 2019

Conservation Advisory Council Meeting Notes Summary

February 27, 2019

Attending from the council:

John Frankel, NW Natural (for Holly Braun)
Charlie Grist, Northwest Power and
Conservation Council
Lisa McGarity, Avista
Dave Moody, Bonneville Power
Administration
Julia Harper, NW Energy Efficiency Alliance
Warren Cook, Oregon Department of
Energy

Danny Grady, City of Portland Bureau of
Planning and Sustainability
Wendy Gerlitz, NW Energy Coalition
Tim Hendricks, BOMA
William Gehrke, Citizens' Utility Board of
Oregon
Kari Greer, Pacific Power
Anna Kim, Oregon Public Utility
Commission
Jason Klotz, Portland General Electric

Attending from Energy Trust:

Hannah Cruz
Fred Gordon
Thad Roth
Peter West
Betsy Kauffman
Ryan Crews
Debbie Menashe
Dave McClelland
Justin Buttles
John Volkman
Dave Moldal
Jackie Goss
Cameron Starr

Julianne Thacher
Kenji Speilman
Mana Haeri
Alex Novie
Samuel Girma
Michael Colgrove
Lizzie Rubado
Mana Haeri
Eleni Eisenhart
Spencer Moersfelder
Steve Lacey

Others attending:

Alan Meyer, Energy Trust board
Elee Jen, Energy Trust board
Chad Gilliss, Stillwater Energy
John Molnar, Rogers Machinery
Alicia LaRoche, Evergreen

Joe Marcotte, Lockheed Martin
Shelly Beaulieu, TRC
Mark Lyles, New Buildings Institute

1. Welcome, Old Business and Short Takes

Hannah Cruz convened the meeting at 1:34 p.m. The agenda, notes and presentation materials are available on Energy Trust's website at www.energytrust.org/about/public-meetings/conservation-advisory-council-meetings/. The meeting was recorded on Go To Meeting. If you'd like to refer to the meeting recording for further detail on any of these topics, email info@energytrust.org.

2. CAC Operations and 2019 Planning

Topic summary

Hannah Cruz conducted an annual review of the CAC operating principles, including the 2018 Operating Principles document and an additional 2018 Meeting Guidance document. The operating principles spell out CAC engagement for the year, including how many meetings are

held, how members are engaged and what discussion topics are brought to the group. Hannah asked the group to review her recommended updates, which combined the two documents into one by incorporating some Meeting Guidance information into the operating principles. Recommended changes were presented using tracked changes. The group had the opportunity to provide feedback on the document before being finalized for 2019.

After finalizing the Operating Principles, Hannah presented the results of a survey that CAC members recently participated in. CAC provided feedback on meeting topics brought forward in 2018. Overall, the respondents found most of the 2018 topics to be useful. Respondents also indicated they prefer to provide feedback about meeting topics in a variety of ways, mostly after a presentation. CAC noted in the meeting they do like small group discussions.

Discussion

CAC inquired about the process for relaying takeaways from their meetings to Energy Trust's board of directors. Hannah clarified that the board is provided with CAC meeting notes, and she provides high-level updates on CAC discussions during board meetings.

CAC asked whether Energy Trust was getting what they needed from the group and emphasized that they want to be helpful contributors. Peter West mentioned the group will have a valuable role in strategic planning, and their perspectives help Energy Trust understand if we have considered all aspects of a topic.

CAC noted the Operating Principles could also list the expectations of CAC members.

CAC recommended showing key takeaways at the beginning of each presentation to provide visibility for members who don't have time to read the whole presentation.

Regarding the survey, CAC discussed the level of detail desired in a presentation and concluded that they preferred to have more detail available for those who may be less informed on a topic.

Next Steps

Hannah Cruz will compare the CAC charter to the Operating Principles to ensure the expectations of CAC members is documented in one of the two documents, and will then finalize the Operating Principles, providing the final copy in the next meeting's packet.

The results of the survey and CAC discussion will be used to inform upcoming topics for 2019 CAC meetings.

3. 2018 Preliminary Annual Results

Topic summary

Peter West shared preliminary annual results for 2018. Official annual results will be available on April 15, 2019. The results show that Energy Trust is expected to achieve 95 percent of the electric savings goal, 114 percent of the gas savings goal and 126 percent of the renewable energy generation goal. The shortfall in the electric savings goal is largely due to lower-than-expected savings from the commercial sector in Pacific Power territory and a megaproject in PGE territory; the savings not acquired in 2018 from the megaproject are expected to come in during later years.

Discussion

Pacific Power asked how Energy Trust's work with schools intersects with Oregon Department of Energy's schools funding. Peter West explained that Energy Trust coordinates with ODOE to ensure customers receive the maximum benefit without duplicating incentives.

CAC expressed interest in how diversity, equity and inclusion efforts and progress will be incorporated into annual reporting moving forward. Hannah said quarterly reports now contain highlights of DEI activity and there will be a section devoted to DEI in the 2019 annual report.

Next Steps

No next steps.

4. Residential Net Zero Specification

Topic summary

Mark Wyman (residential) and Jeni Hall (solar) presented on program concepts and different approaches to net zero in the residential sector. Energy Trust is developing a net-zero offering for residential homes that is targeted for launch in 2020 to prepare for Governor Brown's Executive Order 17-20. Staff is currently in the process of gathering stakeholder feedback. The new offering will combine elements of the existing EPS New Construction and residential Solar programs and aim to increase adoption of energy efficiency and solar while decreasing the cost of combining both elements in one project.

Jeni and Mark reviewed possible ways of defining net zero in homes and asked CAC for input on which definition made sense for Energy Trust to use in this offering. Some definitions assume all energy use will be offset, while others assume all or some electric use or consider "smart home" grid benefits.

Discussion

CAC inquired about potential cost-effectiveness concerns, and the program clarified that the cost-effectiveness for new construction, which is a custom program, is based on a number of representative prototypes for each tier that are updated on an ongoing basis. The Solar program works under above-market costs as opposed to cost-effectiveness but has a set of requirements that go beyond current code requirements.

CAC discussed whether the new homes would automatically be built EV ready, and if the energy load from transportation would be included in the zero energy calculation. It is currently not included in the model but may still show up in the home's energy footprint.

CAC discussed the idea of how integrating energy efficiency and solar incentives would ultimately decrease costs. The goal is to decrease the cost of solar and working something into common practice will generally bring costs down. Net zero is an overarching brand and can be a rallying point to make sure the solar trade allies and builders are working in closer alignment, which will decrease the cost of collaboration to get to net zero on the energy efficiency side.

Earth Advantage noted that they have been doing this work through their Zero Energy and Zero Energy Readiness programs. Until recently, gas homes were excluded from the Earth Advantage program due to a site definition of net zero energy use. They have now moved to a source energy definition, which allows gas homes to participate but that necessitates oversizing the solar system. Having the system oversized can ensure enough load for a future electric vehicle, and they see that as a win.

Bonneville Power Administration noted that the zero-all energy use definition could lead to gas homes not reaping the full benefit of their solar systems and could inadvertently lead to fuel switching. On the other hand, the zero-some energy usage definition would be hard to brand and communicate in the market. Zero-all electric usage is the most viable near-term option for implementation.

NW Natural stated since power is generated to a large degree with fossil fuels, a source-based approach would have the most integrity. Within the three options, the zero-all electric option would be best to determine zero or near-zero.

CUB noted that for PGE, the basic charge is subsidized. The customers who are receiving the full benefit of the solar investment would have larger fixed charges even though they're not using the grid. If you market zero-all electric energy costs, there could be negative feedback from customers who pay increasing base costs.

Oregon Department of Energy noted that there is a national definition of net zero from the U.S. Department of Energy that refers to zero regulated load. Staff should consider what "zero" in Governor Brown's Executive Order refers to, and the original proposition was related to reducing carbon emissions and producing low-load homes. That changes the formula and means you wouldn't necessarily have to offset with renewables on-site. The low-load home is a great way to go but would also necessitate homeowner education and explaining that they would need to make behavioral changes to get to zero.

Next Steps

The members filled out a survey handout with their feedback, which has been aggregated by staff and added to these notes. See Attachment 1.

5. Overview of Market Research at Energy Trust

Topic summary

Peter Schaffer presented market research underway or recently concluded at Energy Trust, including sample studies. He explained that Energy Trust completes around eight to ten 10 market research projects each year with the goal of better understanding how to target, acquire and retain a customer base with regard to our services and offerings. These projects could take many forms including customer analysis, supply chain models, consumer choice information, market segmentation, market trends, pricing, cost research and branding research.

Peter reviewed a few examples of recent studies. One study sought to understand capital planning and project cycles for the water and wastewater sector, while another study researched the market for energy-efficient windows for residential homes.

Discussion

Bonneville Power Administration expressed that all of the studies were of general interest, especially the wastewater study.

Avista expressed interest in the low-income energy affordability study that was performed by Oregon Housing and Community Services, ODOE and the OPUC.

Next Steps

Hannah will send a link to the wastewater study when it has been posted online and will add the energy affordability study as a topic for 2019, depending on available time.

6. 2019 Measure Development Preview

Topic summary

Jackie Goss provided a high-level summary of measures that will be reviewed and potentially revised in 2019. CAC is being given the opportunity to review the draft list in case there are measures to bring back to a future meeting. The majority of the measure revision work will be completed by the end of July before staff begins developing the 2020 budget and action plans.

Energy Trust reviews all of our measures at least every three years, but some measures are updated more frequently than that. Measures that have exceptions tend to have a two-year exception which means they must be reviewed every other year. Measures that are highly dynamic or have some kind of deadline such as a code change may have a shorter time between reviews as well. At minimum, measures are re-tested to ensure they are cost effective. For other measures, we review the assumptions and the data that went into them to ensure that we're claiming appropriate savings and offering appropriate incentives.

Discussion

NEEA noted they'd like to partner on midstream lighting.

CAC noted a lot of these measures are going to affect moderate-income customers more.

CAC discussed the non-energy benefits of some measures, like ductless heat pumps in both residential and multifamily settings.

CAC asked how complementary funding is used by staff in cost-effectiveness tests. We have guidance from the OPUC on how we can work with other partners who have funding available. This provides direction on how we treat that funding in our cost-effectiveness test when the payments from other organizations are reflective of other non-energy values. Using this guidance, we can use their contributions to reduce the cost used in the Total Resource Cost test.

Next Steps

Staff will inform OPUC staff of reviews for measures that might have a large impact on savings and will bring back to CAC any measures that show, post review, a potential for a large savings change.

7. Public Comment

There was no additional public comment.

8. Meeting Adjournment

The meeting adjourned at 4:22 p.m. The next meeting is Wednesday, April 10, 2019.

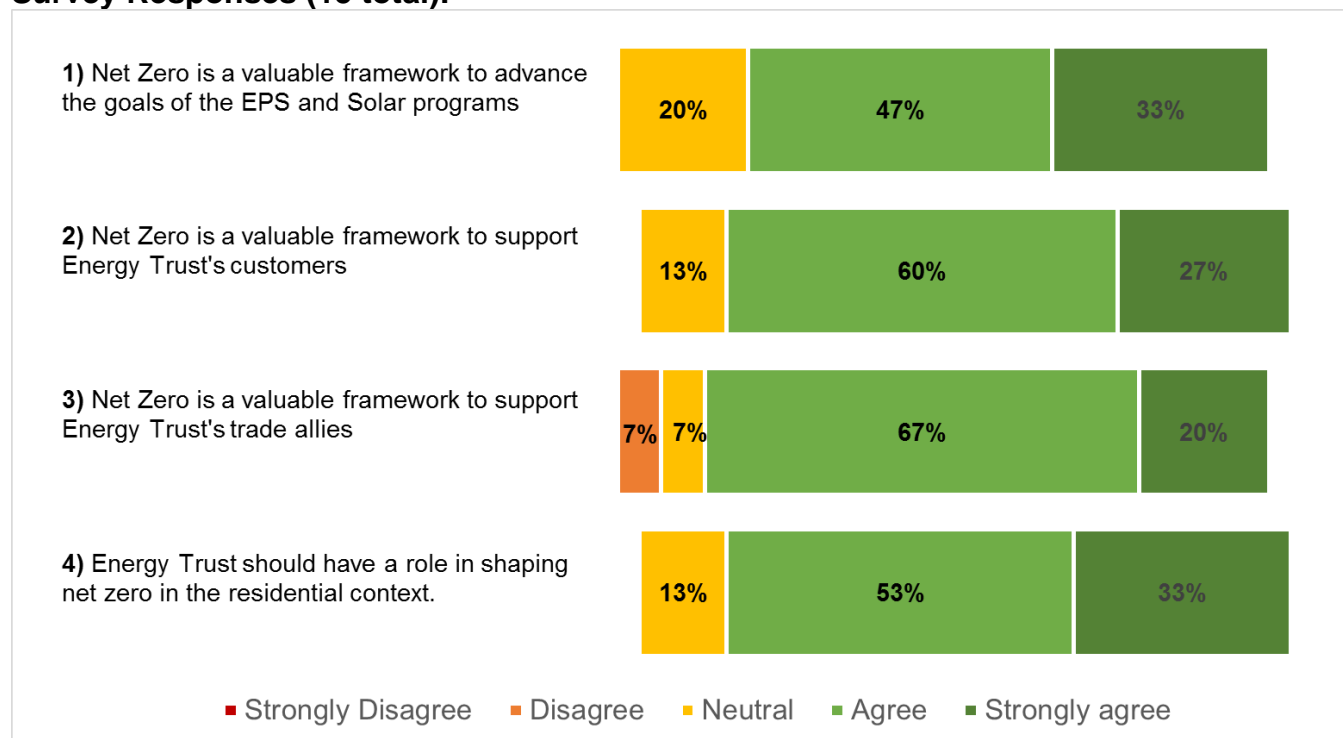
Attachment 1: Residential Net Zero Specification

Compiled survey responses and highlights from the discussion at CAC and RAC on February 27, 2019.

Key points that should be considered in program design:

- How and whether to incorporate EV adoption and usage
- How the program would interact with carbon programs at the city, county and state level
- Creating a net zero specification that works for both home buyers and builders
- The importance of branding/marketing/communicating the concept to home buyers
- Coordination with other groups in Oregon and Washington defining net zero

Survey Responses (15 total):



Highlights from the discussion at both RAC and CAC for each of the Net Zero concepts discussed

Zero all energy usage

- I would be concerned the homeowner might use more energy because they are overproducing and not getting the benefit.
- If you are encouraging a home buyer to build out a solar system that is larger and more expensive, does it tacitly encourage fuel switching?
- At scale, does this produce grid management issues? That could drive utility cost up.
- The potential for oversized solar to accommodate gas load could exacerbate issues with grid constraints.
- I am concerned that there could be some perverse incentives (or disincentives) under the [zero] all energy [usage] (gas+electric) definition of net-zero.
- It could work if our net metering policy is changed.

Zero all electricity usage

- Would an [zero all] electric energy only approach drive more all electric new construction vs gas?
- Cost to customer is something to consider whether the market will adopt. Zero all electric use or some would probably increase participation.
- Considering challenges with the other two methods this zero all electric usage seems most viable.
- Options 1 (zero all energy usage) or 2 (zero all electric usage) offer the most understandable process. We think option 2 (zero all electric usage) has more integrity than option 3 (zero some energy usage).

Zero some energy usage

- You will struggle with communication/marketing this to home buyers.
- Eliminating the space and water heating load is not the way to go.
- Cost to customer is something to consider whether the market will adopt. Zero all electric use or some [energy usage] would probably increase participation.

Grid Responsive

- Smart homes should be an aspect of net zero homes. Storage is very important. Makes more grid neutral, if can be integrated, multitude of benefits.
- I think the smart grid responsive homes should definitely be overlaid on whatever "net zero" definition is chosen. Far less expensive to integrate when home is built than to add distributed energy resources later.

General

- Make sure to coordinate with Washington as I understand they are fairly far down this road.
- Energy Trust's skillset is in providing training and standardization to the community and trade allies. Seems like there is value to the state of [Energy Trust] developing a "standard program".

2019 Operating Principles Conservation Advisory Council

April 2019

Per the Energy Trust bylaws and grant agreement with the OPUC, the Conservation Advisory Council (CAC) is one of several standing committees formed by the board of directors to provide advice in support of Energy Trust of Oregon energy efficiency programs.

Excerpts the CAC charter (full charter language at the end of this document):

The purpose of the Conservation [and Renewable] Advisory Councils is to advise the board and staff of Energy Trust of Oregon, Inc., regarding issues associated with Energy Trust energy efficiency and renewable energy policies and programs.

The Councils will:

- (a) Review and discuss selected energy efficiency and renewable energy issues prior to Energy Trust decision-making to ensure that the Board and staff have the best available information on such issues;*
- (b) Help the Board and staff to identify alternative resolutions of such issues; and*
- (c) Help staff identify matters for board consideration.*

CAC provides direct advice and input on budgets, program designs and strategies and the implications and programmatic response to policy or market changes. Final resolution of issues and all decision authority remains with the board of directors.

The following operating principles are a distillation of Conservation Advisory Council meeting discussions concerning the CAC role and meeting process. CAC Operating Principles were initially developed in 2004 to improve and enhance the CAC process, and went through an extensive review in 2018. The Operating Principles are reviewed by CAC members and Energy Trust staff at the beginning of the year, updated as needed and adopted.

CAC Operating Principles

1. Meet in person at least 8 times per year, with staff providing remote participation options for CAC members and other attendees.
2. Draft an annual CAC schedule to set expectations for the year and prioritize known topics for the year to inform annual schedule and meeting agenda development. Identify topics that can be brought early to CAC for feedback; topics could involve a significant change in program planning and delivery or shifts in market trends.
3. Whenever possible, distribute meeting agendas, related materials and notes from the previous meeting one week in advance so that CAC members can review and be prepared to engage on topics. Agendas to provide a summary of each topic that will be covered, along with the objective of the presentation.
4. Identify agenda items as discussion, information or recommendation needed, and seek to vary presentation styles to foster greater exchanges among CAC members and staff.
5. Make presentations short and succinct; provide ample time for discussion. Structure the meetings to maximize dialogue between staff, CAC members and other interested parties who attend.

6. Ensure sufficient CAC member input and discussion on warranted topics before polling members for opinions. Document minority viewpoints as well as prevailing opinions.
 7. Provide summaries of CAC input in board packets, briefing materials or decision documents where applicable. Summaries should reflect the degree of CAC unanimity. Inform CAC of board decisions on discussion topics or recommendation topics previously reviewed by the council.
 8. Encourage board member attendance at CAC meetings. Include board members on CAC distribution list to allow the board to review CAC packets and to choose to attend meetings of interest.
 9. Include time on agendas for open discussion and suggestions for future agenda items.
 10. Brief new, incoming CAC members on their duties.
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ATTACHMENT

Energy Trust of Oregon Conservation and Renewable Advisory Councils Charter March 28, 2007

Purpose: The purpose of the Conservation and Renewable Advisory Councils is to advise the board and staff of Energy Trust of Oregon, Inc., regarding issues associated with Energy Trust energy efficiency and renewable energy policies and programs. The Councils will operate in accordance with this charter.

Council functions:

1. The Councils will:
 - (a) Review and discuss selected energy efficiency and renewable energy issues prior to Energy Trust decision-making to ensure that the Board and staff have the best available information on such issues;
 - (b) Help the Board and staff to identify alternative resolutions of such issues; and
 - (c) Help staff identify matters for board consideration.

Council composition:

2. The Councils will aim for a membership of 10-18 each, to keep Council logistics manageable. The Councils should have members with backgrounds from a broad range of interests and organizations.
3. Energy Trust staff will consult with individuals and organizations with experience and interest in energy efficiency and renewable energy and appoint Council members after obtaining the consent of the board Policy Committee.
4. Members who do not attend meetings for six months will be asked if they wish to continue membership; a year's non-attendance may be deemed withdrawal from the Council.

Council meetings and procedures:

5. The Councils will meet as needed, typically on a monthly basis.
6. Meetings shall be open to the public.
7. Members will be invited to suggest topics for meeting agendas. Agendas and background materials shall be made available to Council members and the public a week in advance if possible.
8. All Council members shall be provided an opportunity for comment; audience comments will also be solicited.
9. Staff shall prepare fair and balanced meeting notes and provide them to Council members and the Board. Notes will document Council consensus and/or majority and minority views.
10. The Councils will maintain operating principles.



Residential Pay For Performance Pilot

Conservation Advisory Council

April 9, 2019

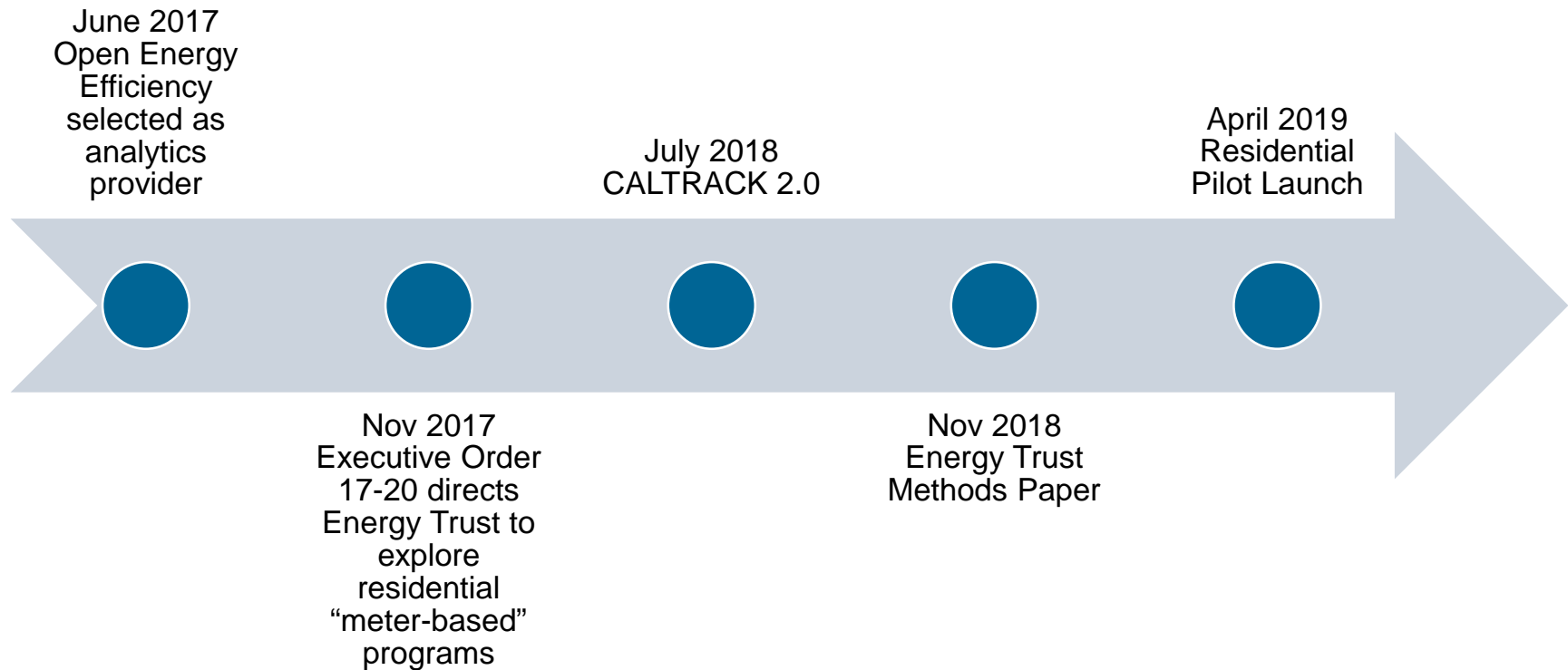




Key Takeaways

- Energy Trust launched a Residential Pay For Performance Pilot on April 1, 2019
- The pilot will operate for up to two years, with one additional year of measure and evaluation
- The pilot utilizes site-specific, weather normalized meter data to determine savings

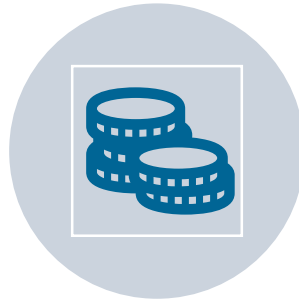
Oregon Residential Pay For Performance: Milestones



Oregon Residential Pay For Performance (P4P) Design Principles



SAVINGS CALCULATED
OFF 12 MONTHS
WEATHER NORMALIZED
BASELINE AND 12
MONTHS POST-
TREATMENT USAGE DATA



USE CALTRACK AS THE
FOUNDATION FOR
SAVINGS METHODOLOGY,
IMPLEMENTED THROUGH
OPEN EE PLATFORM



SAVINGS ARE MEASURE-
AGNOSTIC

Pilot overview



2 year limited deployment

Three aggregators

Portfolios based on dominant treatment type



Layered onto deemed savings

Savings + incentives paid on performance above deemed assumptions

Lifetime value established by deemed weighted average measure life



1 year performance period

Two enrollment periods per year

Comparison group analysis nets exogenous change



Contractor-facing market test

Three contractors act as aggregators of projects

Contractors have access to performance dashboards

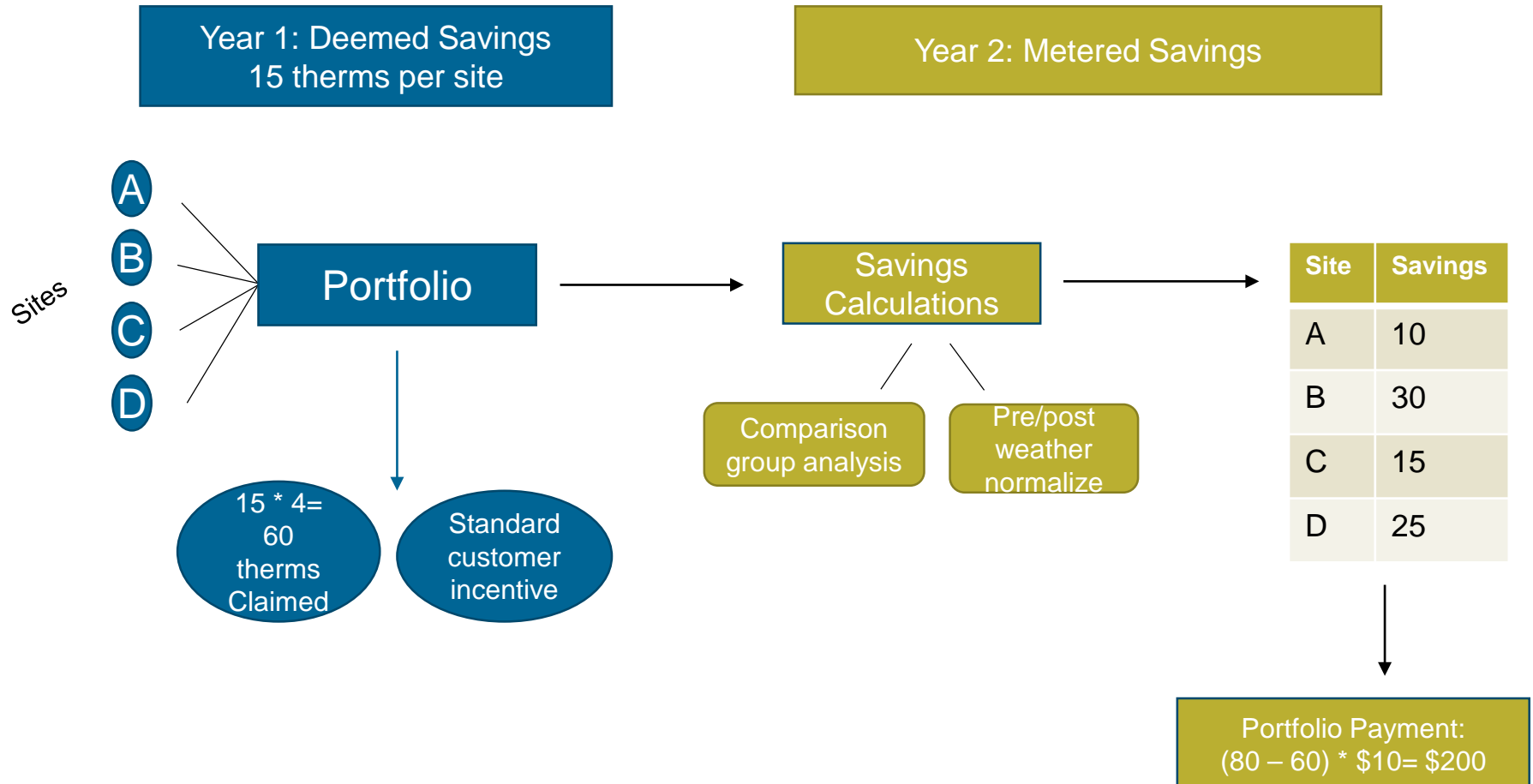


Limits and Exclusions

- Sites with solar
- Missing meter data
- Fuel switching
- Account changeovers
- “Synthetic baselining” or non-routine adjustments

Sample Portfolio Life Cycle

Example: deemed savings 15 therms per treatment, savings above deemed priced at \$10/therm



Pay for Performance Portfolio Types

Priority Measures



weatherization

- insulation
- windows



HVAC

- heating systems
- HVAC controls
- water heaters



whole home

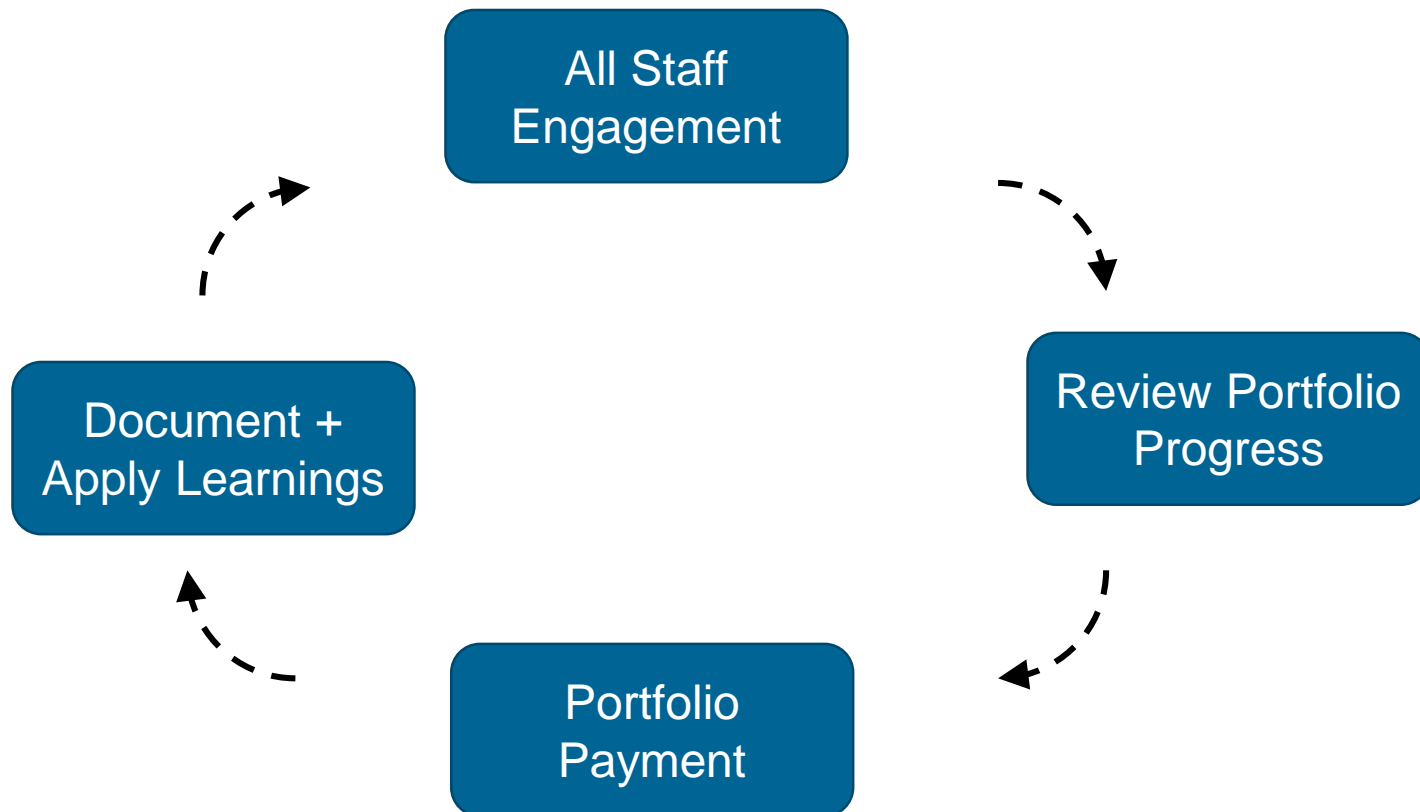
- HVAC + weatherization

Pay for Performance Portfolio Pricing

Portfolio		Incentive (\$)
Gas	Weatherization	\$10.97/therm
	HVAC	\$7.52/therm
	Whole Home	\$9.92/therm
Electric	Weatherization	\$1.44/kWh
	HVAC	\$0.75/kWh
	Whole Home	\$1.31/kWh

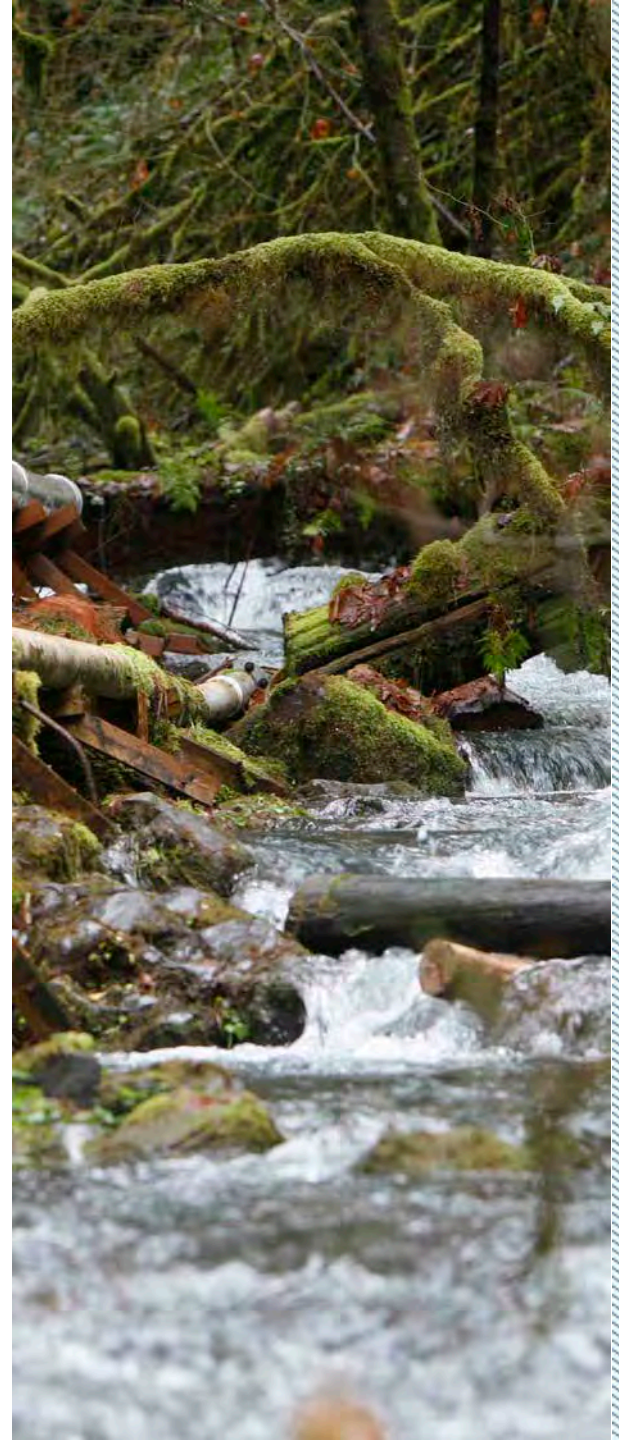
Per unit pilot program incentives screen at 1.3 on the utility cost test

Aggregator Engagement



Research Questions

- 1) Do P4P designs enable better targeting of interventions with variable outcomes?
- 2) Do P4P designs improve measure cost effectiveness?
- 3) Do P4P designs create new participation opportunities for lagging markets?
- 4) Is the market ready for a “pure” P4P approach with no guaranteed (deemed) incentives?
- 5) How persistent are the energy savings from P4P?



Risks, Unknowns and Considerations

- UCI data quality
- Account changeovers
- Non-routine events
- Suitability of incremental measures
- Forecasting yield





Thank you

Mark Wyman

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Industrial SEM: Developing a Streamlined Approach Conservation Advisory Council

April 10, 2019

Agenda

- Streamlined Strategic Energy Management (SEM) development
- Background
 - Production Efficiency's SEM offerings
 - First Year SEM evolution
- Streamlined SEM focus areas



Key Takeaways

- SEM is a significant contributor to industrial sector savings
- Evolving SEM offerings to reach and serve more customers, primarily small to medium
- There are 4 focus areas staff has identified for streamlining and is looking for CAC feedback on



Streamlined SEM

2019 Development Activities

- Currently collecting input and looking at implementation feasibility
- Identified 4 focus areas for streamlining:
 - Role compression
 - Reduce on-site time
 - Streamline modeling
 - Streamline completion reports
- Looking to test streamlined SEM in Q4 2019 with 8-10 sites

Industrial SEM Background

Industry & Agriculture Sector

Production Efficiency Program

Custom Track
(Custom PDCs)

Custom Analysis
(ATAC)

Strategic Energy
Management
(Coaches)

Capital Upgrades
Retrofits
Custom O&M

SEM Practices
Energy Intensity Modeling
Operations & Maintenance

Streamlined Track
(Standard PDCs)

Lighting Tool
(Trade Ally and
Vendor Network)

Lighting

Prescriptive Rebates
Calculator Tools
(Trade Ally and
Vendor Network)

Compressed Air
Greenhouse
Irrigation
HVAC

Strategic Energy Management

- Holistic approach to improving energy performance over time
- Focused on organizational culture, employee engagement, and implementing no- and low-cost projects (O&M and behavioral based projects)
- Training, coaching and technical support and cash incentives
- Savings are claimed using a top-down energy intensity model



Production Efficiency SEM Suite of Offerings

- **First Year SEM**

- Duration: 14 months, one-time enrollment
- Format: Cohort model, 1:1 is also available
- Material Covered: Intro to SEM, standardized curriculum

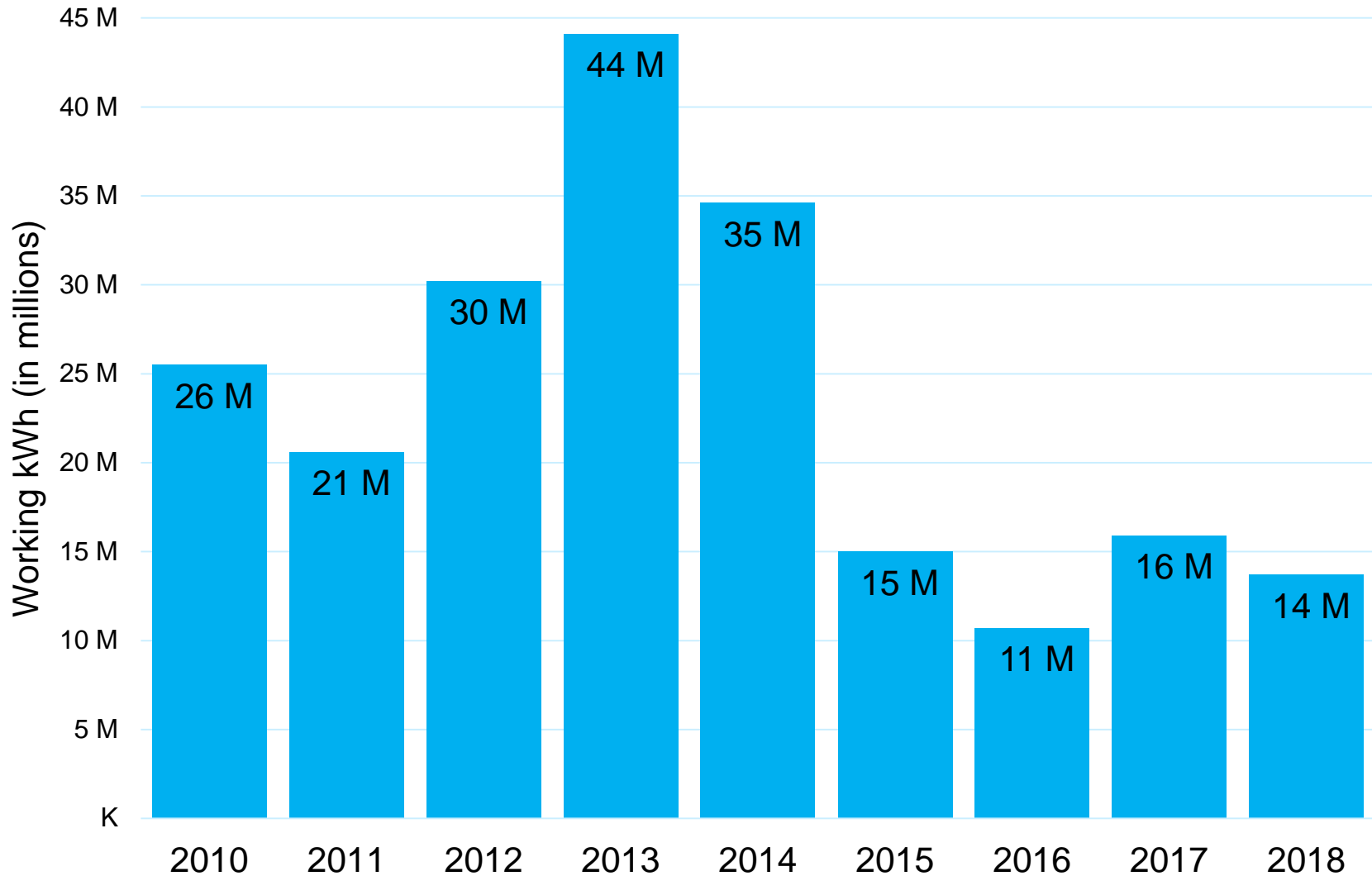
- **Continuous SEM**

- Duration: 12 months, annual renewal
- Format: 1:1, planning to test a cohort element
- Material Covered: Standard elements of energy management, but customizable for the site's needs



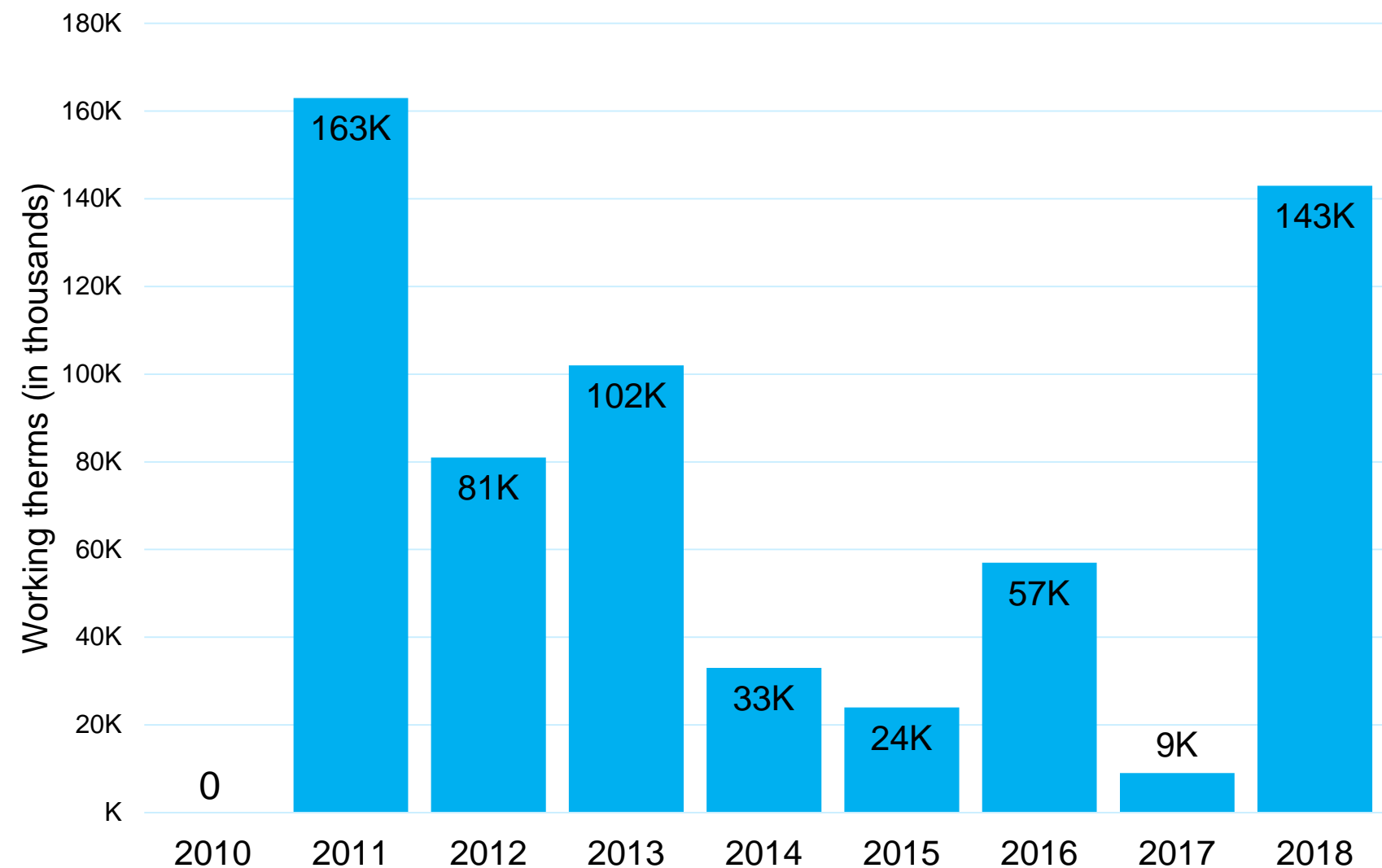
SEM Savings Over Time

Electric (Working Savings, in Millions)



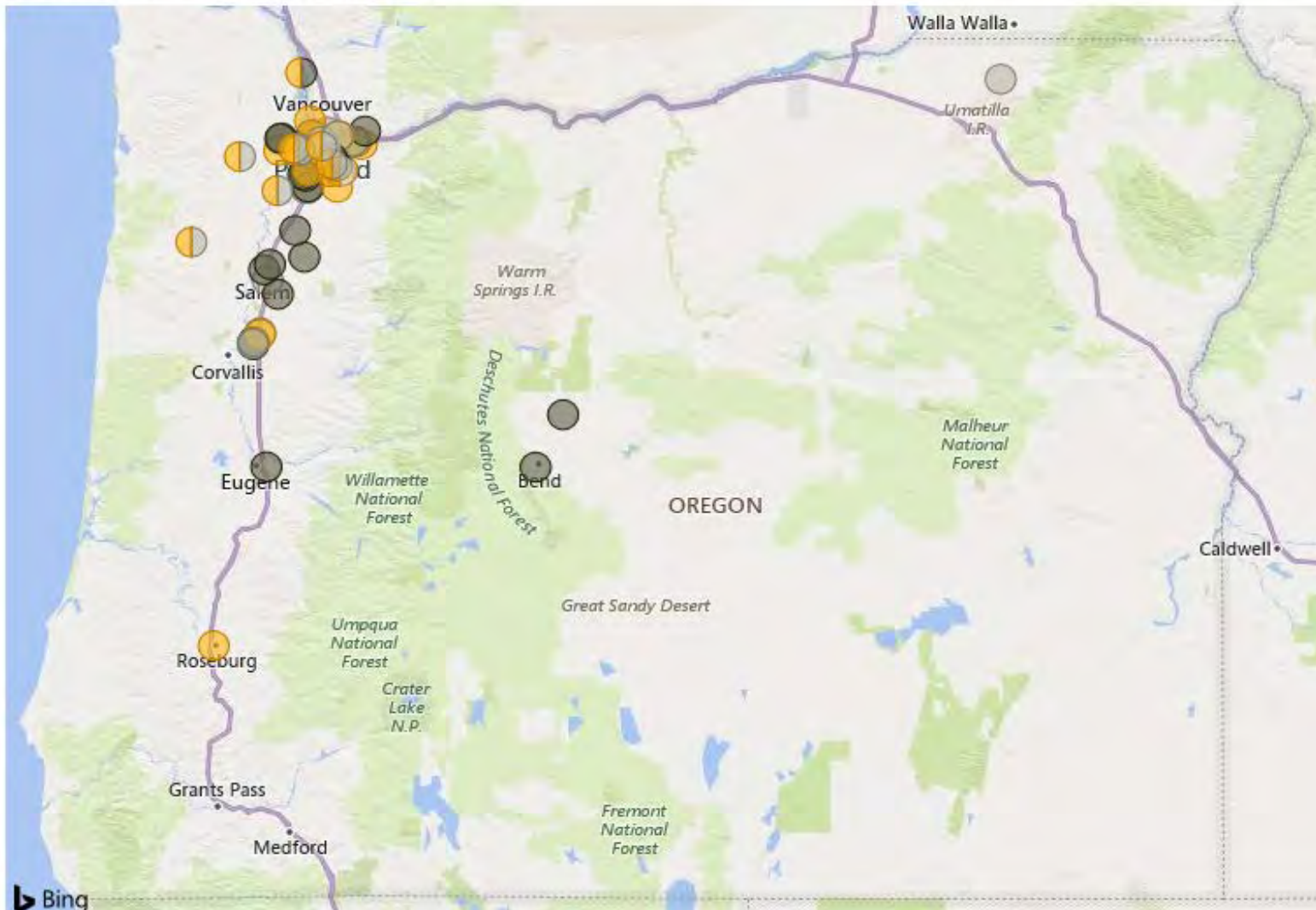
SEM Savings Over Time

Gas (Working Savings, in Thousands)



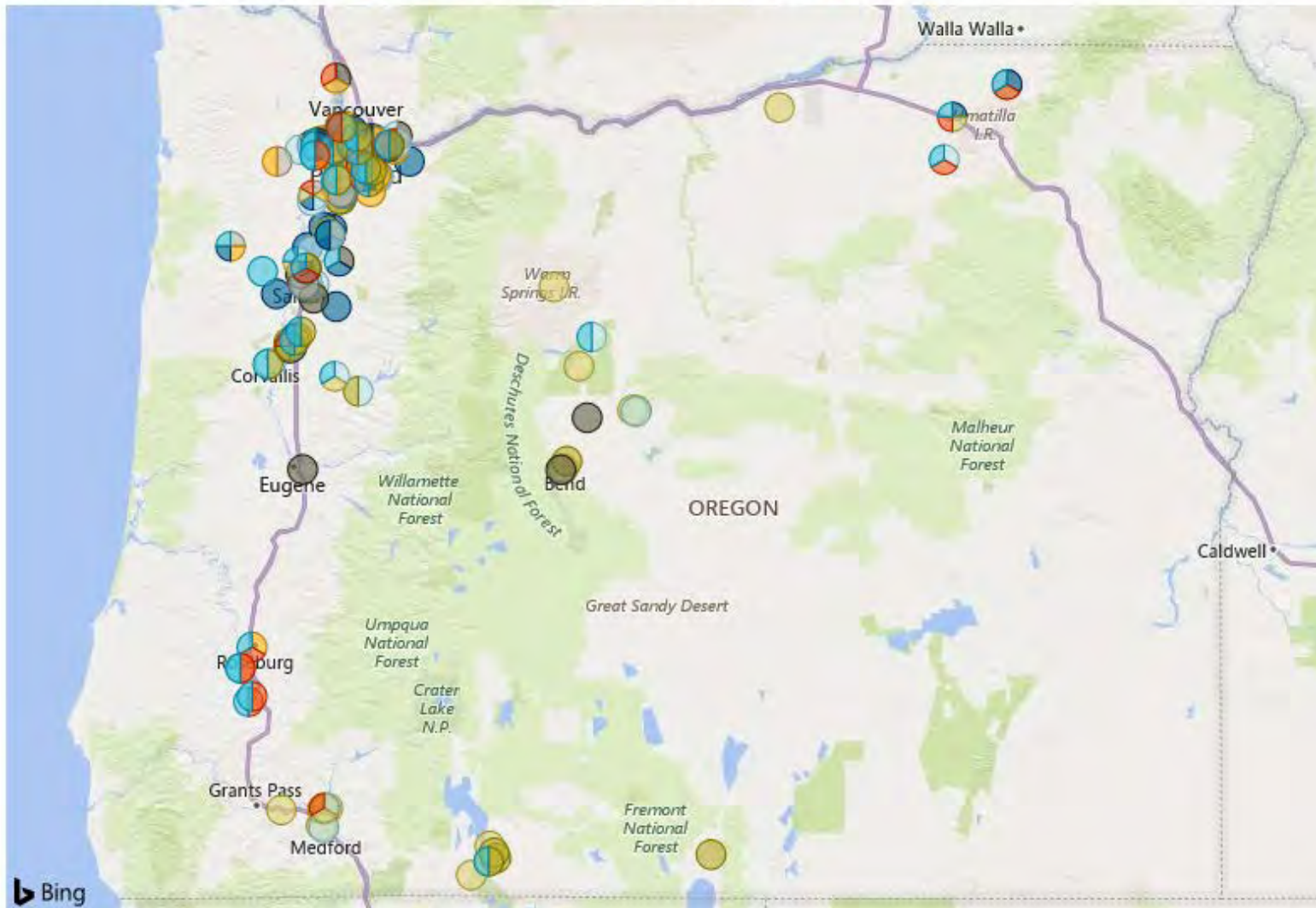
Industrial SEM Participation 2009-2012

Year ● 2009 ● 2010 ● 2011 ● 2012

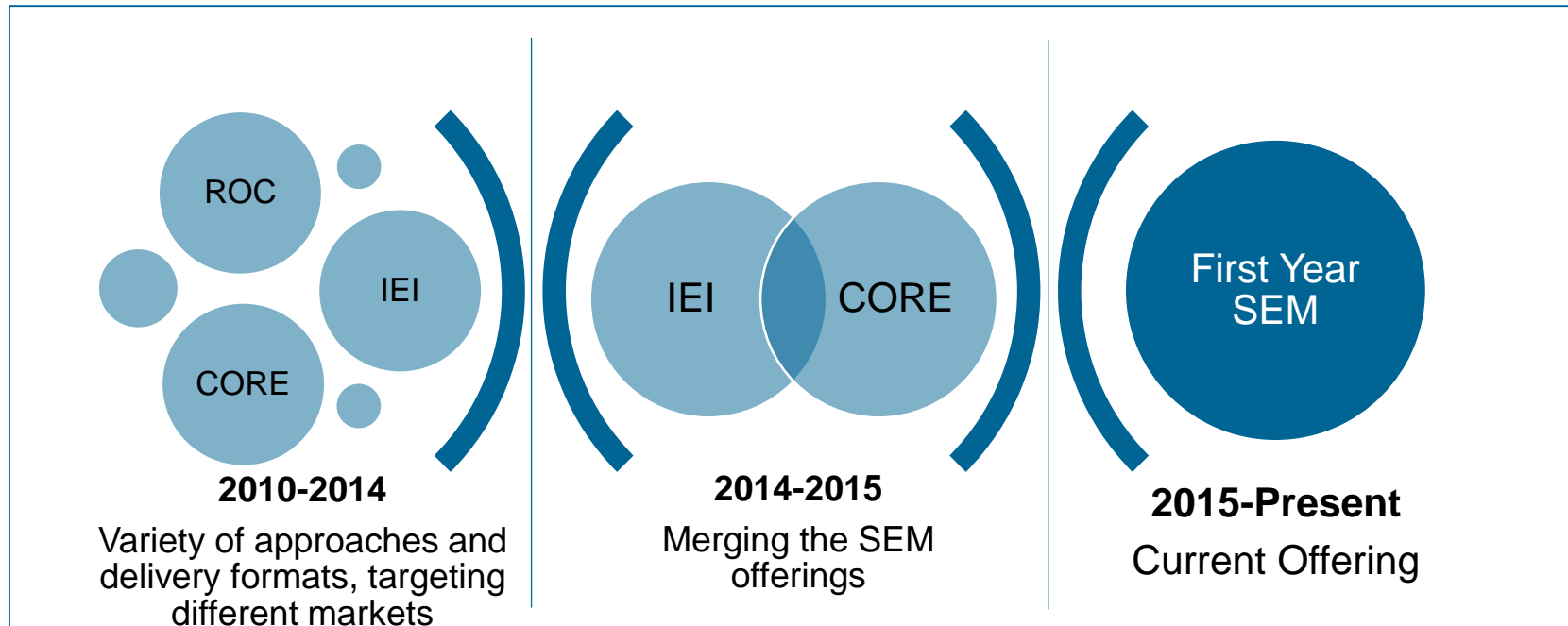


Industrial SEM Participation 2009-2018

Year 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018



Evolution of First Year SEM Offering



Acronym Legend

- CORE - CORE Improvement
- IEI - Industrial Energy Improvement
- ROC - Refrigeration Operator Coaching

First Year SEM Outcome

- Anticipated:
 - Increased enrollment numbers, especially small and medium participants
 - Wider delivery throughout service territories
 - More gas savings
- Actual:
 - First Year enrollment has declined
 - Recruitment is still focused on obtaining anchor sites before extending enrollment to smaller sites
 - Delivery is still focused in urban areas
 - No change in gas savings

Focus Areas for Streamlining

Focus Area 1 – Role Compression

Current State:

- Site required to dedicate staff to serve three distinct SEM roles
- And send a minimum of 2 people to each workshop

Participation Barrier:

- Smaller sites have less personnel, they tend to wear multiple hats

Proposed Solution:

- Allow for greater flexibility to compress roles
- Reduce requirement to minimum of 1 person at each workshop

Monitoring:

- Track use of this option; workshop attendance; and engagement completion

Focus Area 2 – Additional Coaching

Current State:

- Beyond official on-site activities, SEM Coaches are expected to maintain monthly contact

Delivery Barrier:

- More enrollments with smaller sites, with more geographic diversity will become more costly to reach sites individually

Proposed Solution:

- Maintain monthly contact via group call format with multiple sites

Monitoring:

- Track use of this option; call attendance and frequency; and engagement completion

Focus Area 3 – Energy Intensity Modeling

Current State:

- Energy intensity models used to claim savings, alternative modeling methods are used

Delivery/Participation Barrier:

- Savings tend to come from 3-5 projects
- Data quality issues
- Models aren't always possible

Proposed Solution:

- For smaller sites, pivot to an alternative method earlier

Monitoring:

- Track use of this option; hours spent modeling

Focus Area 4 – Completion Report

Current State:

- At the end of every SEM engagement, a site receives a lengthy completion report

Delivery Barrier:

- Lengthy completion reports are resource intensive and are a barrier to scaling

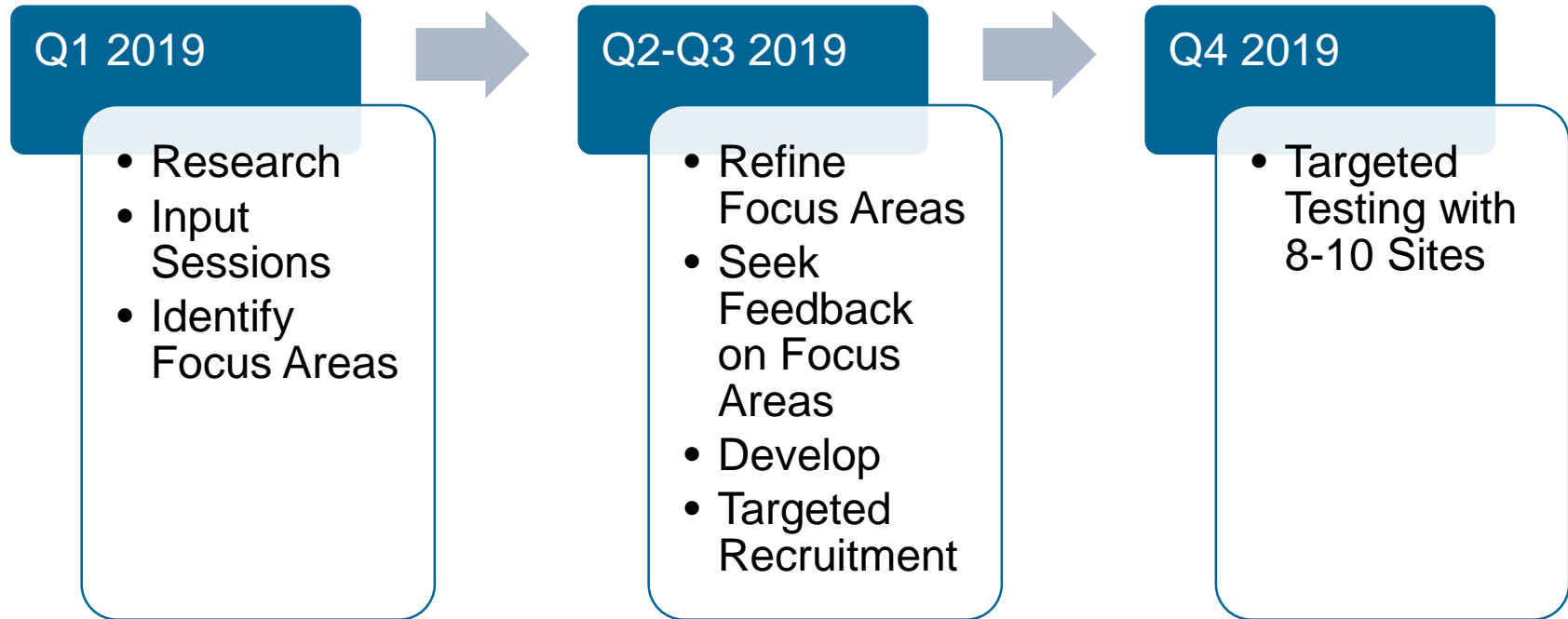
Proposed Solution:

- Pare down the completion report to the essentials
- Move to have the modeling details live in the modeling tool

Monitoring:

- Survey report audiences; track effort spent drafting and reviewing

2019 Streamlined SEM Development Timeline





Thank you

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Existing Multifamily Program Assessment

Conservation Advisory Council

April 10, 2019



Introduction

- What is the Multifamily Program Assessment?
- Program overview
- Objectives
- Challenges
- Timeline
- Questions

Customer segments

- Market rate housing
- Affordable housing
- Assisted living
- Campus living
- Condos & townhomes
- Homeowners Associations
- Individual unit owners
- Tenants





Program offerings

- Direct-install of instant-savings measures (LEDs, water devices, advanced power-strips)
- Incentives for standard prescriptive measures, common area lighting, custom savings opportunities, distributor buy-down
- Technical services

Objectives

Maintain a resilient and robust program with a suite of cost-effective offerings that will meet the diverse needs of multifamily customers in Energy Trust service territory.

- Ensure offerings reach and serve all multifamily customers
- Decrease market confusion and improve customer and contractor experience
- Explore non-energy benefits and cost-effectiveness approaches
- Increase participation rates by all multifamily customer segments



Program challenges

- Measure-level savings reductions
- Future measures at risk
- Market saturation
- Increased cost of acquisition

Project timeline

Phase 1: Exploration	Phase 2: Options/Impacts	Phase 3: Concepts & Recommendations
January 2019 through March 2019	April 2019 through June 2019	July 2019 through January 2020
<ul style="list-style-type: none">• Working sessions<ul style="list-style-type: none">• Customer segments• Resource potential• Cost-effectiveness• Program delivery models• Vision planning	<ul style="list-style-type: none">• Continued working sessions• Stakeholder engagement• Savings resource planning• Develop and prioritize early concepts	<ul style="list-style-type: none">• Present early concepts to CAC, Board & other stakeholders• Determine changes for program optimization in 2020• Present recommendations for program updates and structure for 2020 rebid



Questions?

Kate Wellington

Multifamily Program Manager

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2020-2024 Strategic Plan Development



Discussion Outline

- Process to Date
- Draft Plan Outline
- Next Steps

Process to Date

Who's involved in our strategic planning?

- Board Strategic Planning Committee with Internal Staff Strategic Planning Team
- Board of Directors
- Engagement with OPUC, utilities, CAC, RAC, staff, stakeholders
- Outreach to stakeholders and general public

+ Board and staff are taking a collaborative approach to the development of the plan

Approach for the 2020-2024 Plan

Approve
Plan

Draft
Plan

Building
Blocks

**Kickoff
at the May 2018
Strategic Planning Workshop**

**Next milestone: May 2019
Strategic Planning Workshop
May 16-17 at Energy Trust**

Approach for the 2020-2024 Plan

Approve
Plan

Draft
Plan

Building
Blocks

Draft Plan Outline

Draft Plan Outline

1. Vision and Purpose
2. Organizational Values
3. Context
4. Role
5. Focus Areas
6. Strategies
7. Metrics of Success
8. Signposts

Next Steps

Upcoming Discussions on the Draft Plan

- Energy Trust All Staff Engagement on Organizational Values **April 17**
- Meetings with Advocate Groups **April 17**
- Strategic Planning Committee **April 22**
- Board Workshop **May 16-17**
- CAC and RAC Draft Plan Review **May 22**
- Draft Plan Public Outreach **Summer 2019**
- Approve Final Plan (expected) **October 2019**

Questions



Thank You

Internal Staff Strategic Planning Team

Mike, Hannah,
Cheryle, Fred, Debbie,
Spencer, Lizzie, and
John



Conversion to Gross Savings Status Update

4/10/19 Conservation Advisory Council

Catching up

- Net adjustment applied primarily to retrofit, behavioral and add-on measures
 - e.g., Add wall insulation to existing building, SEM or add control functions
- For new construction and replacement equipment (e.g., replace failed water heater) we adjust for market effects by tracking and claiming savings above market efficiency levels
 - No plans to changes to this
- In 2018 staff proposed to set goals and track savings in terms of “gross” kWh and therms
 - Support from CAC ([June meeting](#)), board Evaluation Committee, Board and OPUC (with conditions)



OPUC: Clarify how you will decide about measure exit

- Net adjustment rarely the primary driver to change or exit incentives
- We will continue fast feedback survey and ask about influence, but not creating a number that, by agreement, is no longer meaningful
- The process brings together all data, and considers direct market goals and influence, and implications beyond the single measure
- CAC involved for measures where they care the most
- Others involved as appropriate

Preparing for the Change

- Finalizing description for OPUC
- Planning changes to IT and reporting systems
- Preparing to build up savings forecast for 2020 budget in “gross” terms
- Will report net for 2019, then discontinue





Questions and Comments

Fred Gordon

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Evaluation

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Overview of 2020 Avoided Cost Update for Oregon

Conservation Advisory Council

April 10, 2019

Agenda

- Key takeaways
- What are avoided costs?
- High-level overview of the results of this update
- Electric details
- Gas details

Key Takeaways

- Avoided costs are the primary component of value in the numerator of the Benefit/Cost ratio we use to screen measures and programs for cost-effectiveness
- Energy Trust routinely updates avoided costs to reflect the current value of energy savings in relation to utilities' supply side resources
- Avoided cost forecasted values went up for both electricity and gas for the first time in a while

What Are Avoided Costs?

- Avoided costs reflect the forecasted value of energy savings in relation to supply side resources as determined by each utility's integrated resource planning
- Stream of values over the next 20 years extended to cover the measure lives of the most long lived measures
- Different end uses have different values based on whether they save during utility peak periods
- They are the primary component of value in the numerator of the Benefit/Cost ratio we use to screen measures and programs for cost-effectiveness

What Are Avoided Costs? (continued)

- Energy Trust routinely updates avoided costs to reflect the current value of electric and gas energy efficiency
- We just finished updating avoided costs for 2020 planning
- The last time we updated avoided costs for Oregon was for 2018 planning
- We will update avoided costs again in Fall/Winter 2019/2020 for 2021 planning

Components of Avoided Costs

1. Price of power or gas
2. Extra cost to provide it at peak times
3. Cost of systems to deliver it
4. Benefits of reduced risk of extreme costs
5. Carbon compliance costs
6. 10% regional power act credit which gives energy efficiency an extra boost and covers unknowns

Outcomes of the 2020 Avoided Cost Update

- Avoided cost forecasted values went up for both electricity and gas for the first time in a while
- Capacity values and forward prices forecasts went up for both electricity and gas
 - Increase in capacity value reflects refinement of methodology to quantify capacity values and growing capacity constraints for gas
 - Increase in forward prices reflects higher price forecasts to purchase/generate electricity and gas

Electric Details

- On average 2020 electric avoided costs increased by 8% compared to 2018 values when weighted by 2018 achievements
- Refined Generation Capacity Deferral Value calculation methodology
 - End uses that coincide with utility defined peak have higher values
- Values up for most end uses with the exception of end uses that don't save much during peak times when capacity is more constrained
 - Increases of 4% to 285% (for air conditioning!)
 - Outdoor lighting is down 6%

Gas Details

- 2020 gas avoided costs increased for all gas end uses compared to 2018 values
 - For flat load profiles increases of 13-18%
 - For residential and space heating measures increases of 25-36%



Questions?

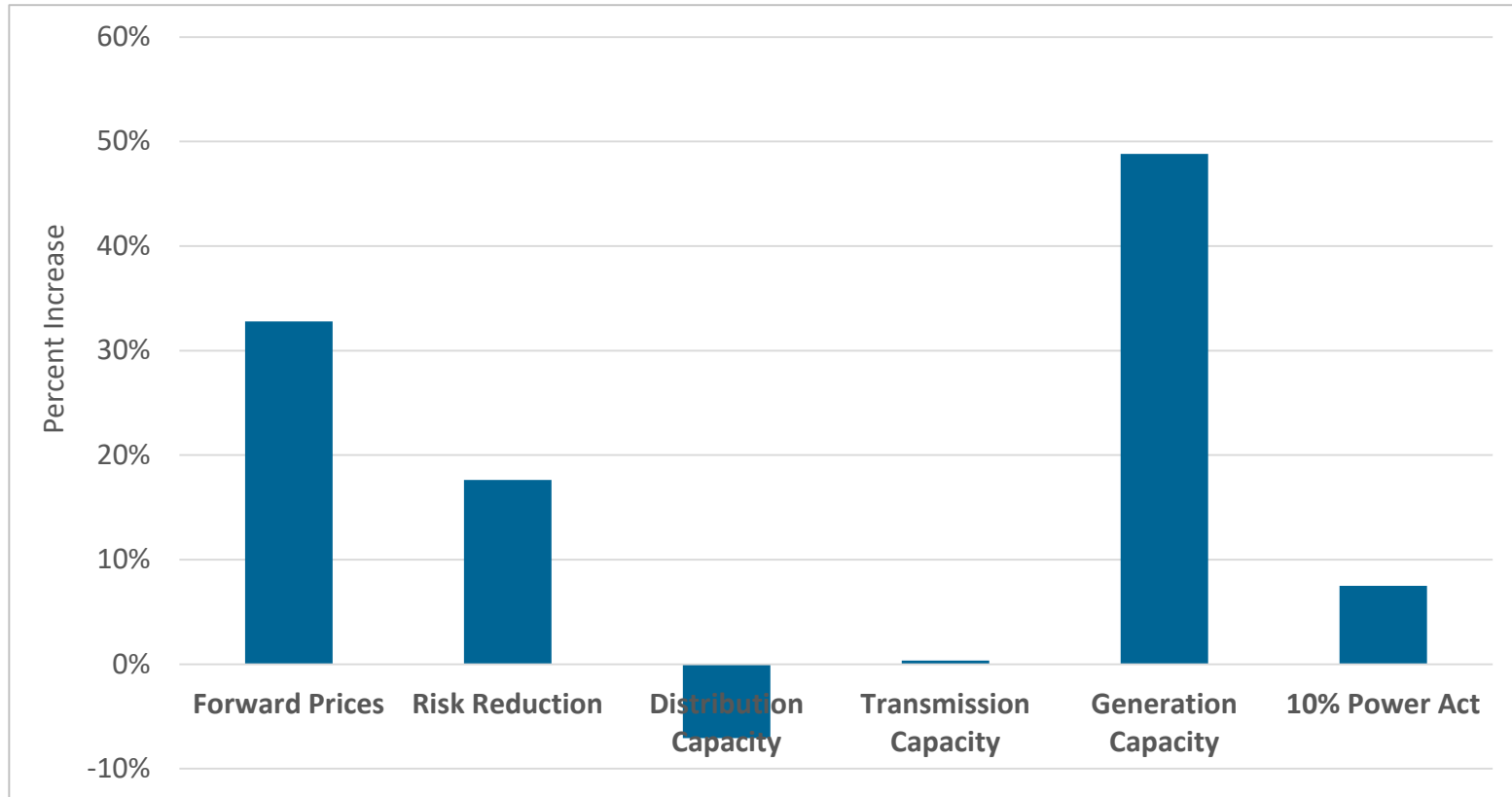
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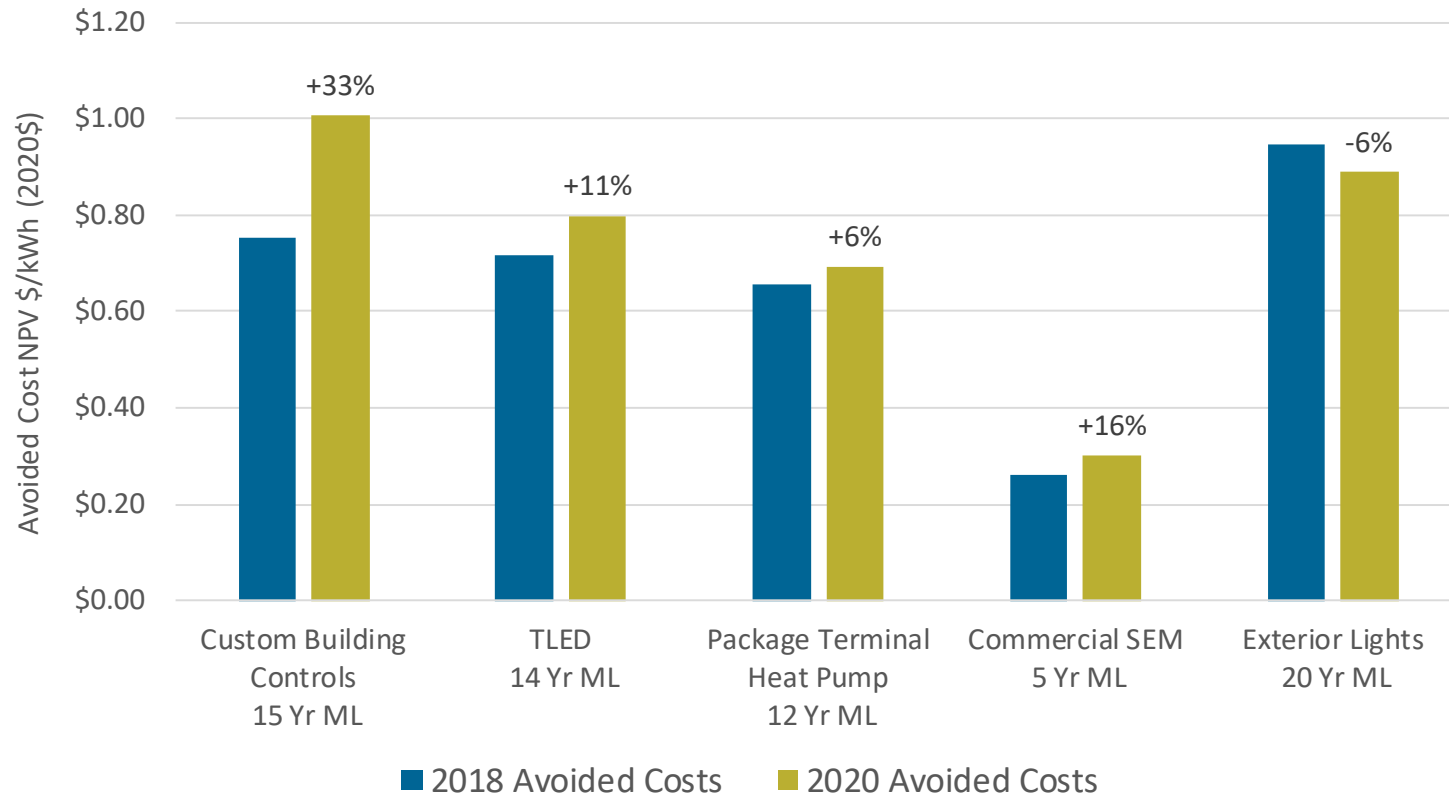
Spencer.Moersfelder@energytrust.org

Supplementary Slides

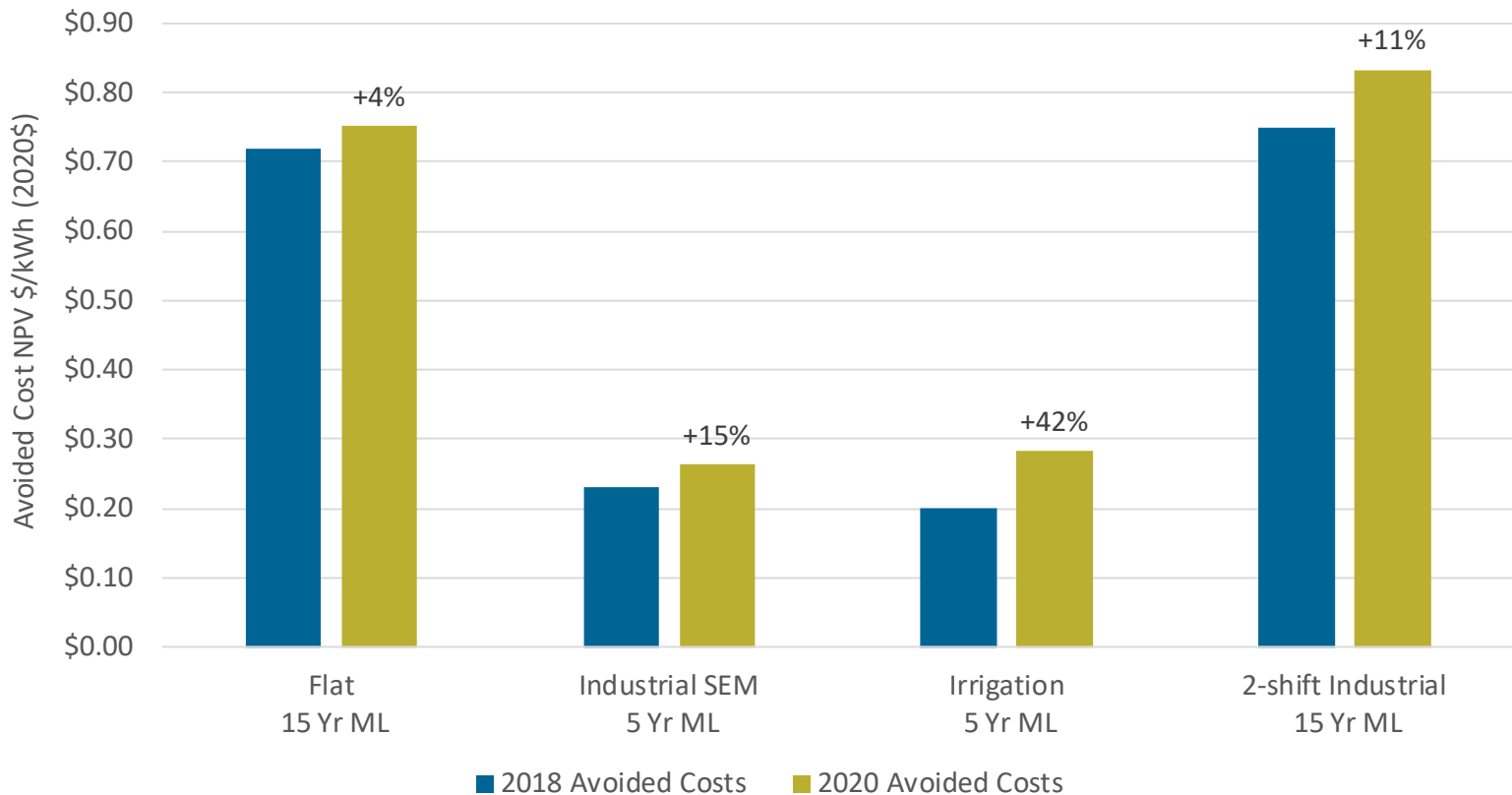
Contribution of Each Component to Overall Weighted Average Electric Avoided Cost Changes



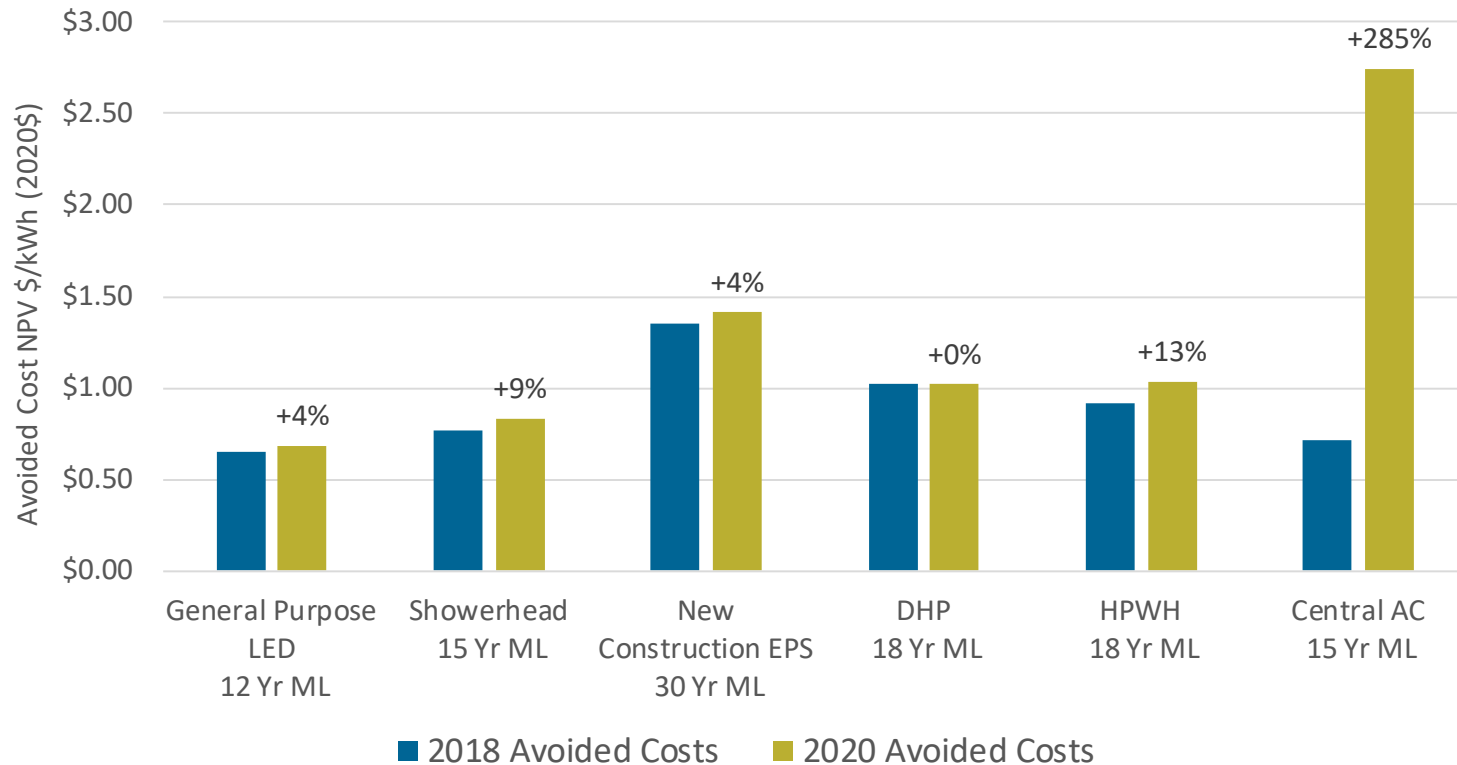
Commercial Avoided Cost Comparison of Representative Electric Measures



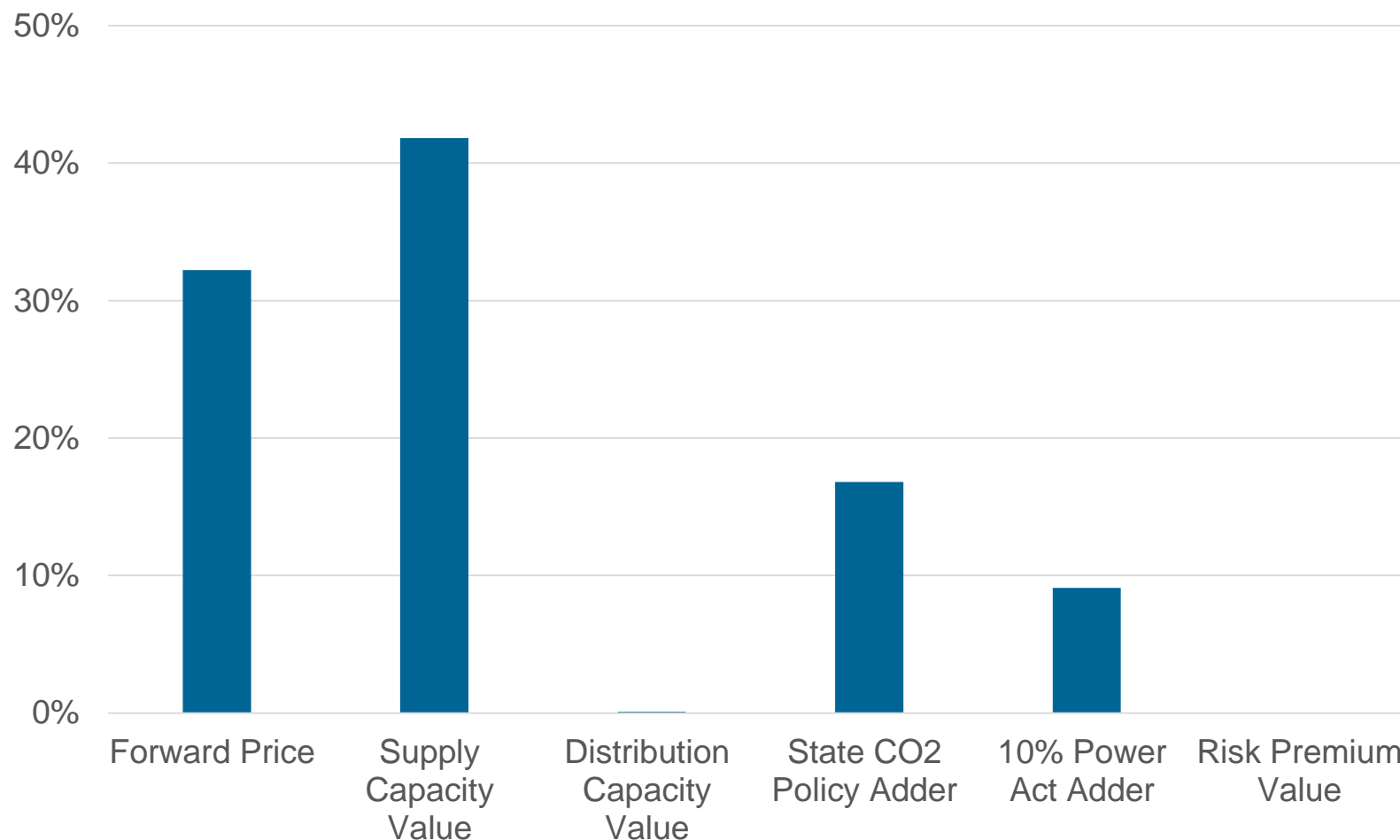
Industrial Avoided Cost Comparison of Representative Electric Measures



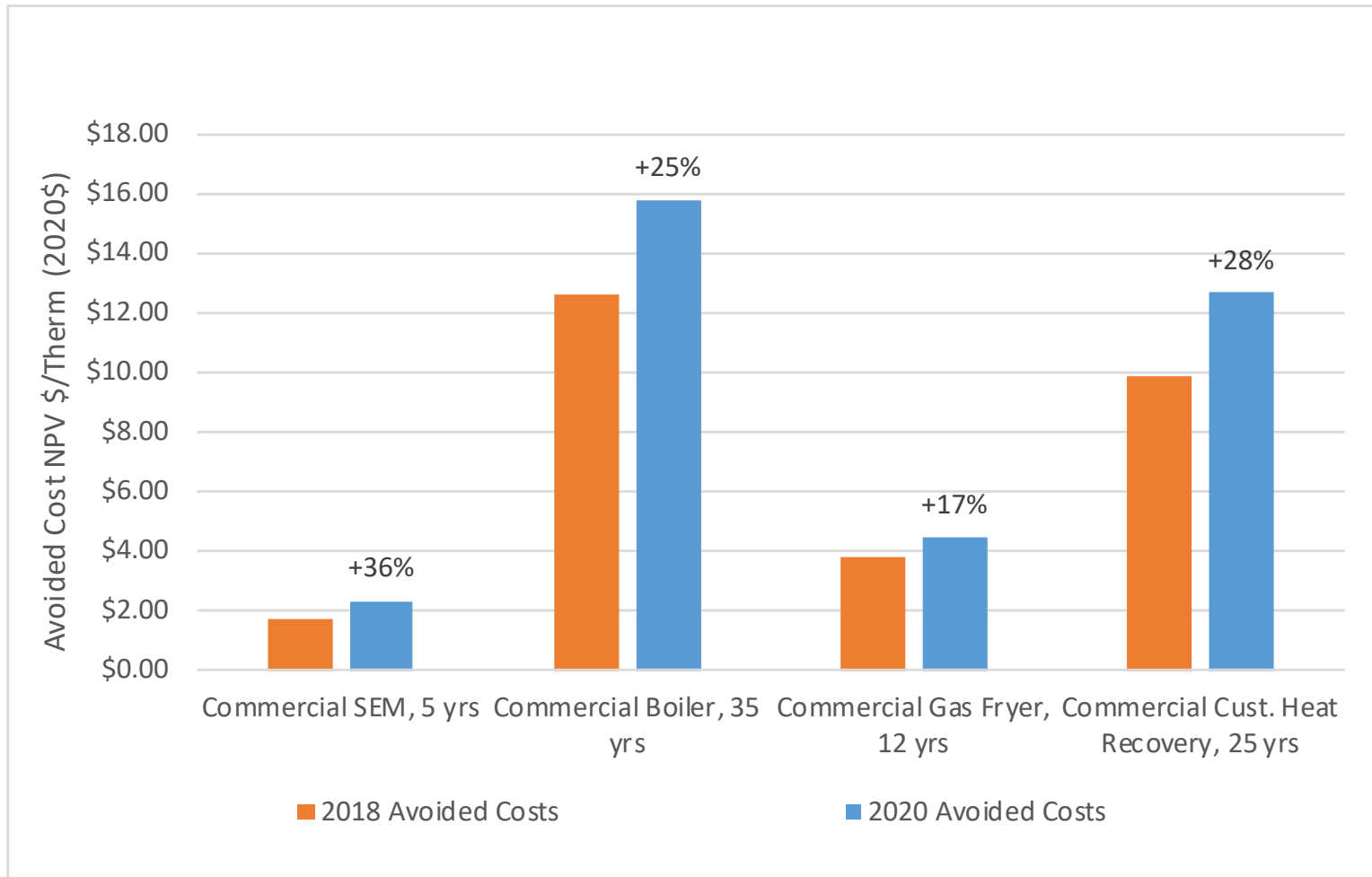
Residential Avoided Cost Comparison of Representative Electric Measures



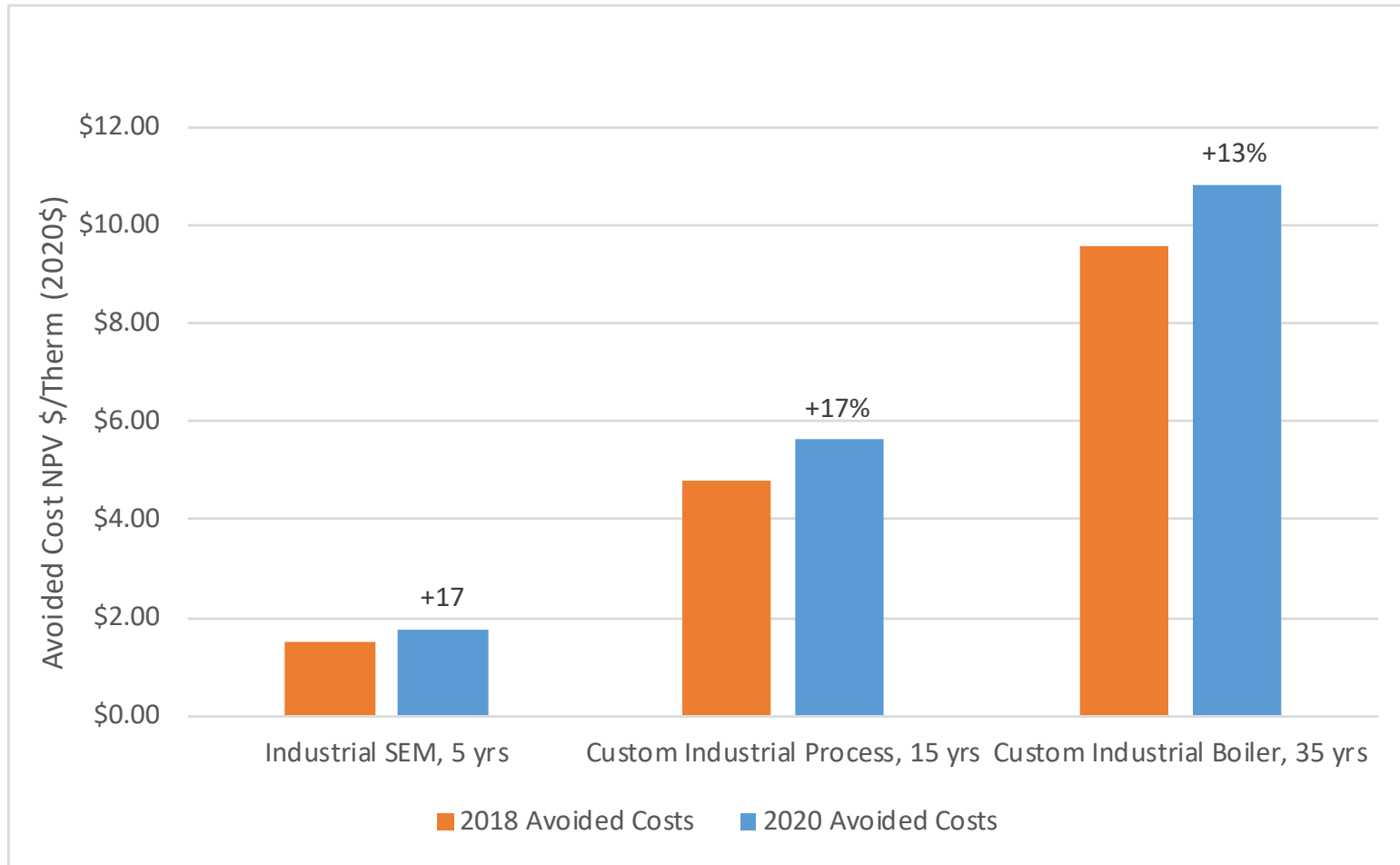
Contribution of Each Component to Overall Average Gas Avoided Cost Changes



Commercial Avoided Cost Comparison of Representative Gas Measures



Industrial Avoided Cost Comparison of Representative Gas Measures



Residential Avoided Cost Comparison of Representative Gas Measures

