Agenda

Conservation Advisory Council
Friday October 21, 2016 1:30 pm – 4:00 pm

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

1:30 **Welcome and Introductions**
New CAC members: Allison Spector, Cascade Natural Gas; Lisa McGarity, Avista; Tony Galluzzo, BOMA

1:45 **Old Business and Announcements**
Sept CAC minutes

1:50 **2017 Residential Changes** *(discussion)*
Staff will discuss proposed discontinuation of appliance recycling and the end of incentives for CFLs.

2:15 **2017 R1 Budget Overview** *(discussion)*

3:30 **Public comment**

3:45 **Adjourn**

The next scheduled meeting of the CAC will be Wednesday November 16, 2016.

Conservation Advisory Council Meeting Notes

September 7, 2016

Attending from the council:
Jim Abrahamson, Cascade Natural Gas
JP Batmale, Oregon Public Utility Commission
Warren Cook, Oregon Department of Energy
Julia Harper, Northwest Energy Efficiency Alliance
Wendy Gerlitz, Northwest Energy Coalition
Kari Greer (for Don Jones), Pacific Power
Garrett Harris, Portland General Electric
Andria Jacob, City of Portland
Jess Kincaid (for Brent Barclay), Bonneville Power Administration
Don MacOdrum, Home Performance Guild of Oregon
Tyler Pepple, Industrial Customers of Northwest Utilities

Attending from Energy Trust:
Mike Bailey
Tom Beverly
Mike Colgrove
Amber Cole
Kim Crossman
Fred Gordon
Scott Leonard
Spencer Moersfelder
Jay Olson
Kate Scott
Kenji Spielman
Mark Wyman

Others attending:
Audrey Burkhardt, NW Natural
Scot Davidson, Enhabit
Carolynn Farrar, NW Natural
Sara Fredrickson, CLEAResult
Elaine Prause, Oregon Public Utility Commission
Allison Spector, Cascade Natural Gas

1. Welcome and introductions

Kim Crossman convened the meeting at 1:30 p.m. The agenda, notes and presentation materials are available on Energy Trust's website at: www.energytrust.org/About/public-meetings/CACMeetings.aspx.

2. Announcements and old business

Julia Harper provided corrections to the July meeting notes.

Jim Abrahamson: I will be retiring in early 2017. Allison Spector is here and will take my place on the Conservation Advisory Council. It has been a pleasure to serve since 2009.

Kim: Tony Galuzzo of McKinstry, representing the Building Owners and Manager Association, is expected to join the committee after board approval. Someone from Avista may join us soon.

3. Welcome new executive director

Mike Colgrove: I am on my fourth week of transition at Energy Trust. I spent the last 20 years in New York, most recently at New York State Energy Research and Development Authority, where I directed the multifamily program. I have experience with low- to moderate-income programs. I also have experience with the commercial sector in New York City and statewide. With NYSERDA, I learned to navigate the urban and rural divide because we served customers throughout the state. The experience will translate nicely. I'm blessed with having Margie's help

during the transition and with inheriting a successful organization. I'm looking forward to learning and working with all of you.

Tyler Pepple: What is your vision for Energy Trust?
Mike: As the organization is already successful, my first goal is to learn and understand where we are now. There are numerous challenges we face in the future. The environment around us has changed, and we need to figure out our role. Oregon and the Pacific Northwest are in a very unique position nationally. There is a wonderful coming together of political views, industry and regulators. Citizens are extremely receptive to our message. It creates a great opportunity here. The vision is really to see what the next level is and bring Oregon to the forefront nationally. I would like to see how much farther we can go.

4. Combined heat and power incentives
Kim: We previously came to Conservation Advisory Council in March 2015 with a proposal to increase fossil fueled combined heat and power (CHP) incentives from 8 cents per kilowatt hour to be equal with all other custom incentives. Members largely supported this with the notable exception of the electric utilities, who expressed concerns about fossil fuel fired CHP projects for Energy Trust.

> We have treated CHP as electric efficiency since 2006 as long as it's cost effective, used on site and highly efficient. This approach aligns with Oregon Public Utility Commission direction. CHP projects can participate in Existing Buildings, New Buildings, Multifamily and Production Efficiency programs.
>
> When we launched the CHP incentive offering, the perceived higher performance risk led us to set the incentive at half of the incentive level for custom projects. We worried savings from CHP projects might not have persistence. The standard custom incentive is now 25 cents per kWh, up from 15 cents per kWh in 2006, but the CHP incentive was never revisited. We completed one CHP project since 2006, a megaproject at Oregon State University.
>
> In March 2015, we proposed that the incentives for CHP be raised to match custom electric project incentives. We have discussed this further with electric utilities to understand and address concerns. In the NW Natural CHP docket, questions were raised. The OPUC addressed those questions in its response to the docket. The OPUC reaffirmed that Energy Trust can support CHP as electric conservation. Based on that direction, we are ready to move forward.
>
> The OPUC asked how we will limit this offering so that we will not exhaust funds supporting CHP projects. First, we will limit the offer to only high efficiency CHP projects that use at least three quarters of the heat. That eliminates Public Utility Regulatory Policies Act projects. Second, a CHP project must be cost-effective and pass the same tests as any other custom energy efficiency project. Third, anything under consideration for over $500,000 in incentives would be considered a megaproject. We have controls and extensive review on that type of project, including board review and approval. Finally, we will limit the number of new fossil CHP projects to five. Once we have reached five projects, we will stop to assess outcomes, engage with the public and determine next steps. In this way, CHP would be treated like a pilot.

Warren Cook: The combined efficiency of 65 percent relates to standalone electric production in what way?

Kim: That was me doing a quick conversion for illustration purposes. It's a net heat rate calculation and we've historically matched up with Oregon Department of Energy. The actual number was negotiated with the OPUC and utilities in 2006 and reviewed by CAC in March of 2015.
Warren: The thing that helps bring it together is that conservation and efficiency are the same thing in this case. Producing electricity potentially has the same value as conserving it. It's not a reduction in energy use, but they are using what they produce.

Tyler: Do you have five projects in mind?
Kim: No. We have been on hold for the last year and a half while under discussions with utilities. We will now start working on the CHP pipeline in earnest, but we are unlikely to see anything complete in the next two years. CHP projects take two to four years to complete. In reality, we are unlikely to reach five projects in five years. Gas fired CHP remains marginal in Oregon. Only certain applications will work. Where they do happen, it's a powerful savings tool.

Garrett Harris: PGE does appreciate this approach.

Kari Greer: How will you recruit projects?
Kim: We aren't marketing for CHP projects. Customers bring up CHP as we are discussing projects at their site.

Tyler: What would the incentive be?
Kim: We propose that each program use its current custom incentive level.

Garrett: Do you believe CHP projects will be megaprojects and therefore probably get less than 25 cents based on that?
Kim: Most will fall below that range.

Tyler: How does the per kWh incentive work? How is it measured?
Kim: We have a negotiated baseline that is the grid heat rate. It's the value of the heat converted into kWh. We incent the difference between that rate and the normal heat rate.

Warren: We may want to revisit that chart. Is the grid baseline the same by utility?
Kim: Yes, and we're not recommending any changes. Are you suggesting we don't move forward? The baseline hasn't changed for us, and I would be happy to walk through it with everyone. The incentive change came about because at 8 cents per kWh, the payback was 9.5 years and we covered 13 percent of project costs. For other custom projects we have learned that we need to cover 40 percent on average. With the new incentive, payback is driven down to 6.5 years, and other incentives bring it below 5 years.

Garrett: With no other incentives and yours at 8 cents, the payback is 9.5 years?

Warren: I think walking through an example project would help give us more comfort.
Amber Cole: I suggest we move on and go forward with the changes. We can bring more information back at another meeting.

Wendy Gerlitz: Thank you all for all the work you've done on this and being responsive.

5. Multifamily incentive structure
Kate Scott: This is a follow-up on an exercise at the July Conservation Advisory Council meeting to help us improve multifamily incentive structure. We have addressed the priorities and concerns. Multifamily has some complex eligibility requirements for some measures. We think

that the simplifications will help boost participation. This is related to a limited number of measures and won't have a big impact. The changes will go live January 1.

Don: You mentioned the ownership layer will be removed. That means there were limitations that units needed to be individually owned. Was that the only limitation?
Kate: We have found the ownership layer to be confusing to customers. For example, a home owners association doing measures in a condo building may have had different incentives for some measures than an individual condo owner. Individual ownership created some limitations and confusion. In 2017, we intend to customize outreach to different segments instead of building it into the incentive structure.

Don: With townhomes, what's the difference between your description and code description?
Kate: Code defines a townhome as a side-by-side structure with exposed surfaces, including ceiling and floor. It's easier to understand a townhome as a place without a unit above or below.

JP Batmale: Thanks for bringing this to the council. It's a good use of time.
Kate: The feedback we got from Conservation Advisory Council improved this proposal.

6. 2017 residential incentive adjustments
Scott Leonard presented residential incentive changes.

Julia: What are the two levels of incentives?
Scott: They represent different tiers of heat pump water heaters. That's consistent with this year's incentives.

Kim: This relates to something Garrett provided feedback on last year.
Garrett: Customers might undersize units or go with electric resistance instead. That was the concern.
Scott: This will avoid it.
Julia: We are happy to see this because we've seen the share of large tanks increasing.

Audrey Burkhardt: What is the incentive to consumers for the same thing under Savings Within Reach?
Scott: All Savings Within Reach incentives are paid to the contractor. It's one or the other.
Sara Fredrickson: Savings Within Reach incentives reduce the out of pocket cost to the consumer up front.

Don MacOdrum: Given the update on the GE Geospring, is there an expectation that AO Smith has products available?
Scott: Yes, they have products that meet the requirements, and we expect more to come online.
Julia: AO Smith added something like 35 models to the qualified products list in July.

JP: How does Savings Within Reach get managed and tracked?
Scott: Qualification for Savings Within Reach is based on a percentage of the median income.

Carolynn Farrar: Is there on-bill repayment through the utilities?
Scott: Yes, that's available.

Don: Has EPS™ always been branded like that, or was it called New Homes before?
Scott: EPS is a performance metric offered through the New Homes program. The incentive is tied to performance improvements over code. EPS is the end piece the builder or buyer gets.

Don: I've been expecting updates regarding the draft city policy for time-of-sale energy disclosure and how EPS supports or confuses that program.
Scott: We will bring that topic back to CAC.

Don: Does it look like the measure to decommission manufactured homes will happen?
Scott: I'm optimistic that it will. Part of it will rely on financing availability and other factors.
Garrett: When is that expected to launch?
Scott: We are hoping to launch it in the first part of 2017.

Scott: We are not expecting big changes to lighting in 2017.

7. Draft 2017 budget action plans

Amber Cole introduced the draft 2017 budget action plans presentations. Amber reviewed the budget process and invited Conservation Advisory Council members and the public to comment. Amber emphasized the deadline for formal budget comments is November 9, but early comments are appreciated. She directed members to send comments to Peter West.

Mark Wyman presented the draft budget action plans for the residential sector, including Existing Homes, New Homes and Products programs.

Don: What do you see as the biggest Existing Homes savings opportunities in Avista territory? Is the opportunity similar to other territories?
Mark: We're starting out similar to other areas, but we expect to learn more as we go in.

Jim: Behavioral change appears to be a large area of savings. What is it?
Mark: It includes Opower, but also some other approaches like advanced thermostats that gradually adapt to behaviors and adjust set points.

Julia: What are examples of higher free rider rates?
Kim: We will be able to go into that in more detail in October.

JP: How are large, mixed-use new construction projects handled internally between programs? How do you ensure a seamless customer experience? I'm thinking about projects like master planned communities with homes and retail shops.
Mark: We've been working with Hillsboro for three years. The developers are interested in what they can build and how. The city has these negotiations all the time, but now they have added efficiency as part of it, driving homes to be built above code. We're trying to deal with a block of homes at once and pass through covenants during the sale of development rights to the builder.
Amber Cole: Were you thinking of customer touch points? We do have outreach resources to help with that: Jay Ward, Susan Badger-Jones, Karen Chase and program field staff.

JP: There seem to be a lot of overlap with Oregon Housing and Community Services. I'm curious about communications and coordination with them on serving moderate income customers, rentals and new manufactured homes.
Mark: A few of us have worked with OHCS to see if there's an overlap between moderate- and low-income offerings. We're looking at ways that funding can be stacked.

JP: It would be helpful at the next Conservation Advisory Council to talk about the number of pilots and initiatives. What's happening in the pipeline for Products?
Kim: We will revisit this and are seeking your written comments.

Oliver presented the draft budget action plans for the commercial sector, including Existing Buildings, Existing Multifamily and New Buildings programs.

Oliver: We have new savings realization adjustment factors for Existing Buildings for both gas and electric incentives. They will be going down slightly in 2017, which will drive a need for greater accomplishment and will drive up the overall incentive budget.

Wendy: When will the pilot evaluation be available for Pay for Performance? When will the new program details be available?
Oliver: We'll have to get back to you on the Pay for Performance evaluation. We're happy to schedule another update for you to discuss the current design in more detail.

Wendy: Are the six Pay for Performance projects a rough estimate of customer interest? Why did you limit it to six?
Oliver: These are complicated projects and we are entering into a three-year commitment with these customers, so we want to roll it out slowly and keep learning before we make it more widely available. We are confident we can find six projects.

Andria Jacob: How could solar policy changes impact efficiency programs?
Oliver: Net-zero projects are interested in efficiency as well as solar and renewables. If there's a shift in incentives, it will impact interest.

JP: How will the Program Management Contractor manage the different operations and maintenance offerings?
Oliver: We provide a spectrum of offerings. Retrocommissioning is a measure specific offering for smaller projects. Pay for Performance is a whole building, long-term approach with deeper analysis provided by a third party. Strategic Energy Management is focused on organizational change for larger customers who have an energy champion. Each offering will fit a different customer type, and they are all implemented through a PMC.

JP: What's the approach for SEM and capital measures?
Oliver: Through SEM, we work with customers who have multiple buildings, but we only focus on comprehensive operations and maintenance services for a couple of buildings at a time. If customers implement capital measures where we are also capturing operations and maintenance savings, we net the capital savings out of the operations and maintenance calculation.

JP: How do you balance making more incentives midstream and better managing trade allies?
Oliver: We're looking at both, and we will carefully manage the potential for risk of double dipping. It's about engaging and helping trade allies get more savings where they are already supporting our programs, and finding midstream opportunities where that would be the best approach.

Kim presented the draft budget action plan for the industrial and agricultural sector, including the Production Efficiency program.

JP: What was the big jump in lighting project counts between 2014 and 2015?
Kim: It was the onset of LEDs and a different approach to LEDs.

Tyler: You are seeing smaller savings per project. Is that more with streamlined or custom?
Kim: It's more with streamlined and especially lighting.

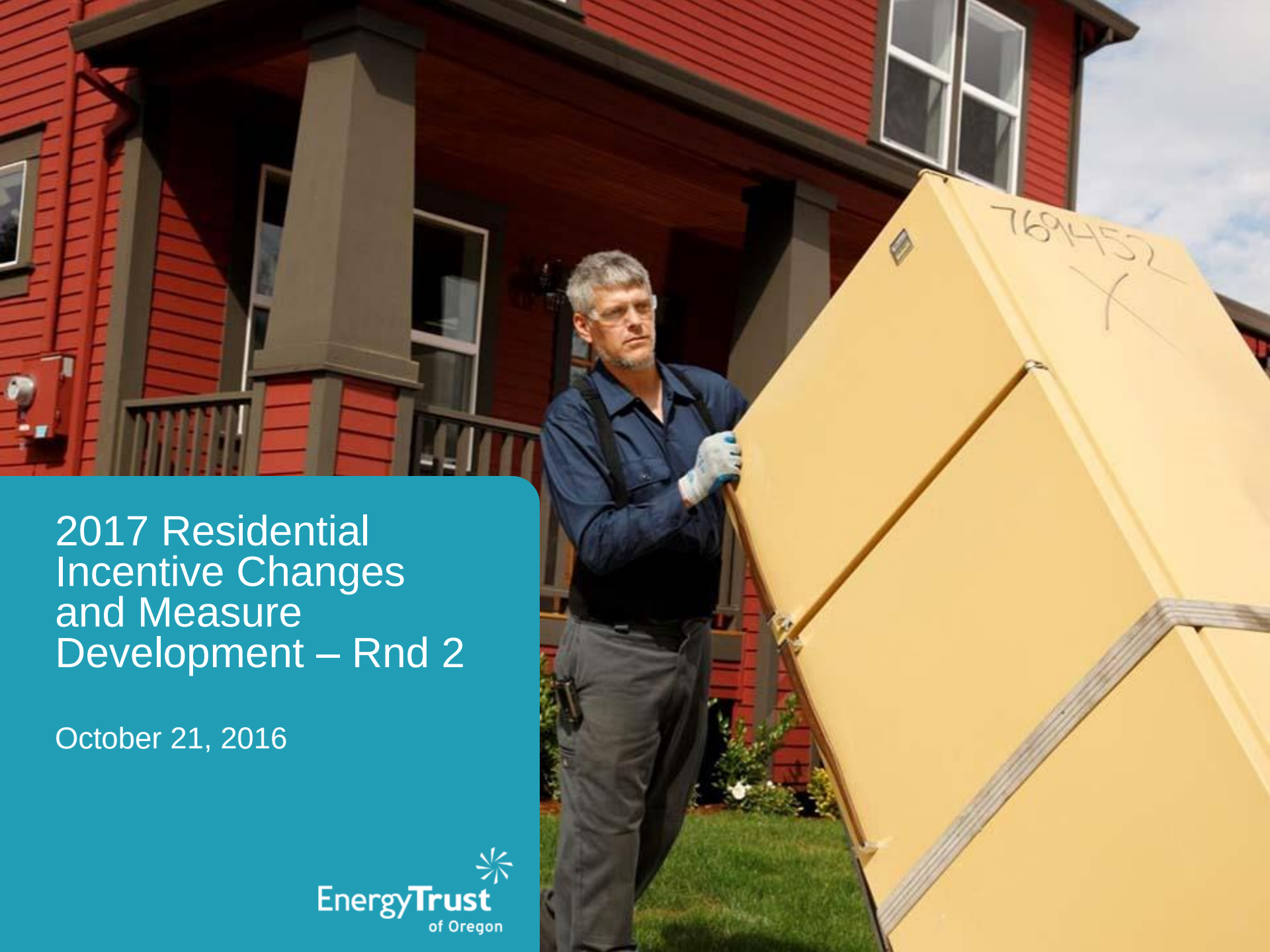
Amber: Are there any things you want us to look at when crafting our presentations for October?
Warren Cook: We appreciate the time to go through the drafts and send in written comments.

Amber: Any comments are welcome, and earlier is better. We are tweaking things through September. When you see the draft budget in October, we need formal comments by November 9. We'll include them in the board packet.

JP: Will we receive a copy of the budget before the next meeting?
Amber: It's coming together and we will do our best to get it out a few days before the next meeting. The full board packet with the draft budget and action plan will be up on the website the Monday or Tuesday after the October 21 Conservation Advisory Council meeting.

8. Public comment
There were no additional public comments.

9. Meeting adjournment
The next scheduled meeting of the Conservation Advisory Council will be on October 21, 2016, from 1:30 p.m. – 5:00 p.m.



2017 Residential Incentive Changes and Measure Development – Rnd 2

October 21, 2016

Energy Trust of Oregon

Topics

- Incentive adjustments effective Jan 1, 2017

Incentive Adjustments Effective Jan 1, 2017

Measure	Program	Incentive
Fridge/Freezer recycling	Products	Discontinued
Clothes washer recycling	Products	Discontinued
CFLs	Products	Discontinued

Questions?

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503.445.7632

EnergyTrust of Oregon

Draft 2017 Annual Budget & 2017-18 Action Plan

October 21, 2016

Energy Trust of Oregon

Today's Presentation

Projected 2016 Results

Building Blocks

Draft 2017-2018 Action Plan Highlights

Draft 2017 Budget

Discussion and Feedback

Next Steps

14 Years of Affordable Energy

From Energy Trust's investment of $1.3 billion in utility customer funds:

Nearly 600,000 sites transformed into energy-efficient, healthy, comfortable and productive homes and businesses

10,000 clean energy systems generating renewable power from the sun, wind, water, geothermal heat and biopower

$5.6 billion in savings over time on participant utility bills from their energy-efficiency and solar investments

17.4 million tons of carbon dioxide emissions kept out of our air, equal to removing 3 million cars from our roads for a year

Projected 2016 Results

- ✓ Forecasting to exceed savings goals for all utilities
- ✓ Expenditures are up; levelized costs remain low
- ✓ Two large renewable energy projects are delayed, causing generation shortfall
- ✓ Projecting reserves will be reduced by $36.8 million—more than planned
- ✓ Large pipeline of projects
- ✓ Avista collaboration on track

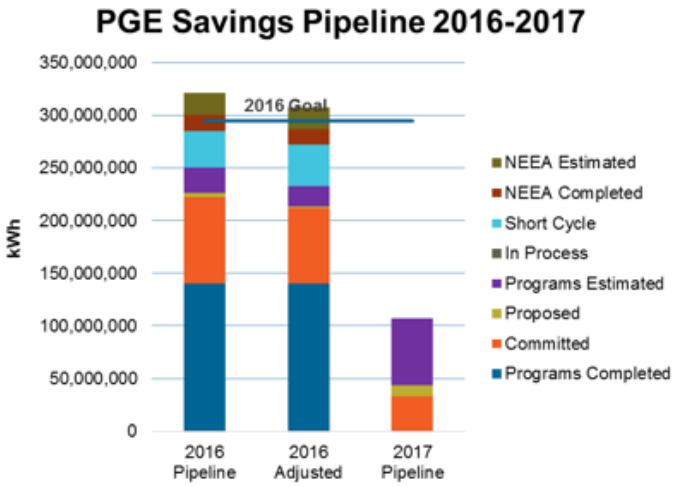
Q3 Dashboards

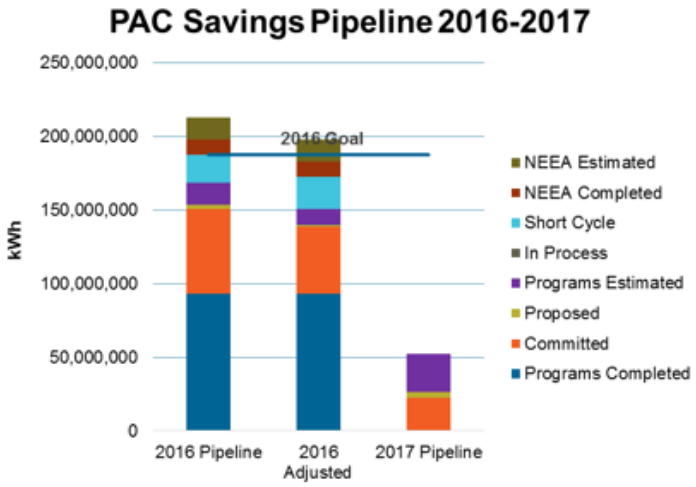
PGE
104%

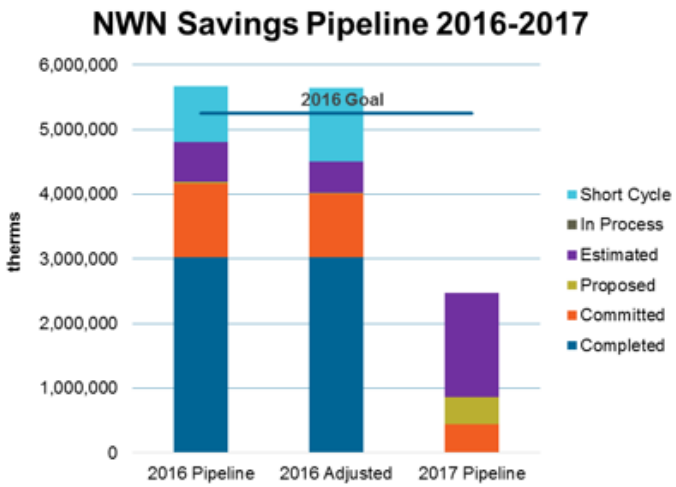
Pacific Power
105%

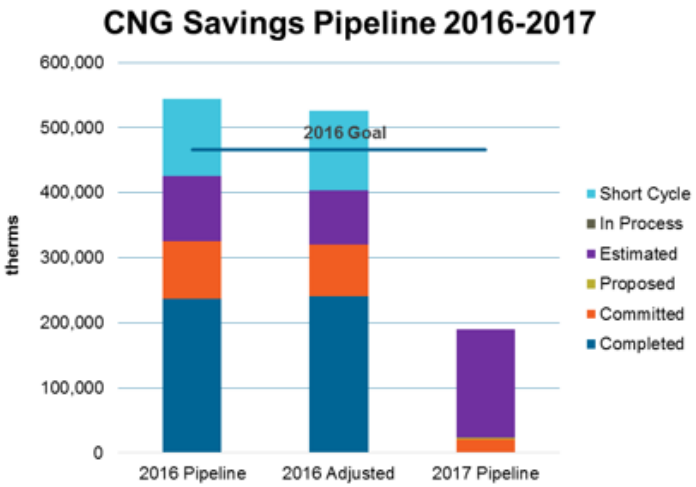
NW Natural
107%

Cascade
Natural Gas
113%





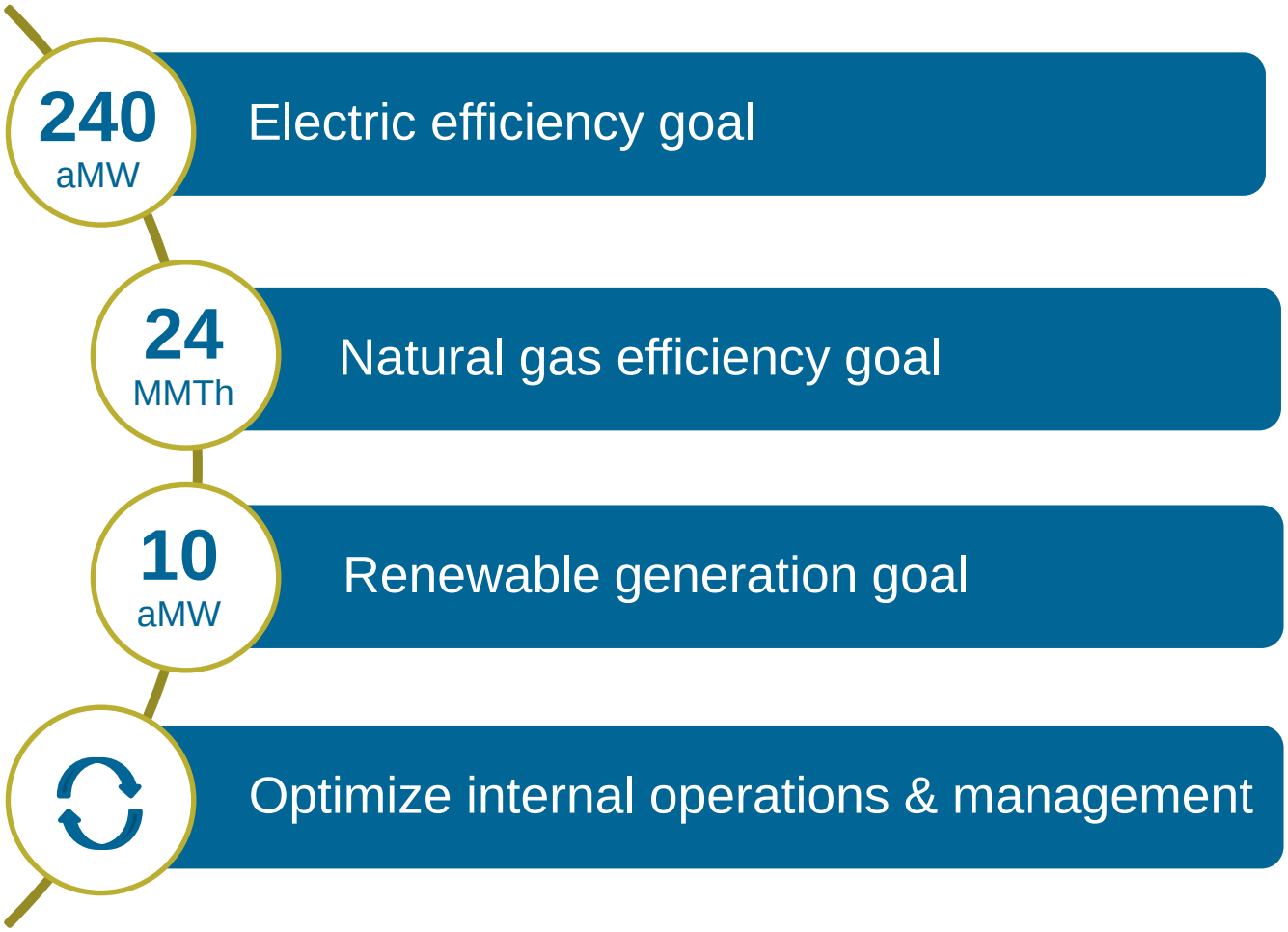




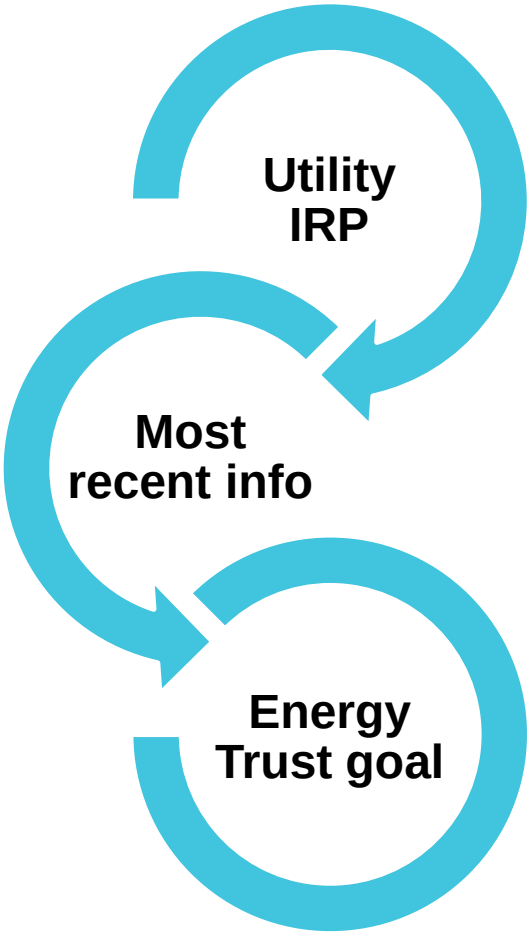
Budget & Action Plan Building Blocks

Building Blocks for Budget & Action Plan

2015-2019 Strategic Plan Goals



Budget and Action Plan Annual Goals

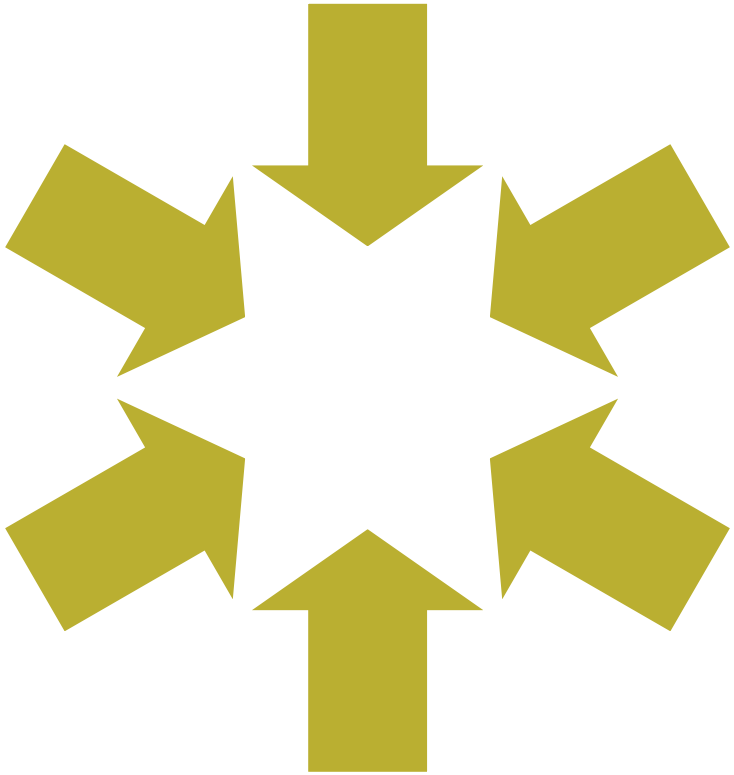


- Energy Trust annual savings goal for each utility approximates Integrated Resource Plan (IRP) target
- Two year IRP cycle
- Energy Trust goal can be higher because of new information
- Utilities file tariffs to collect funding necessary for Energy Trust to meet goal

Budget and Action Plan Context

Stronger economy, driving project volume

Key unknowns for 2018 programs



More challenging business case

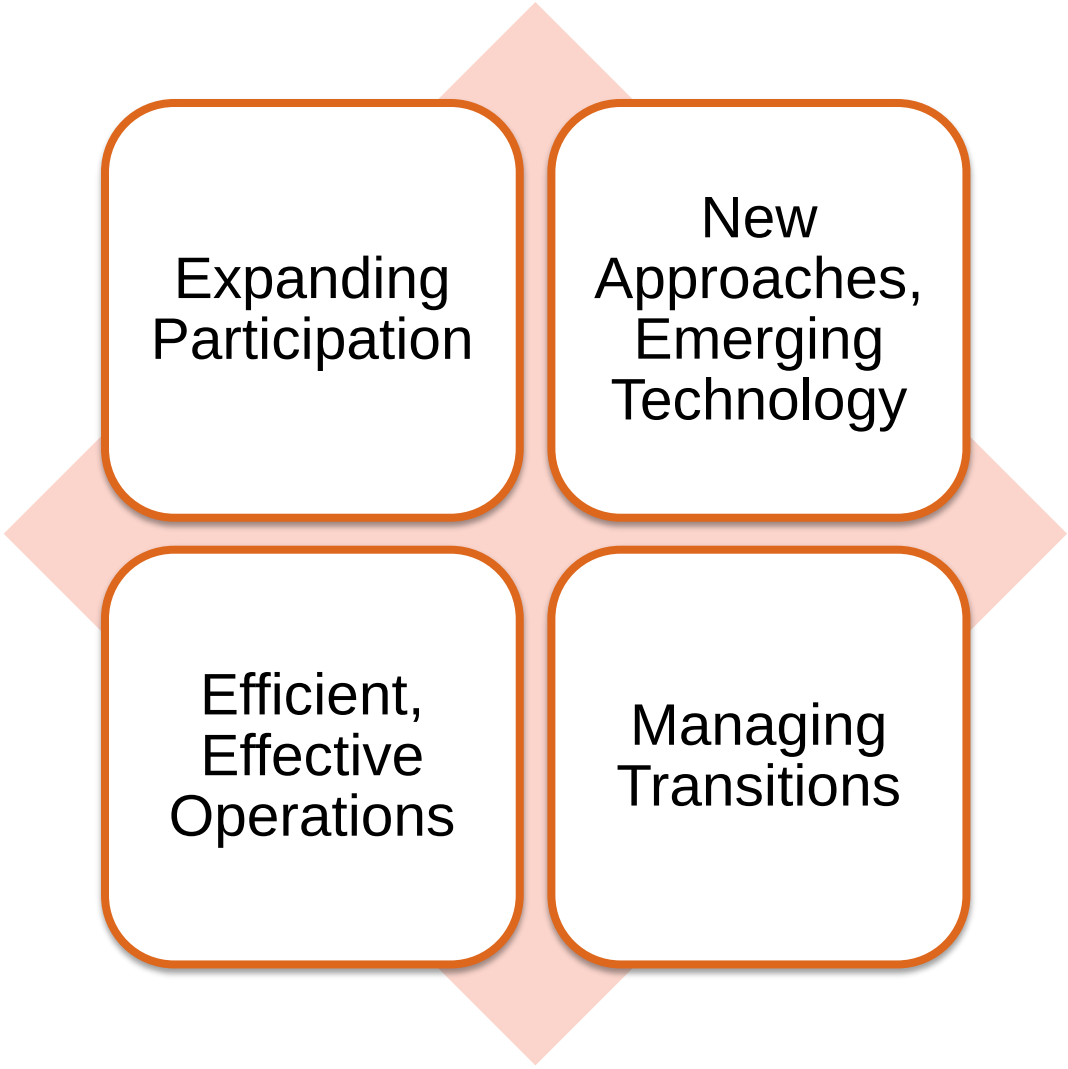
Active policy landscape

Avoided costs

- Stable for efficiency
- Lower for renewables

Oregon is diversifying demographically

Areas of Emphasis



Draft 2017-2018 Action Plan Highlights

Expanding Participation

- Continuing successful 2016 activities
- Growing program outreach and adding business trade allies
- Increasing upstream, retail and direct installation approaches
- Enhancing stakeholder and community engagement
- Continuing strategies to reach rural customers
- Expanding informational resources for customers and capacity to respond
- More market research and planning

New Approaches, Emerging Technology

- Supporting new markets
  - Cannabis production
  - Emission control technologies
  - Energy performance management approaches
  - Smart thermostats and utility-led demand response
- Implementing pilots
  - 8 approved and 4 pending
- Investing in NEEA efforts
- Exploring roles in new areas
- Developing educational approaches

Managing Transitions

- Responding to solar policy decisions
- Expanding project development
- Responding to rapidly changing LED market
- Implementing measure changes
- Implementing residential changes
- Engaging trade allies proactively
- Offering Avista customers full range of programs
- Continuing outreach to complete Executive Director transition

Efficient, Effective Operations

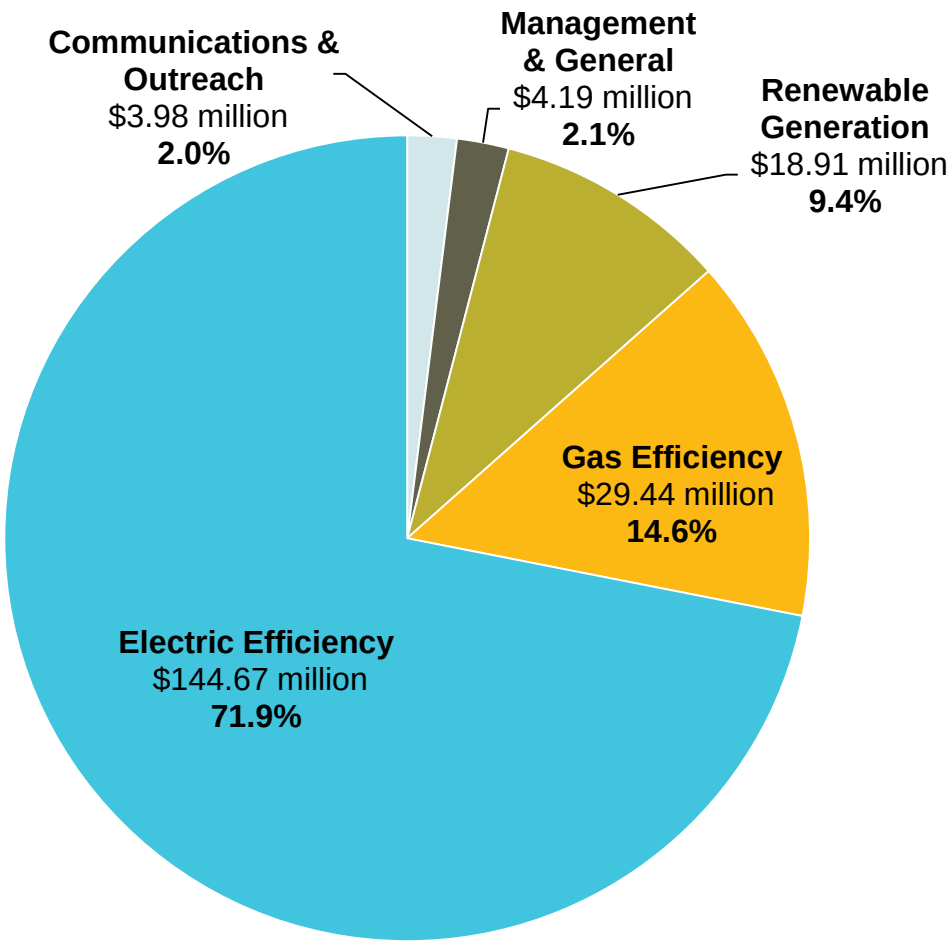
- Expanding instant incentives, upstream rebates and online forms
- Continuing data and system enhancements
- Increasing use of data and analytics
- Providing trade ally support
- Launching revised program packages
- Leveraging government and municipal initiatives
- Supporting utility engagements as a channel to customers
- Fostering a diverse workforce

Draft 2017
Annual Budget

2017 Draft Budget Summary

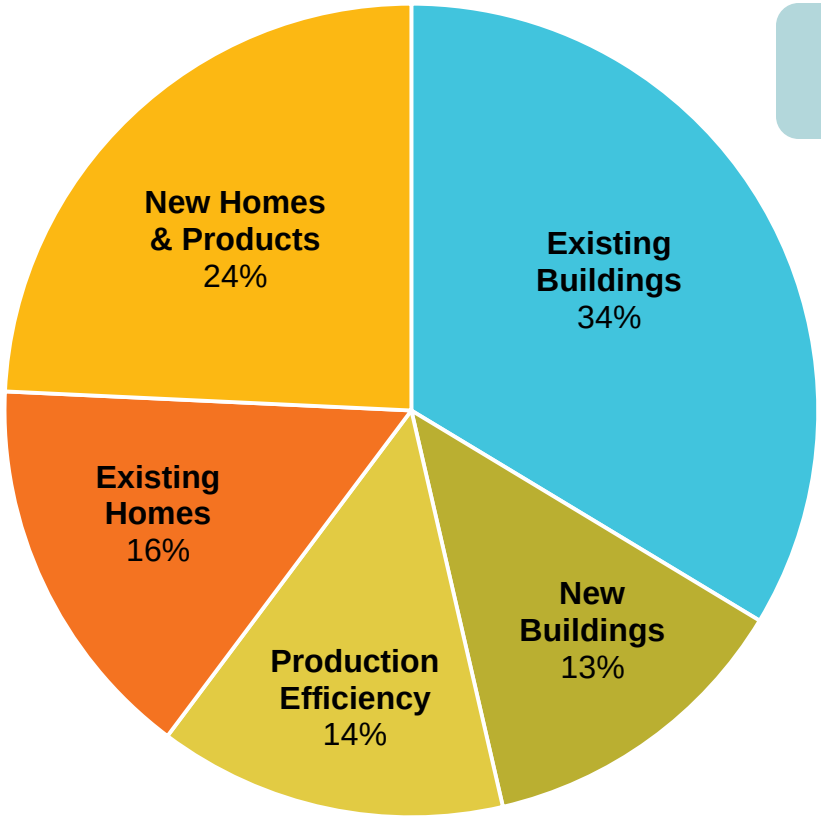
- Investing **$201.2 million** to acquire
  - **56.88 aMW** and **7.74 MMTh** through efficiency
  - **2.75 aMW** through renewable generation
- Electric savings up by **3.3%**; gas savings up **29.2%**
- Delivering highly cost-effective energy
  - **3.0 cents/kWh** and **31.5 cents/therm** levelized
- Overall renewable generation down **33.4%**, solar is up **3%**
- Overall **spending up 6.4%** due to increased project volume and growth in incentive, delivery and internal costs
- **Incentives up 6.7%** and represent **57.3%** of total planned expenditures
- Revenue up significantly; reserves on target, down from prior years
- Staffing costs at **6.6%**, well below OPUC performance measure
- Low administrative and program support costs at **5.8%**

2017 Budgeted Expenditures



Budgeted expenditures of $201.2 million, up 6.4% from 2016 budget
Continued drawdown of reserves will cover expenses in excess of anticipated revenue

2017 Natural Gas Savings by Program



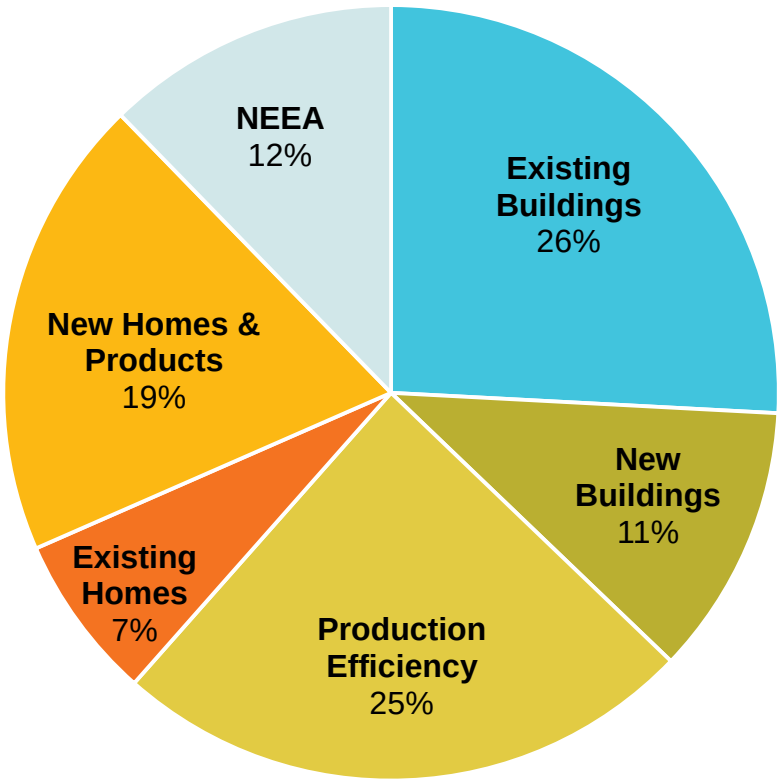
7.74 million annual therm goal
31.5 cents/therm levelized

A 29.2% increase in natural gas savings over 2016 budget

Investing $29.4 million in incentives, services and program delivery for residential, commercial, industrial, agricultural and public sector customers

2017 Electric Savings by Program

56.88 aMW goal
3.0 cents/kWh levelized



A 3.3% increase in total electric savings over 2016 budget

Investing approximately $144.7 million in incentives, services and program delivery for residential, commercial, industrial, agricultural and public sector customers

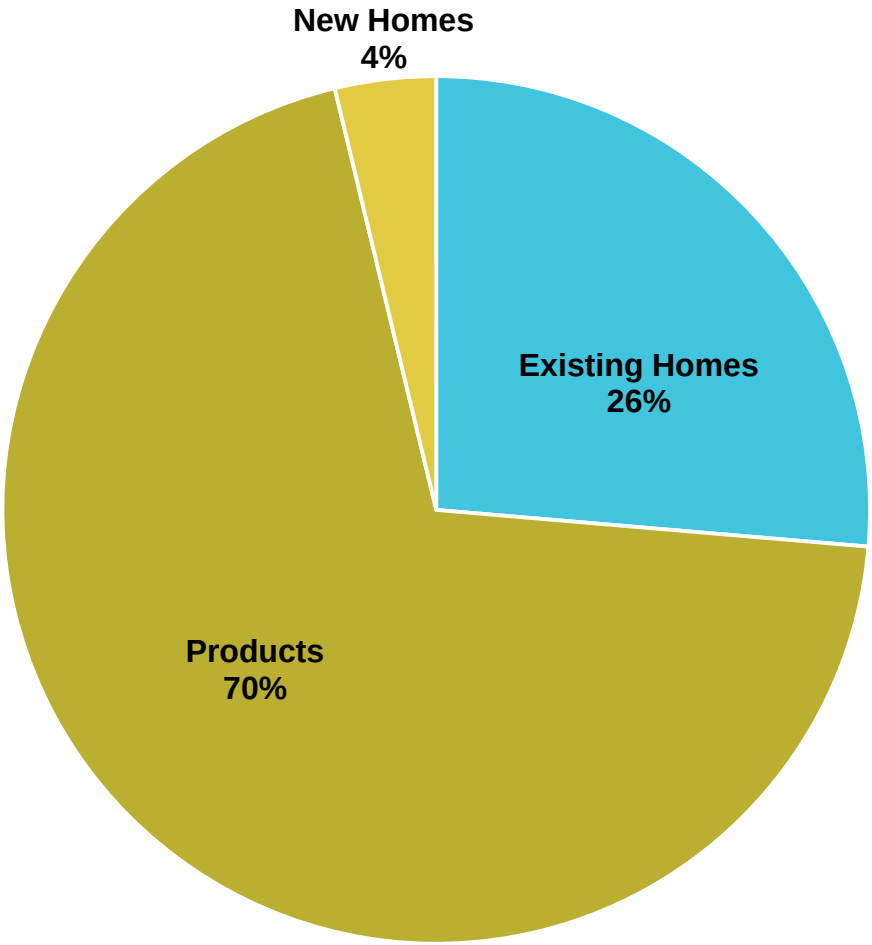
2017 Utility Savings & Generation Summary

	2016 Budget Savings & Generation (Net) aMW or MMTh	2017 Budget Savings & Generation (Net) aMW or MMTh	Prior IRP target for 2017 (Net) aMW or MMTh	2017 Budget ($ Million)	2017 Budget Levelized Cost Per kWh or therm
PGE (Efficiency)	33.66	35.23*	31.87	$94.55	3.0¢
Pacific Power (Efficiency)	21.42	21.64*	19.94	$56.23	2.9¢
NW Natural (Oregon)	5.25	6.54*	4.40	$25.16	30.8¢
NW Natural (Washington)	0.27	0.28*	0.26	$2.07	55.5¢
Cascade Natural Gas	0.47	0.57*	0.36	$2.49	33.9¢
Avista	-	0.34	0.34	$0.97	20.0¢
PGE (Renewable Energy)	1.09	1.16	N/A	$10.05	N/A
Pacific Power (Renewable Energy)	3.04	1.59	N/A	$9.66	N/A

MMTh: million annual therms
aMW: average megawatts

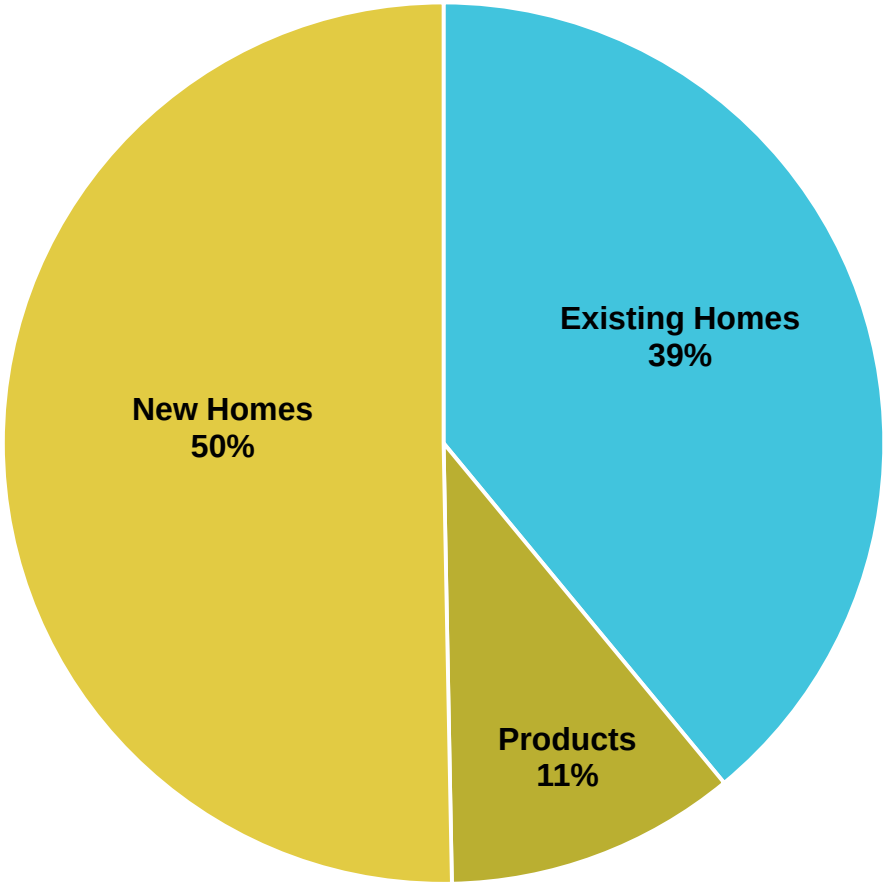
** Energy Trust is proposing updated IRP targets for these utilities based on these 2017 savings goals. Additional savings opportunities have been identified over and above the prior IRP targets for 2017*

Residential Sector: 2017 Electric Savings



NEEA savings not included.

Residential Sector: 2017 Gas Savings

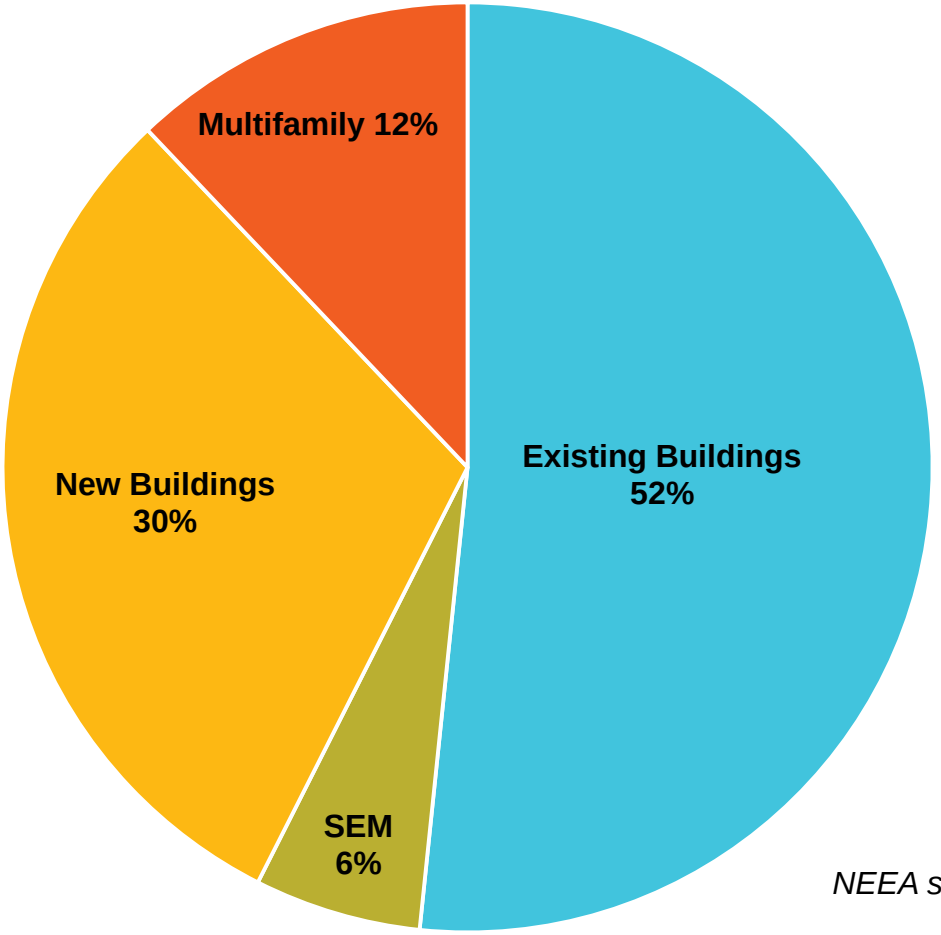


Residential Sector: Goals and Budget

	2016 Goal	2016 Re-forecast	2017 Goal	2017 Budget ($ Million)
Cascade Natural Gas (therms)	167,901	195,367	199,963	$0.7
NW Natural (therms)	2,032,344	2,398,125	2,615,378	$11.3
Avista (therms)	-	-	260,945	$0.6
PGE (kWh)	69,946,586	88,580,160	79,770,891	$25
Pacific Power (kWh)	51,627,477	56,479,682	50,700,375	$15.3

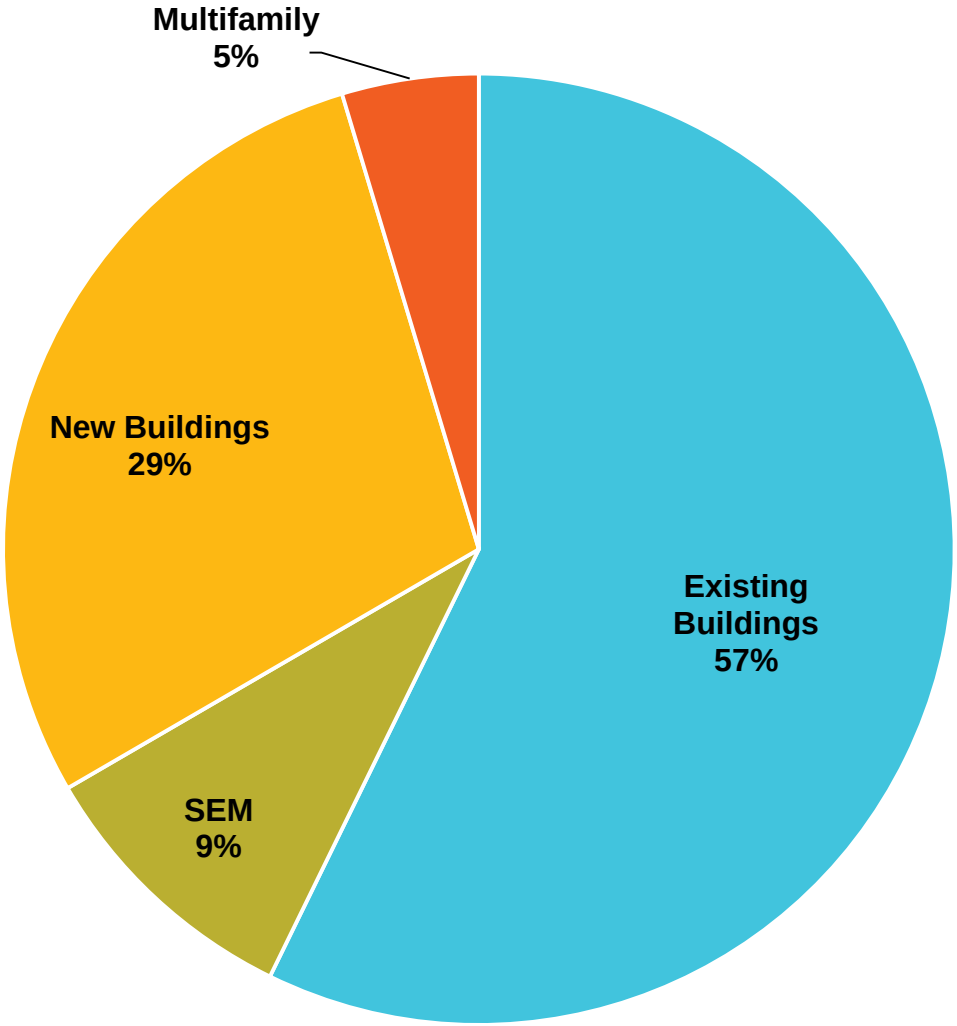
NEEA savings not included.

Commercial Sector: 2017 Electric Savings



NEEA savings not included.

Commercial Sector: 2017 Gas Savings

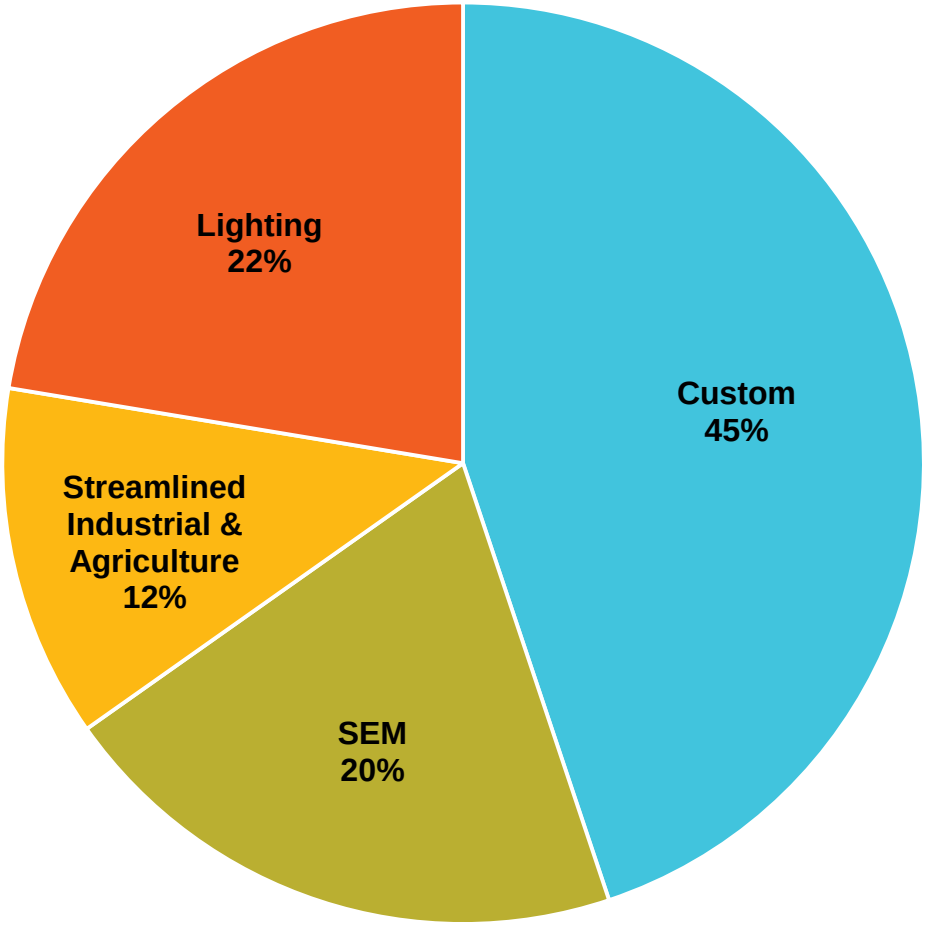


Commercial Sector: Goals and Budget

	2016 Goal	2016 Re-forecast	2017 Goal	2017 Budget ($ Million)
Cascade Natural Gas (therms)	263,661	293,236	328,286	$1.6
NW Natural (therms)	2,485,865	2,449,344	3,189,492	$12.1
Avista (therms)	-	-	70,692	$0.3
PGE (kWh)	118,025,020	120,851,599	119,749,859	$45.6
Pacific Power (kWh)	64,012,933	74,951,414	65,415,981	$25.3

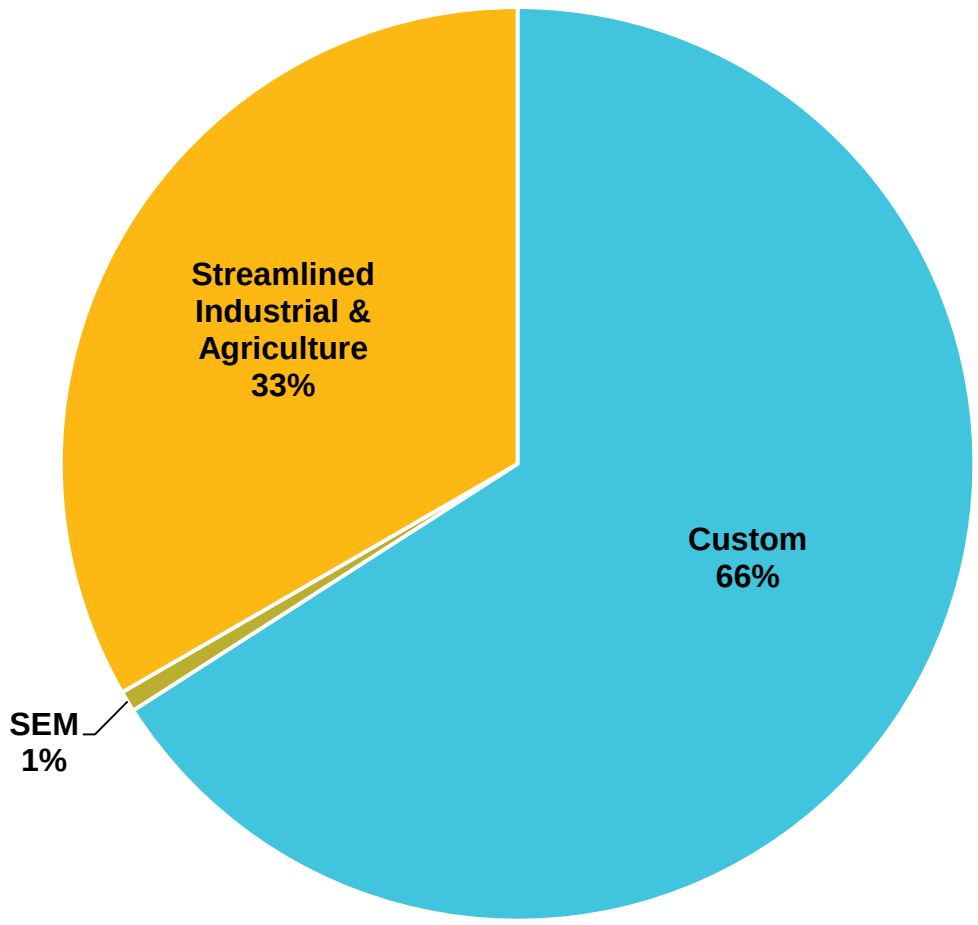
NEEA savings not included.

Industry & Ag Sector: 2017 Electric Savings



NEEA savings not included.

Industry & Ag Sector: 2017 Gas Savings



Industry & Ag Sector: Goals and Budget

	2016 Goal	2016 Re-forecast	2017 Goal	2017 Budget ($ Million)
Cascade Natural Gas (therms)	35,015	37,153	41,155	$0.1
NW Natural (therms)	1,001,438	1,1173,370	1,020,370	$2.7
Avista (therms)	-	-	9,649	$.03
PGE (kWh)	70,863,310	62,667,615	73,019,613	$19.6
Pacific Power (kWh)	46,923,228	41,087,053	48,386,137	$12.6

NEEA savings not included.

NEEA Goals and Budget

	2016 Savings Goal	2016 Savings Re-forecast	2017 Savings Goal	2017 Budget ($ Million)	2017 Levelized Cost (per kWh)
PGE (aMW)	4.12	4.25	4.12	$4.32	1.3¢
Pacific Power (aMW)	2.86	2.95	2.87	$3.00	1.3¢
NW Natural	-	-	-	$1.07	N/A
Cascade Natural Gas	-	-	-	$0.11	N/A

Customer Benefits from 2017 Investments

- **$707 million in future bill savings** from energy improvements made in 2017 with help from Energy Trust
- Enough **energy to power 46,000 homes** and **heat 14,700 homes**
- Improved air quality by **avoiding 292,000 tons** of carbon dioxide
- Continued **high customer satisfaction**
- **Expanded access and participation** statewide
- Training and **support for 2,400 local businesses**

Budget Outreach Schedule

October & November

RAC/CAC presentations Oct. 21

Draft budget online, Oct. 26

Board of Directors, Nov. 2

Public webinar, Nov. 4

OPUC public meeting, Nov. 8

Public comments due Nov. 9

Comments reviewed, final adjustments

RAC/CAC updates, Nov. 16

December

Final proposed budget online, **Dec. 7**

Board of Directors, **Dec. 16**

Action on Final Proposed
2017-18 Budget and Action Plan

+ www.energytrust.org/about/budget
Send comments to info@energytrust.org

Discussion and Feedback

- What questions do you have?
- What information needs clarification?
- Other feedback?

+ www.energytrust.org/about/budget
Send comments to info@energytrust.org

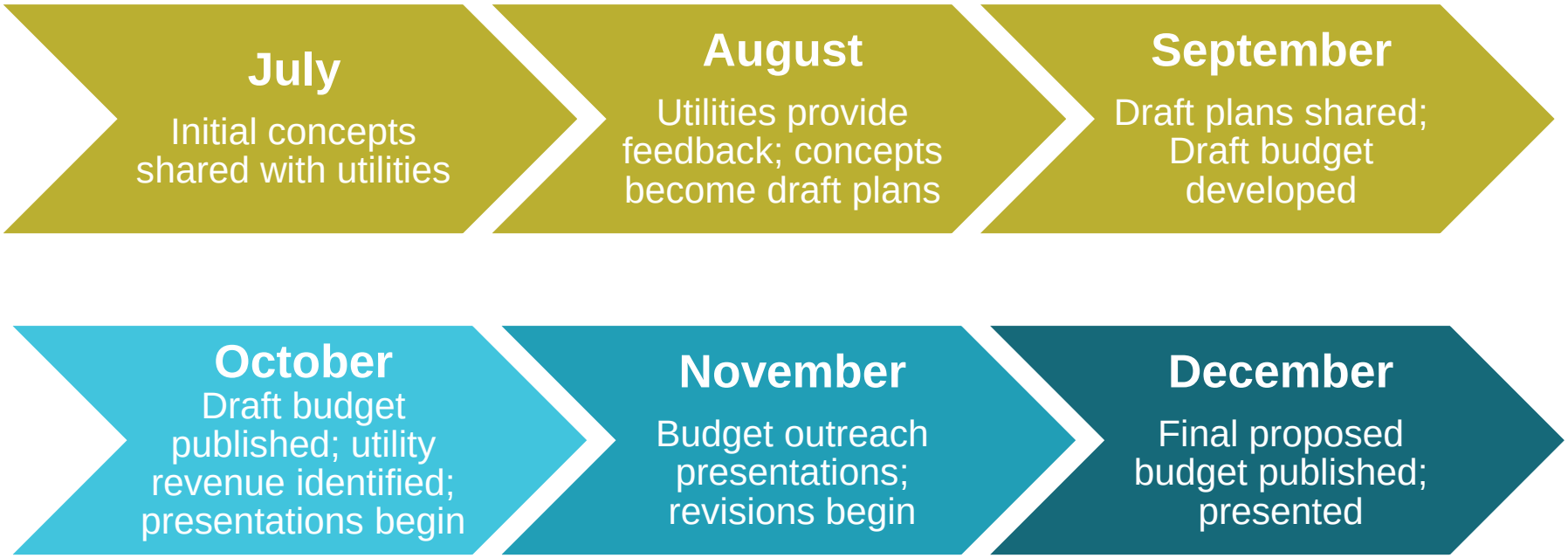
+ Comments due November 9

Thank You

info@energytrust.org
1.866.368.7878

Supplemental Information

Budget and Action Plan Development Process



Projected 2016 Results by Utility

	Budgeted 2016 Savings Goal (Net)	Budgeted 2016 Levelized Cost	Projected 2016 Savings (Net)	Projected % of 2016 Savings Goal (Net)	Projected 2016 Levelized Cost
PGE (Efficiency)	33.66 aMW	2.9¢/kWh	35.31 aMW	105%	2.9¢/kWh
Pacific Power (Efficiency)	21.42 aMW	3.0¢/kWh	22.65 aMW	106%	2.7¢/kWh
NW Natural (Oregon)	5.25 MMTh	32.3¢/therm	5.64 MMTh	107%	30.6¢/therm
NW Natural (Washington)	0.27 MMTh	33¢/therm	0.33 MMTh	124%	41¢/therm
Cascade Natural Gas	0.47 MMTh	41.1¢/therm	0.53 MMTh	113%	31.8¢/therm
PGE (Renewable Energy)	1.09 aMW	9.4¢/kWh	1.44 aMW	132%	6.5¢/kWh
Pacific Power (Renewable Energy)	3.04 aMW	2.8¢/kWh	0.98 aMW	32%	8.6¢/kWh

MMTh: million annual therms
aMW: average megawatts

2017 Electric Savings, Budget by Program

	2016 aMW Savings Forecast (Net)	2017 aMW Savings (Net)	2017 Electric Cost ($ Million)	2017 Levelized Cost
Production Efficiency (24%*)	11.8	13.9	$32.2	2.8¢
Existing Buildings (21%)	14.0	12.1	$41.8	3.7¢
Products (18%)	11.6	10.4	$18.1	2.1¢
New Buildings (11%)	5.8	6.4	$17.8	2.7¢
Existing Homes (7%)	4.3	3.9	$13.7	3.6¢
Multifamily (4%)	2.6	2.6	$11.3	4.7¢
New Homes (1%)	0.7	0.6	$8.5	10.7¢
NEEA—combined (12%)	7.2	7.0	$7.3	1.3¢
TOTAL**	**58.0**	**56.9**	**$150.8**	**2.98¢**

* % of total 2017 electric savings

** Columns may not total due to rounding

aMW: average megawatts

2017 Natural Gas Savings, Budget by Program

	2016 Savings Forecast MMTh (Net)	2017 Budget MMTh Savings (Net)	2017 Gas Cost ($ Million)	2017 Levelized Cost
Existing Buildings (32%*)	1.89	2.44	$10.5	39.8¢
New Homes (20%)	1.24	1.55	$4.7	18.8¢
Existing Homes (16%)	1.03	1.20	$7.4	48.6¢
Production Efficiency (14%)	1.15	1.07	$2.9	24.1¢
New Buildings (13%)	0.60	0.99	$2.5	20.7¢
Products (4%)	0.32	0.33	$0.5	16.1¢
Multifamily (2%)	0.26	0.16	$0.9	60.0¢
NEEA—combined (-%)	-	-	$1.2	-
TOTAL**	**6.49**	**7.74**	**$30.7**	**31.5¢**

* % of total 2017 gas savings

** Columns may not total due to rounding

MMTh: million annual therms

2017 Renewable Energy Programs

	Total Budget 2016		Total Budget 2017	
	$ Million	aMW	$ Million	aMW
Other Renewables	$5.8	0.01	$6.5*	0.001
Solar	$15.6	4.12	$13.2	2.75
Total	**$21.4**	**4.13**	**$19.7**	**2.75**

* Other Renewables expenditures include:

- Milestone payments on five projects completed, with generation claimed in prior years (29%)
- Project development assistance payments for potential generation in future years (49%)
- Staff, professional services, outreach and other allocated costs (22%)
- Commercial operation payment for two small wind projects scheduled for completion in 2017 (1%)

33.4% less generation than 2016 budget of 4.13 aMW

Investing $19.7 million in incentives, services & program delivery for clean, renewable power

Utility Detail (distribute in CAC packet)

PGE: 2017 Savings, Budget by Program

	2016 Savings Goal aMW	2016 Savings Forecast aMW	2017 Savings Goal aMW	2017 Budget ($ Million)	2017 Levelized Cost/kWh
Existing Buildings (22%*)	8.4	8.4	7.7	$25.8	3.6¢
Multifamily (5%)	1.8	1.8	1.8	$7.9	4.7¢
New Buildings (12%)	3.4	3.6	4.2	$11.9	2.8¢
Production Efficiency (24%)	8.1	7.2	8.3	$19.6	2.8¢
Existing Homes (6%)	2.2	2.2	2.2	$7.4	3.6¢
New Homes (1%)	0.3	0.5	0.4	$6.6	10.7¢
Products (18%)	5.5	7.4	6.5	$11.0	2.1¢
NEEA – combined (12%)	4.1	4.2	4.1	$4.3	1.3¢
TOTAL	**33.7**	**35.3**	**35.2**	**$94.6**	**3.0¢**

* % of total 2017 electric savings

Pacific Power: 2017 Savings, Budget by Program (net)

	2016 Savings Goal aMW (Net)	2016 Savings Forecast aMW (Net)	2017 Savings Goal aMW (Net)	2017 Budget ($ Million)	2017 Levelized Cost/kWh
Existing Buildings (20%*)	4.2	5.6	4.4	$16.0	3.8¢
Multifamily (4%)	1.2	0.7	0.8	$3.4	4.8¢
New Buildings (10%)	1.9	2.2	2.3	$6.0	2.5¢
Production Efficiency (26%)	5.4	4.7	5.5	$12.6	2.9¢
Existing Homes (8%)	1.8	2.1	1.7	$6.3	3.7¢
New Homes (1%)	0.1	0.2	0.1	$1.9	10.7¢
Products (18%)	4.0	4.2	3.9	$7.1	2.2¢
NEEA – combined (13%)	2.9	3.0	2.9	$3.0	1.3¢
TOTAL	**21.4**	**22.6**	**21.6**	**$56.2**	**2.9¢**

* % of total 2017 electric savings

Pacific Power: 2017 Savings, Budget by Program (gross)

	2016 Savings Goal aMW (Gross)	2016 Savings Forecast aMW (Gross)	2017 Savings Goal aMW (Gross)	2017 Budget ($ Million)	2017 Levelized Cost/kWh (Gross)
Existing Buildings (20%*)	5.47	7.32	5.70	$16.00	2.9¢
Multifamily (4%)	1.40	0.90	0.86	$3.40	4.3¢
New Buildings (10%)	1.91	2.16	2.24	$6.00	2.9¢
Production Efficiency (26%)	6.96	6.10	6.62	$12.60	2.3¢
Existing Homes (8%)	1.81	2.09	1.74	$6.30	3.6¢
New Homes (1%)	0.12	0.18	0.13	$1.90	10.7¢
Products (18%)	3.98	4.20	3.94	$7.10	2.2¢
NEEA – combined (13%)	2.86	2.95	2.87	$3.00	1.3¢
TOTAL	**24.52**	**25.89**	**24.09**	**$56.20**	**2.6¢**

* % of total 2017 electric savings

NW Natural: 2017 Savings, Budget by Program (Oregon, Without Industrial)

	2016 Savings Goal Annual Therms	2016 Savings Forecast Annual Therms	2017 Savings Goal Annual Therms	2017 Budget ($ Million)	2017 Levelized Cost/therm
Existing Buildings (17%*)	796,512	709,073	728,614	$3.34	48¢
Multifamily (3%)	301,496	239,371	141,094	$0.87	63¢
New Buildings (16%)	518,170	498,608	698,509	$1.83	21¢
Production Efficiency (6%)	300,722	160,456	274,773	$0.62	21¢
Existing Homes (23%)	752,193	899,987	986,451	$6.19	50¢
New Homes (28%)	893,073	989,038	1,208,003	$3.49	18¢
Products (7%)	273,055	294,883	295,609	$0.47	16¢
NEEA – combined (0%)	-	-	-	$0.96	-
TOTAL	**3,835,221**	**3,791,416**	**4,333,054**	**$17.77**	**35¢**

* % of total 2017 gas savings--Oregon

NW Natural: 2017 Savings, Budget for Oregon (Industrial DSM)

	2016 Savings Goal Annual Therms	2016 Savings Forecast Annual Therms	2017 Savings Goal Annual Therms	2017 Budget ($ Million)	2017 Levelized Cost/therm
Production Efficiency (34%*)	700,716	956,914	745,597	$2.12	25¢
Existing Buildings (59%)	709,032	875,260	1,311,647	$5.01	35¢
New Buildings (7%)	9,600	12,150	153,103	$0.25	13¢
TOTAL	**1,419,348**	**1,844,324**	**2,210,347**	**$7.39**	**30¢**

* % of total 2017 gas savings—Oregon Industrial DSM

NW Natural: 2017 Savings, Budget by Program (Washington)

	2016 Savings Goal Annual Therms	2016 Savings Forecast Annual Therms	2017 Savings Goal Annual Therms	2017 Budget ($ Million)	2017 Levelized Cost/therm
Existing Buildings (56%*)	151,056	114,882	156,525	$0.84	48¢
Existing Homes (24%)	53,434	70,303	67,554	$0.53	24¢
New Homes (20%)	60,589	143,914	57,761	$0.59	20¢
NEEA- Combined (0%)	-	-	-	$0.11	-
Total	**265,079**	**329,099**	**281,841**	**$2.07**	**56¢**

* % of total 2017 gas savings—Washington

NW Natural: 2017 Savings, Budget by Program (All Programs, Both States)

	2016 Savings Goal Annual Therms	2016 Savings Forecast Annual Therms	2017 Savings Goal Annual Therms	2017 Budget ($ Million)	2017 Levelized Cost/therm
Existing Buildings (32%*)	1,656,60	1,699,215	2,196,786	$9.19	40¢
Multifamily (2%)	301,496	239,371	141,094	$0.87	63¢
New Buildings (12%)	527,770	510,758	851,612	$2.08	20¢
Production Efficiency (15%)	1,001,438	1,117,370	1,020,370	$2.75	24¢
Existing Homes (15%)	805,627	970,290	1,054,005	$6.72	50¢
New Homes (19%)	953,662	1,132,952	1,265,764	$4.08	20¢
Products (4%)	273,055	294,883	295,609	$0.47	16¢
NEEA – combined (0%)	-	-	-	$1.07	-
TOTAL	**5,519,64**	**5,964,839**	**6,825,241**	**$27.23**	**32¢**

* % of total 2017 gas savings—Total NW Natural

Cascade Natural Gas: 2017 Savings, Budget by Program

	2016 Savings Goal Annual Therms	2016 Savings Forecast Annual Therms	2017 Savings Goal Annual Therms	2017 Budget ($ Million)	2017 Levelized Cost/therm
Existing Buildings (39%*)	182,129	189,430	222,180	$1.21	52¢
Multifamily (2%)	12,000	16,850	11,336	$0.03	33¢
New Buildings (17%)	69,532	86,956	94,769	$0.32	25¢
Production Efficiency (7%)	35,015	37,153	41,155	$0.12	26¢
Existing Homes (9%)	35,771	64,291	49,071	$0.22	37¢
New Homes(24%)	110,649	109,275	136,790	$0.45	21¢
Products (2%)	21,481	21,801	14,103	$0.02	20¢
NEEA – combined (0%)	-	-	-	$0.11	-
TOTAL	**466,577**	**525,756**	**569,405**	**$2.49**	**41¢**

* % of total 2017 gas savings

Avista: 2017 Savings, Budget by Program

	2017 Savings Goal Annual Therms	2017 Budget ($ Million)	2017 Levelized Cost/therm
Existing Buildings (7%*)	24,000	$0.15	53¢
Multifamily (2%)	7,000	$0.03	46¢
New Buildings (12%)	39,692	$0.13	24¢
Production Efficiency (3%)	9,649	$0.03	24¢
Existing Homes (6%)	97,068	$0.42	34¢
New Homes (42%)	144,866	$0.19	18¢
Products (6%)	19,011	$0.03	80¢
NEEA – combined (0%)			
TOTAL	**341,286**	**0.97**	**20¢**

* % of total 2017 gas savings