# Trade Ally Survey

**Final Report** 

October 17, 2018





Prepared by

research into action\*

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October 17, 2018

Funded By:

**Energy Trust of Oregon** 

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# Acknowledgment

We would like to thank Energy Trust of Oregon for giving us the support needed to conduct this project. We also wish to acknowledge the many trade ally companies that agreed to participate in the survey and provided their responses to our questions; we appreciate their willingness to participate.

# **Table of Contents**

Ac	knowledgment	
Та	ble of Contents	i
Ex	ecutive Summary	
1.	Introduction	1
2.	Methodology	2
	2.1. Survey Instrument	2
	2.2. Sampling	2
	2.3. Distribution	3
3.	Results	4
	3.1. Respondents Characteristics	
	3.2. Firmographics	
	3.3. Program Paperwork and Participation	12
	3.4. Solar Market Participation	19
	3.5. Relationship with Energy Trust	21
	3.6. Trade Ally Forum and Training	24
	3.7. Communications, Website and Insider Newsletter	28
	3.8. Star Rating System	32
4.	Conclusions	35
Ар	ppendix A. Instrument	A-1
Ар	ppendix B. Tables by Focus Region	B-1
An	opendix C Open-Ended Responses	

## **Executive Summary**

This report provides the results of the 2018 Energy Trust of Oregon (Energy Trust) Trade Ally Survey conducted for the first time since 2013. The main goal of this study is to gather feedback from trade allies to improve communication and to enhance offerings to both trade allies and customers.

The research team collected 180 survey responses online from a sample of participating trade allies that represent the various geographic areas in Energy Trust's service territory and varying levels of project activity with Energy Trust in 2017 and 2018.

The following are the highlighted findings:

### **Firmographics**

- Almost 80% of respondents are small companies with fewer than 20 employees, half of which (39%) are very small companies with fewer than five employees.
- One in 10 respondents (11%) are new trade allies with two years or less since becoming an Energy Trust's ally.
- > For about a third of respondents (30%), a large portion (50% or more) of 2017 revenues came from projects receiving Energy Trust incentives.
- > 12% of responding companies are women-owned, 9% are veteran-owned, and 6% are minority-owned.

## **Program Paperwork and Participation**

- > Three-quarters of the respondents across the market sectors complete program paperwork for their customers at least most of the time.
- Two-thirds of respondents (68%) think the amount of time it takes to complete an application is within a "reasonable" range. Somewhat more than half of solar sector respondents (59%), however, think the amount of time it takes is "unreasonable." Relatedly, while 8% of all respondents reported that it takes more than two hours to complete an application, 28% of solar sector respondents did so.
- 30% of respondents anticipate an increase in Energy Trust projects next year compared to 2017-2018, 18% anticipate a decrease, and 39% anticipate no change.

## **Solar Market Participation**

A high proportion of solar respondents (41%) anticipate a decrease in Energy Trust projects next year compared to 2017-2018.

- > Two-thirds of the solar respondents (68%) reported that the sunset of the Residential Energy Tax Credit (RETC) in 2017 has caused their solar-related business approach to change in 2018.
- Just over one-half of solar respondents (54%) reported that three-quarters or more of their 2017 revenues were from solar projects, while about one third reported that non-solar work made up more than three-quarters of their revenues.
- More than a third of the solar respondents (35% in residential and 38% in the commercial market) reported having no projects currently planned.

## Relationship with Energy Trust

- Three-quarters of respondents (76%) reported overall satisfaction with Energy Trust. They reported highest satisfaction in areas such as interactions with, or response time from, program staff; however, half of respondents (50%) were dissatisfied with the incentive payment processing time.
- Most respondents across the market sectors (89%) reported their relationship with Energy Trust has stayed the same or improved since last year. Eight percent said it had declined.

#### Trade Ally Forum and Traininig

- Despite being familiar with various types of support that Energy Trust provides trade allies (program and technical training, cooperative marketing, training reimbursement, etc.), fewer respondents reported using those opportunities. Most respondents were unfamiliar with travel reimbursement for energy conferences and training, but a large portion of respondents reported being interested in using it.
- Top training topics of choice among respondents across market sectors are savings calculation tools, code changes, selling the value of energy efficiency to customers, and program requirements and paperwork.
- A third of respondents (34%) reported attending trade forums or training in the last year, but almost half (47%) reported they have never attended or have not attended in more than two years.

## Communications, Insider Newsletter, and Website

- > The most-commonly reported preferred communications channels were email (84%), the *Insider* newsletter (65%), and the Energy Trust website (59%). Only a few respondents mentioned social media as a preferred communication channel.
- Across the market sectors, 83% of respondents reported reading the *Insider* email newsletter at least "sometimes." Ten percent reported being unfamiliar with the newsletter.
- > Two-thirds of respondents (67%) check the Energy Trust website a few times a month, and some (11%) check more frequently. Twenty percent of respondents said they never do.

## Star Rating System

- > Three-quarters of the single-family and solar respondents (76%) reported they are familiar with Energy Trust's star system that is used to rate them. (Only single-family and solar trade allies were asked about familiarity with the star rating system.)
- A majority of those respondents reported the current star rating system is clear (93%). But when asked how fair the system is to them, more than a quarter said (28%) it is at least a "slightly" unfair system. While most respondents (60%) remained neutral about the system's usefulness to their customers, more thought the rating system is useful (30%) than not useful (11%).

#### **Conclusions**

Findings from the survey in general suggest that Energy Trust's trade ally network serves the trade ally community effectively, and has opportunities for improvement.

The respondents represent a large core of long-term members with a mixture of more recent entrants. They generally enjoy stable relationships with Energy Trust, with which satisfaction is high. Attitudes are generally positive about the star rating system, including a proposed change in the system, among single-family homes and solar respondents (the only ones surveyed on this topic).

Energy Trust programs significantly contribute to the trade allies' aggregate revenues, but most revenues still come from non-program projects, suggesting continuing room for program expansion. Some trade allies, however, expect an increase in Energy Trust projects next year. While this likely stemmed from their positive experience working with the Trust, this may also suggest the need of encouraging diversification of the allies' businesses and continuing monitoring their revenue sources to avert over-reliance on leveraging the incentive.

Trade allies prefer email, the *Insider* newsletter, and the Energy Trust website as sources of information about programs. They prefer the website, for information on incentives, general program information, and forms; and the *Insider*, for articles about common problems and their solutions, emerging technologies, tax credits, and technical assistance or resources. The *Insider* could be improved with more focus on program updates, how to work with Energy Trust, and more technical articles and industry news.

Among the various forms of Energy Trust support, trade allies are most familiar with, and interested in, trainings, cooperative marketing support, and reimbursements for conference, workshop, and training attendance. However, half of respondents have not attended any recent Energy Trust-sponsored trade ally forum or training. Energy Trust may achieve greater attendance by making trade allies more aware of the travel reimbursement for trade ally forums and making training and forums more informative and more relevant to continuing education credits.

Trade allies are interested in the idea of internships and apprenticeships offered through SummerWorks, a Worksystems program, which is a publicly funded paid summer internship program for diverse young adults ages 16-24 in the Portland Metro area.

About one-quarter of responding trade allies are minority-, women-, or veteran-owned businesses, and such businesses serve as subcontractors for about 11% of the subcontracted projects done by other trade allies.

Evidence is slightly mixed on how well trade allies serve non-English-speaking communities. More than one-quarter of responding trade allies have staff who speak at least one other language, which far exceeds the percentage of the Oregon population who cannot speak English very well (about 6%). On the other hand, on average, about 10% of sales are with customers for whom English is not the first language, which is less than the 15% of Oregonians who speak a non-English language at home. It may be worth attempting to investigate what additional barriers exist to reaching and serving non-English-speaking households.

Responses indicate that the incentive paperwork is not in general an excessive burden for trade allies, except in the case of solar incentives.

Solar trade allies generally depend on work in that segment, as it tends to make up a large percentage of their work and most such trade allies reported having no more than about a one-month pipeline of work. Solar sector trade allies experienced decreases in activity from 2017 in both the residential and commercial sectors, likely due to the sunset of the Residential Energy Tax Credit (RETC).

## **MEMO**

**Date:** January 2, 2018 **To:** Board of Directors

From: Ashley Prentice, Trade Ally Project Manager

Cameron Starr, Sr. Customer Service Strategy Manager

**Subject:** Staff Response to the 2018 Trade Ally Survey

Energy Trust's 2018 trade ally survey was developed from previous surveys of the trade ally network that were last conducted in 2013. The previous surveys were heavily focused on questions related to equipment installation. This survey was shortened and the focus shifted to the collection of firmographic information, examination of benefits trade allies receive from being part of the network and feedback on communications and satisfaction with Energy Trust. Insights from the survey will help identify areas for improvement in 2019.

The web-based survey resulted in 180 responses from a sample of participating trade allies from all geographic areas in Energy Trust's service territory, and who completed at least one project with Energy Trust in 2017 and 2018. The survey asked about the services trade allies perform, instead of programs enrolled in, which returned interesting results. For example, 50 percent of respondents reported serving multifamily properties, while our enrollment data shows that only 27 percent of those respondents are enrolled as Multifamily trade allies. This indicates an opportunity to increase enrollment in programs in which contractors already participate.

This year's survey was designed to capture firmographic information from survey respondents. We captured number of employees, trade allies who are minority, veteran or women-owned, trade allies who employ staff who speak a language other than English, serve non-English speaking customers and collected information on revenue coming from Energy Trust projects. Almost 80 percent of respondents are small companies with fewer than 20 employees. Forty percent of respondents reported that they have fewer than five employees. 12 percent of responding companies self-report being women-owned, 9 percent report veteran-owned and 6 percent report minority-owned. Results show that more than one-quarter of responding trade allies have staff who speak at least one language other than English, and support non-English-speaking customers – most commonly Spanish. We are reviewing the data to understand where we can provide better support regionally, based on the feedback received. Lastly, for about a third of respondents, fifty percent of 2017 revenues came from projects receiving Energy Trust incentives.

The survey also asked about satisfaction with benefits trade allies receive from being in the network. We asked trade allies about a possible new benefit, travel reimbursement. Results showed that 60 percent of trade allies are interested in travel reimbursement for conferences and trainings. We recently launched a travel reimbursement for those who attended the Pendleton Trade Ally Forum in October 2018, and we are planning to expand this offering to other rural locations throughout the state for the fall 2019 forum.

The survey results provided good feedback to staff on trade allies' preferred methods of communication, trainings and workshop topics of interest, along with support needs through business development funds and Energy Trust's website. Trade allies prefer email, the Insider

newsletter, and the Energy Trust website as main sources of information about programs. Along with communications, we also asked about satisfaction with Energy Trust. Three-quarters of respondents reported overall satisfaction with Energy Trust. The area with highest satisfaction were interactions with, or response time from, program staff. Trade allies expressed the lowest satisfaction with incentive payment processing time. Energy Trust's Solar program received the lowest rating for incentive payment processing time. We believe that this is because the survey was fielded during the sunset of the Residential Energy Tax Credit and a decrease in the number of post installation quality assurance verifiers. The program has since redesigned the verification process to allow them to be conducted remotely. This effort, in addition to launching a new processing system, have helped reduce processing time.

Other Energy Trust programs are also working to reduce payment processing timelines. The Home Retrofit program has implemented standards to ensure 90 percent of completed applications are processed within 30 days of receipt – a significant reduction from the previous processing time of six to eight weeks. Other programs, such as Existing Multifamily and Production Efficiency, are redesigning high volume incentive application forms to help reduce customer and contractor confusion. In open-ended comments, trade allies reported an interest in electronic payments and DocuSign software. Energy Trust is exploring an electronic payment option to potentially decrease the payment timeline.

With about 1,400 trade allies throughout Oregon and southwest Washington, we recognize their important role in supporting and increasing awareness of energy efficiency. Trade allies are often the customer's primary, or only, connecting point with Energy Trust. We ask for trade ally input on relevant training topics at every forum and trade ally event, and highly value their input. This survey provides good insights to refine and adjust our approach to communications, training and the benefits we offer and we look forward to exploring next steps summarized above.

## 1. Introduction

This report provides the results of the 2018 Energy Trust of Oregon (Energy Trust) Trade Ally Survey.

Energy Trust refers customers to the network of licensed and insured, independent trade ally contractors. Trade allies receive training and support from Energy Trust to stay up to date on the latest Energy Trust standards, incentives, and quality requirements. Maintaining a high-performing trade ally network is thus of great importance for Energy Trust to deliver high-quality programs to its customers.

The main goal of this study is to collect feedback from trade allies to enhance offerings to both trade allies and customers, to improve communications, and to gather insights for future planning to provide more value for participating trade allies. The previous Trade Ally Survey was conducted in 2013.

## 2. Methodology

This section describes the detailed methodologies used to implement the survey.

#### 2.1. Survey Instrument

Energy Trust provided the research team with the draft survey instrument, which included many of the same questions from the Trade Ally Survey conducted in 2013, which used a mixed mode (telephone and web). The research team made minor revisions in several questions to improve comprehensibility and flow and edited some questions to make them more implementable in a fully online format.

The questionnaire consisted of 70 questions, eight of which were open-ended. The median completion time was 22 minutes.

#### 2.2. Sampling

The sampling goal was to obtain a sufficient number of completed surveys that represented the various geographic areas of Energy Trust service territory, and both high and low activity levels. Based on the trade ally data Energy Trust provided, we divided the population into five geographic strata, assigning each ally to the Energy Trust region in which the ally was most active in 2018 or to a "Multiple Regions" stratum if that ally did a similar amount of work across at least two strata. We also stratified the population into low-activity or "inactive" firms – those with fewer than 10 Energy Trust projects in 2017 and 2018 combined – and high-activity or "active" firms – those with 10 or more projects. Trade ally firms who were not associated with any Energy Trust projects in 2017 or 2018 were not invited to take the survey. Additionally, we excluded some commercial and industrial trade allies that were planned to be interviewed for program process evaluations around the same time as this survey to avoid survey fatigue.

The research team set quotas based on the proportion of the population that was in each of the 10 resulting strata. We obtained 180 survey responses, including 31 (17%) partial responses.<sup>1</sup>

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We included respondents as a partial response if the respondent completed at least Q6 (How many people work at your company in each region in Oregon and SW Washington?) which is the end of the firmographic questions.

**Table 2-1: Population and Final Sample** 

		Population				Final Sample						
	Ina	Inactive Active		T	Total Inactive		Active		Total			
	n	Col.%	n	Col.%	n	Col.%	n	Col.%	n	Col.%	n	Col.%
Portland Metro & Columbia Gorge	79	17%	70	22%	149	19%	15	15%	20	25%	35	19%
Willamette Valley & North Coast	45	9%	40	13%	85	11%	5	5%	10	12%	15	8%
Southern Oregon	22	5%	32	10%	54	7%	2	2%	7	9%	9	5%
Central & Eastern Oregon	36	8%	14	4%	50	6%	7	7%	4	5%	11	6%
SW Washington	8	2%	7	2%	15	2%	4	4%	3	4%	7	4%
Multiple Regions	285	60%	154	49%	439	55%	66	67%	37	46%	103	57%
Total	475	100%	317	100%	792	100%	99	100%	81	100%	180	100%

#### 2.3. Distribution

We implemented the survey using the *Qualtrics* survey platform from July 10 to August 31, 2018. Following the advance email sent directly from Energy Trust program staff, the research team sent an initial survey invitation and three reminder emails to non-respondents as well as the final reminder phone calls. As a survey incentive, we offered an instant \$10 e-gift card, which was delivered immediately after their survey submission. The total response rate was 23%.

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## 3. Results

This section provides the results of the question-by-question analysis. The responses to most questions were cross-tabulated by Energy Trust's primary market sectors – single-family homes, multifamily, commercial, industrial and agricultural, and solar – so that the results can be examined within each of the market sectors. The total of 180 respondents include 31 partial respondents; therefore, the count of respondents (the "n") changes throughout the analysis.

## 3.1. Respondents Characteristics

Most respondents (90%) were the owner or administrative staff who assume some administrative or management responsibilities at their company.

Table 3-1: Roles in the Company (n=178)

Role		Percent
Owner / Principal		48%
Administrative / Office Staff		31%
Project Manager / Estimator		11%
Technician / Installer		3%
Other (Please Specify)		7%
	Total	100%

Q1: Please select a category that best describes your job responsibility.

About half or more respondents said their company serves single-family homes (78%), the commercial sector (53%), or the multifamily sector (49%). A quarter of the respondent companies (25%) reported that they serve the industrial and agricultural sector. Only 17% of the respondent companies said they serve the solar sector.

Table 3-2: Market Sectors Served by the Respondent Companies

	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
Count	140	89	95	44	28	180
Percent	78%	49%	53%	25%	17%	100%

Q2: Which market segment(s) does your company serve? (Multiple responses allowed)

Table 3-3 to Q2 (Industrial & Ag): Please choose all the types of industrial and agricultural facilities your company serves. (Multiple responses allowed)

Table 3-7 show which sub-segments the respondents' companies serve within each of the five Energy Trust's market sectors.

Table 3-3: Subsegments of Single-Family Homes Market (n=140)

Single-Family Home Subsegment	Percent
Owner-occupied	99%
Rentals	74%
Manufactured homes	66%

Q2 (Single-family): Please choose all the types of  $\underline{\text{single-family homes}}$  your company serves. (Multiple responses allowed)

Table 3-4: Subsegments of Multifamily Homes Market (n=89)

Multifamily Home Subsegment	Percent
Individual unit owners	85%
Condominiums/HOAs	83%
Affordable housing	69%
Assisted living	56%
Market rate	27%
Campus living	20%

Q2 (Multifamily): Please choose all the types of multifamily homes your company serves. (Multiple responses allowed)

Table 3-5: Subsegments of the Commercial Market (n=98)

Commercial Market Subsegment	Percent
Small business	98%
Foodservice	63%
Large commercial	60%
Lodging	53%
Grocery	51%

Q2 (Commercial): Please choose all the types of commercial buildings your company serves. (Multiple responses allowed)

Table 3-6: Subsegments of the Industrial and Agricultural Market (n=44)

Industrial/Agriculture Market Subsegment	Percent
Small business	89%
General manufacturing	70%
Cannabis	66%
Refrigerated warehousing & storage	59%
Computer & Electronic manufacturing	52%
Food manufacturing	52%
Greenhouse	52%
Wood product manufacturing	48%
Beverage & Tobacco manufacturing	45%
Sewage/wastewater treatment	43%
Water supply systems	41%
Apparel manufacturing	39%

Q2 (Industrial & Ag): Please choose all the types of industrial and agricultural facilities your company serves. (Multiple responses allowed)

Table 3-7: Subsegments of the Solar Markets (n=28)

Solar Market Subsegment	Percent
Small commercial	96%
Residential	89%
Large commercial	46%

Q2 (Solar): Please choose all the types of <u>solar markets</u> your company serves. (Multiple responses allowed)

## 3.2. Firmographics

Almost 80% of respondent trade ally companies are small companies with fewer than 20 employees, half of which (39%) are very small companies with fewer than five employees. Sixteen percent are medium-sized companies with a more than 20 and fewer than 100 employees. Three percent of the trade allies are large companies with more than 100 employees. Trade ally companies serving the solar sector seem smallest in general, but company sizes are generally similar across the other market sectors.

Table 3-8: The Number of Employees by Market Sector

Number of Employees	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=140)	(n=89)	(n=95)	(n=44)	(n=28)	(n=178)
Fewer than 5	39%	29%	32%	34%	46%	39%
5 to 19	44%	47%	40%	41%	29%	40%
20 to 49	13%	17%	17%	11%	11%	13%
50 to 99	3%	4%	5%	5%	7%	3%
100 or more	1%	2%	6%	9%	7%	3%
Tota	l 100%	100%	100%	100%	100%	100%

Q5: Please provide the number of people employed at your business.

About a quarter of the responding trade ally companies focus on the Portland & Columbia Gorge region (27%). About one in six trade ally companies focus on the Willamette Valley (16%) and Southern Oregon (16%) regions, each. Fourteen percent of the trade ally companies focus on other regions, including SW Washington (4%). About another quarter (26%) focus on multiple Energy Trust regions. The distribution of trade ally companies across the regions is generally similar across sectors, although those working in the solar market appear to have a stronger focus in Southern Oregon than do trade allies in other sectors.

Table 3-9: Focused Region (By the Number of Employees) by Market Sector

Region	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=140)	(n=89)	(n=95)	(n=44)	(n=28)	(n=180)
Portland & Columbia Gorge	24%	22%	24%	20%	29%	27%
Willamette Valley	18%	18%	19%	16%	18%	16%
Southern Oregon	16%	16%	15%	16%	25%	16%
Central Oregon	6%	2%	4%	7%	4%	6%
SW Washington	6%	7%	4%	0%	0%	4%
North Coast	3%	2%	3%	2%	4%	2%
Eastern Oregon	2%	3%	3%	2%	0%	2%
Multiple regions	24%	28%	26%	36%	21%	26%
Refused	1%	1%	1%	0%	0%	2%
Total	100%	100%	100%	100%	100%	100%

Q6: How many people work at your company in each region in Oregon and SW Washington?

We considered the region with the highest number of employees as their focused region. If the same number of employees are working in more than two regions, we considered they are focused on multiple regions.

When asked to select the Oregon regions by county in which they serve for each sector, across the sectors, more than half of responding trade allies reported serving Portland & Columbia Gorge (56%) and Willamette Valley (51%) areas. About a third of the allies are serving Southern Oregon (35%), North Coast (33%), and Central Oregon (31%) areas. Only a small portion of the trade allies report serving Eastern Oregon (18%) and SW Washington (14%) areas. Note that solar trade allies were not asked this question.

Table 3-10: Regions Served (By County) by Market Sector

Region	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=140)	(n=89)	(n=95)	(n=44)		(n=180)
Portland & Columbia Gorge	43%	24%	27%	22%	-	56%
Willamette Valley	37%	21%	27%	16%	-	51%
Southern Oregon	24%	15%	22%	13%	-	35%
North Coast	22%	12%	19%	11%	-	33%
Central Oregon	19%	10%	19%	13%	-	31%
Eastern Oregon	11%	8%	14%	9%	-	18%
SW Washington	12%	8%	6%	1%	-	14%

Q7: For each sector, please select the counties you serve. Select all that apply. (Multiple responses allowed)

Across the market sectors, about two-thirds of responding trade allies have been working with Energy Trust longer than five years. Eleven percent are new, with two years or less since becoming an Energy Trust trade ally.

Table 3-11: The Number of Years as Energy Trust Trade Ally by Market Sector

Number of Years		Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
		(n=140)	(n=89)	(n=95)	(n=44)	(n=28)	(n=178)
0 to 2 years		9%	8%	8%	14%	7%	11%
3 to 5 years		18%	10%	14%	20%	21%	17%
More than 5 years		66%	72%	71%	61%	64%	67%
Unsure		7%	10%	7%	5%	7%	6%
	Total	100%	100%	100%	100%	100%	100%

Q3: How long have you been an Energy Trust trade ally?

Overall, 45% of responding trade allies reported a small portion (less than 25%) of their 2017 revenues came from projects that received an Energy Trust incentive, 16% reported a medium portion (25-49%),

and 30% of the allies reported a large portion (50% or more) from Energy Trust projects. Energy Trust projects generated a larger proportion of revenues for companies serving the solar market compared to other sectors.

Table 3-12: 2017 Revenues from Energy Trust Projects

Percent of Revenues	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=138)	(n=87)	(n=93)	(n=44)	(n=28)	(n=174)
0%	4%	3%	2%	2%	0%	4%
1% to 24%	40%	38%	46%	45%	32%	41%
25% to 49%	18%	21%	20%	23%	14%	16%
50% to 74%	14%	14%	12%	9%	18%	14%
75% to 99%	14%	11%	8%	11%	25%	14%
100%	1%	1%	0%	0%	0%	2%
Don't know	8%	11%	12%	9%	11%	8%
To	tal 100%	100%	100%	100%	100%	100%

Q12: Approximately what percentage of your company's 2017 revenues in Oregon came from jobs participating in Energy Trust programs?

Just more than half of responding trade allies (53%) reported their customers are typically located within 25 miles of travel. For about 30%, typical travel distance to their customers is between 26 and 50 miles. Sixteen percent of the allies need to travel more than 50 miles for a typical job. Companies serving the industrial and agricultural sector seem to have longer travel distances to their customers, typically.

**Table 3-13: Typical Distance to Customers** 

Distance	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=138)	(n=87)	(n=92)	(n=43)	(n=28)	(n=173)
0 to 25 miles	57%	53%	45%	30%	39%	53%
26 to 50 miles	30%	33%	37%	40%	32%	31%
51 to 75 miles	6%	7%	9%	16%	18%	8%
76 to 100 miles	1%	0%	3%	5%	4%	3%
101 to 125 miles	2%	3%	3%	7%	4%	2%
More than 125 miles	2%	2%	2%	2%	4%	2%
Don't know	1%	1%	1%	0%	0%	1%
Total	100%	100%	100%	100%	100%	100%

Q14: What is the typical distance, from your office location, that your company travels to serve a customer?

Maximum distances responding trade ally companies travel to get to a typical job site range widely. About 30% do not travel more than 50 miles, while 26% travel more than 100 miles. Companies serving the commercial, industrial and ag, and solar market sectors are more likely to travel more than 100 miles to reach their job sites.

**Table 3-14: Maximum Distance to Customers** 

Distance	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=138)	(n=87)	(n=92)	(n=43)	(n=28)	(n=173)
0 to 25 miles	12%	8%	5%	2%	0%	10%
26 to 50 miles	23%	20%	15%	7%	14%	21%
51 to 75 miles	20%	17%	14%	14%	25%	18%
76 to 100 miles	20%	26%	22%	21%	21%	20%
101 to 125 miles	7%	7%	7%	7%	7%	5%
More than 125 miles	14%	15%	29%	44%	29%	21%
Don't know	5%	7%	8%	5%	4%	5%
Total	100%	100%	100%	100%	100%	100%

Q13: What is the maximum distance, from your office location, that your company travels to serve a customer for a typical job?

Overall, 12% of responding trade ally companies are women-owned, 9% are veteran-owned, and 6% are minority-owned.

Table 3-15: Minority-, Women-, and Veteran-Owned Businesses

Ownership	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=140)	(n=89)	(n=95)	(n=44)	(n=28)	(n=180)
Women-owned	14%	15%	13%	11%	7%	12%
Veteran-owned	9%	11%	9%	11%	4%	9%
Minority-owned	7%	8%	5%	2%	0%	6%
Any of the above	25%	27%	24%	23%	11%	23%

Q4: Please select all that apply to your firm. Minority-owned, women-owned, and veteran-owned businesses. (Multiple Responses Allowed)

More than a quarter of responding trade ally companies (27%) have staff who can support customers in participating in Energy Trust program in at least one non-English language.<sup>2</sup> Spanish is the most prevalent non-English language supported.<sup>3</sup>

**Table 3-16: Languages Supported** 

Language	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=138)	(n=87)	(n=92)	(n=43)	(n=28)	(n=173)
Spanish	25%	24%	24%	9%	14%	23%
Chinese	0%	0%	3%	5%	4%	2%
Vietnamese	1%	1%	2%	2%	4%	2%
Russian	1%	0%	1%	2%	4%	1%
Japanese	0%	0%	0%	0%	0%	0%
Other languages	4%	6%	7%	5%	7%	4%
Any non-English language	28%	28%	29%	14%	25%	27%

Q16: Do any of your staff support non-English speaking customers in filling out applications and explaining Energy Trust program offerings? Which languages are your staff able to support? (Multiple Responses Allowed)

The prevalence of current customers served that are non-native-English speakers is small. The majority of responding trade allies (85%) report that less than 25% of their revenues are associated with non-native-English speakers.

Table 3-17: Sales Associated with Customers for Whom English is Not the First Language

Percent of Sales	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=138)	(n=87)	(n=92)	(n=43)	(n=27)	(n=172)
0%	28%	22%	26%	33%	41%	29%
1% to 24%	57%	62%	55%	51%	41%	56%
25% to 49%	3%	2%	1%	0%	0%	2%
50% to 74%	1%	0%	0%	0%	0%	1%
75% to 99%	0%	0%	1%	0%	0%	1%

By comparison, note that 15% of the Oregon population speak a language other than English at home, and 6% of the Oregon population speak English less than "very well." Source: U.S. Census Bureau, American Community Survey, 2009-2013, Table 38. https://www.census.gov/data/tables/2013/demo/2009-2013-lang-tables.html.

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Nine percent of the Oregon population speak Spanish at home, and 4% speak English less than "very well." U.S. Census Bureau, American Community Survey, 2009-2013, Table 38, op. cit.

Percent of Sales		Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
		(n=138)	(n=87)	(n=92)	(n=43)	(n=27)	(n=172)
100%		0%	0%	0%	0%	0%	0%
Don't know		11%	14%	16%	16%	19%	11%
	Total	100%	100%	100%	100%	100%	100%

Q18: Around what percentage of sales are associated with customers that are non-native English speakers?

Trade allies reported that cash (95%), financing (72%), and credit cards (70%) are the most common methods of payments their customers use to pay for their projects.

Table 3-18: Methods of Payment

Payment Method	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=105)	(n=70)	(n=68)	(n=31)	(n=22)	(n=128)
Cash	95%	99%	97%	97%	95%	95%
Financing	72%	71%	74%	68%	59%	72%
Credit card	74%	80%	78%	65%	41%	70%
Grant	12%	16%	19%	32%	32%	14%
Other	9%	10%	4%	6%	0%	8%
Combination	15%	19%	22%	32%	45%	21%

Q19: How are your customers most often paying for their projects? (Multiple Responses Allowed)

When asked to describe the trade allies' primary customer base in their own words, 151 trade allies provided a wide range of descriptions of their customers. Appendix C Table C-1 provides verbatim responses by market sector.

## 3.3. Program Paperwork and Participation

Across the market sectors, three-quarters of responding trade ally companies (76%) reported completing the program paperwork for their customers most or all of the time. Eight percent of the trade allies reported they never complete paperwork for their customers.

Table 3-19: Frequency of Completing Program Paperwork for Customers?

Frequency	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=131)	(n=83)	(n=87)	(n=41)	(n=24)	(n=163)
Yes, occasionally (about 25% of the time)	6%	5%	6%	10%	4%	7%
Yes, sometimes (about 50% of the time)	9%	7%	9%	5%	4%	8%
Yes, most of the time (about 75% of the time)	20%	19%	21%	24%	17%	21%
Yes, all of the time	57%	63%	59%	56%	71%	55%
No	6%	5%	5%	5%	4%	8%
Don't know	2%	1%	1%	0%	0%	1%
Total	100%	100%	100%	100%	100%	100%

Q21: Does your firm complete your customers' program paperwork?

The most common reasons trade allies gave for not completing some to all of the paperwork for their customers are that the customers prefer to complete it (54%), the trade ally lacked the necessary information to complete it (46%), and that the amount of paperwork is overwhelming (33%).

**Table 3-20: Reasons for Not Completing the Program Paperwork** 

Reasons	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=20)	(n=10)	(n=13)	(n=6)	(n=2)	(n=24)
The customer prefers to complete the paperwork.	60%	40%	54%	17%	0%	54%
I don't have access to the necessary information.	40%	40%	54%	50%	0%	46%
The amount of paperwork is excessive.	35%	30%	31%	17%	0%	33%
I don't have access to the application.	15%	0%	8%	17%	0%	17%
The paperwork is too complex or confusing.	10%	10%	23%	17%	0%	13%
Other reason	10%	0%	0%	0%	0%	8%

Q22: Please select and rank the three most common reasons you did not complete most or all of the paperwork for a customer by dragging the items into each box. (Multiple responses allowed)

The majority of responding trade allies (86%) reported they never provide an equivalent discount to the incentive amount to avoid submitting Energy Trust application. Seven percent of the allies reported they use this method at varying frequencies.

Table 3-21: Frequency of Providing Discount to Avoid Paperwork

Percent of Jobs	:	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
		(n=129)	(n=81)	(n=86)	(n=40)	(n=18)	(n=156)
Never		88%	93%	87%	83%	83%	86%
1% to 24% of jobs		2%	0%	2%	5%	0%	3%
25% to 49% of jobs		3%	1%	2%	0%	6%	3%
50% to 74% of jobs		0%	0%	0%	0%	0%	0%
75% to 99% of jobs		0%	0%	0%	0%	0%	0%
100% of jobs		0%	1%	1%	3%	6%	1%
Don't know		7%	5%	7%	10%	6%	8%
	Total	100%	100%	100%	100%	100%	100%

Q23: How often do you provide a discount equivalent to an Energy Trust incentive to avoid submitting paperwork?

Ninety percent of responding trade ally companies reported their top management and administrative staff have a significant role in processing Energy Trust applications for their customers. Eighteen percent of trade ally companies assign their sales staff to do the job.

**Table 3-22: Staff Who Process Energy Trust Applications** 

Staff Category	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=129)	(n=81)	(n=85)	(n=39)	(n=22)	(n=160)
Owner/top management	43%	38%	36%	51%	55%	46%
Administrative staff	49%	59%	54%	33%	41%	44%
Sales staff	16%	20%	25%	26%	18%	18%
Technicians	7%	9%	5%	5%	9%	7%
None	3%	1%	4%	5%	0%	4%
Other	8%	5%	7%	3%	5%	8%

Q25: Which staff member(s), if any, of your firm have a significant role in processing applications for your customers? (Multiple responses allowed)

Most of the responding trade allies serving the single-family (75%), multifamily (76%), and commercial (65%) market sectors reported spending less than one hour on average to complete an Energy Trust application. Industrial and agriculture and solar market sector allies are more likely than others to report spending more than one hour on average. Eight percent of responding trade allies reported spending more than two hours on average to complete an application. Twelve percent of respondents were not able to give an estimate of average time to complete an Energy Trust application.

Table 3-23: Average Time Spent on Completing an Energy Trust Application

Amount of Time	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=129)	(n=81)	(n=85)	(n=39)	(n=22)	(n=160)
Less than 30 minutes	48%	51%	39%	21%	9%	41%
30 to 60 minutes	27%	25%	26%	31%	32%	27%
1 hour up to 2 hours	9%	14%	16%	26%	23%	13%
>2 hours up to 4 hours	3%	2%	8%	8%	18%	6%
>4 hours up to 6 hours	1%	1%	1%	3%	5%	1%
More than 6 hours	1%	1%	2%	5%	5%	1%
Unknown	11%	6%	7%	8%	9%	12%
Total	100%	100%	100%	100%	100%	100%

Q26: What is the average time your company spends completing an Energy Trust application?

Despite the amount of time spent on each application, 68% of responding trade allies think the amount of time it takes to complete an application is within a "reasonable" range. The majority of the solar sector allies (59%), however, think it takes an "unreasonable" amount of time to complete an application.

Additionally, when asked to provide suggestions for how Energy Trust could improve the forms to lower the administrative cost to trade ally firms, 86 respondents provided improvement suggestions. Topics included the changing application forms to reduce required information, web-based submission system, submission or payment process changes, and other topics. Appendix C Table C-2 provides the verbatim responses by market sector.

Table 3-24: Reasonableness of the Amount of Time Spent on the Application

Reasonableness	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=127)	(n=80)	(n=84)	(n=39)	(n=22)	(n=158)
It is very reasonable	24%	23%	24%	18%	18%	22%
It is reasonable	47%	49%	40%	46%	18%	46%
It is slightly unreasonable	11%	14%	14%	18%	45%	15%
It is very unreasonable	6%	8%	10%	10%	14%	6%
I don't know	9%	5%	6%	8%	5%	9%
Other (please specify)	2%	3%	6%	0%	0%	3%
Total	100%	100%	100%	100%	100%	100%

Q27: Is the amount of time your company spends completing Energy Trust applications reasonable?

Overall, 30% of responding trade allies anticipate an increase in Energy Trust projects next year compared to 2017 and 2018, 18% anticipate a decrease, and 39% anticipate no change. A higher proportion of solar respondents (41%) anticipate a decrease compared to other sectors.

When respondents that anticipate a decrease were asked to provide the cause for the expected future decrease in Energy Trust projects, 29 allies provided a range of responses. Appendix C Table C-4 provides the verbatim responses by market sector.

Table 3-25: Anticipated Change in the Energy Trust Projects Next Year Compared with 2017/2018

Anticipated Change	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=127)	(n=80)	(n=84)	(n=39)	(n=22)	(n=158)
Expect to increase proportion of projects	32%	36%	30%	38%	23%	30%
Expect to decrease proportion of projects	17%	18%	23%	18%	41%	18%
Don't project a change in proportion of projects	39%	36%	37%	41%	32%	39%
Don't know	12%	10%	11%	3%	5%	12%
Total	100%	100%	100%	100%	100%	100%

Q36: Compared to 2017 and 2018 so far, do you anticipate a change in the proportion of your projects involving Energy Trust over the next year?

About a quarter of respondents (24%) reported they would be "very interested" in learning about internship or apprenticeship programs. Another quarter of respondents (27%), however, reported they were "not interested".

**Table 3-26: Interest in Internship Programs** 

Level of Interest	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=127)	(n=77)	(n=62)	(n=20)	(n=14)	(n=127)
Very interested	24%	29%	31%	20%	14%	24%
Somewhat interested	37%	40%	40%	45%	29%	37%
Not interested	27%	22%	24%	30%	43%	27%
I don't know	12%	9%	5%	5%	14%	12%
Total	100%	100%	100%	100%	100%	100%

Q38: Energy Trust is aware of a workforce development organization that could provide a vetted pool of youth candidates interested in pursuing an apprenticeship or summer internship in your industry. This organization would handle all payroll administration and wages, employer of record services, workers' compensation issues, etc. Are you interested in utilizing such a service? If so, Energy Trust may contact you with more information.

Respondents who reporting being "very interested" or "somewhat interested" in the potential internship offer most commonly reported (53%) they would prefer the minimum age requirement to be 18 years-old.

Table 3-27: Minimum Age Requirement for Internship or Apprenticeship

Minimum Age		Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
		(n=78)	(n=53)	(n=44)	(n=13)	(n=6)	(n=78)
16 to 17 years old		9%	8%	5%	0%	0%	9%
18 to 20 years old		53%	57%	55%	62%	67%	53%
21 to 24 years old		17%	21%	25%	15%	0%	17%
No preference		22%	15%	16%	23%	33%	22%
Other		0%	0%	0%	0%	0%	0%
	Total	100%	100%	100%	100%	100%	100%

Q39: What would be the minimum age requirement you would be interested in?

About two-thirds of respondents (64%) reported using subcontractors for less than 25% of their jobs. In contrast, about a quarter of respondents (26%) use subcontractors for 50% or more of their jobs.

**Table 3-28: Percentage of Jobs Using Subcontractors** 

Percentage		Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
		(n=127)	(n=80)	(n=84)	(n=39)	(n=22)	(n=158)
0%		28%	30%	23%	26%	23%	27%
1% to 24%		33%	38%	46%	49%	27%	37%
25% to 49%		10%	14%	13%	5%	14%	10%
50% to 74%		8%	8%	7%	3%	9%	6%
75% to 99%		8%	5%	2%	3%	0%	8%
100%		13%	5%	8%	15%	27%	12%
Don't know		1%	1%	0%	0%	0%	1%
	Total	100%	100%	100%	100%	100%	100%

Q33: In what percentage of your jobs do you use a subcontractor?

Of the 115 respondents who reported using subcontractors, a large percentage (40%) could not say what percentage of their subcontracted jobs are with minority-, women-, or veteran-owned firms. Of those who were able to report the percentage, about a quarter (26%) reported that they have never used minority-, women-, or veteran-owned firms. Taking the midpoint of each percentage range (e.g, the midpoint of the range 1% - 24% is 13%), however, we can estimate a mean of 7% of subcontracted jobs use minority-, women-, or veteran-owned firms. By comparison, about 24% of the survey respondent firms themselves were minority-, women-, or veteran-owned.

Table 3-29: Percentage of Subcontracted Jobs that Use Minority-, Women-, or Veteran-Owned Firms

Percentage		Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
		(n=91)	(n=55)	(n=65)	(n=29)	(n=17)	(n=115)
0%		25%	18%	14%	17%	41%	26%
1% to 24%		22%	31%	34%	31%	29%	26%
25% to 49%		5%	5%	3%	3%	0%	4%
50% to 74%		3%	4%	3%	0%	0%	3%
75% to 99%		1%	2%	0%	0%	0%	1%
100%		0%	0%	0%	0%	0%	0%
Don't know		43%	40%	46%	48%	29%	40%
	Total	100%	100%	100%	100%	100%	100%

Q34: What percentage of your subcontracted jobs are with minority and women-owned, and/or veteran-owned firms?

Across market sectors, responding trade allies most typically subcontract electrical work (75%), followed by plumbing work (33%). Many allies (31%) also reported other, more specialized work is subcontracted.

Table 3-30: Types of Work Typically Subcontracted

Type of Subcontractor	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=91)	(n=55)	(n=65)	(n=29)	(n=17)	(n=115)
Electrical	77%	76%	74%	66%	71%	75%
Plumbing	35%	29%	29%	17%	18%	33%
Heating, ventilation, and air conditioning	20%	11%	12%	17%	6%	21%
Insulation	21%	11%	9%	7%	6%	18%
Other	30%	29%	32%	34%	29%	31%

Q35: What type of work do you typically subcontract? (Multiple responses allowed)

#### 3.4. Solar Market Participation

The questions in this Section 3.4 were presented only to those who reported serving the solar market sector.

More than two-thirds of responding solar trade allies (68%) reported that the sunset of the Residential Energy Tax Credit (RETC) in 2017 has caused their solar-related business approach to change in 2018.

Table 3-31: Impact of RETC Sunset (n=22)

Caused Business Approach to Change in 2018?		Percent
Yes		68%
No		14%
Don't know		18%
	Total	100%

Q41: Did the Residential Energy Tax Credit (RETC) sunset cause your solar electric business approach to change in 2018 compared to 2017?

More than two-thirds of responding solar trade allies (68%) indicated their 2017 revenues were mostly from solar projects. About a third (32%), however, reported more than 75% of their 2017 revenues were from non-solar projects.

Table 3-32: Non-Solar Jobs of 2017 Revenue (n=22)

Percent of Revenue		Percent
0%		27%
1% to 24%		27%
25% to 49%		14%
50% to 74%		0%
75% to 99%		32%
100%		0%
Don't know		0%
	Total	100%

Q40: What percent of your 2017 revenue came from non-solar jobs?

In both residential and commercial markets, more than a third of solar respondents (35% and 38% respectively) reported having no projects currently planned. Some of the respondents reported having projects in the one-month pipeline (55% and 29% respectively), but there are very few projects planned beyond that timeline.

**Table 3-33: Current Solar Project Pipeline** 

Pipeline Status	Residential (n=20)	Commercial (n=21)
Have no projects currently planned	35%	38%
Have projects to cover work for next month	55%	29%
Have projects to cover work for next 3 months	5%	19%
Have projects to cover work for next 6 months	0%	0%
Have projects to cover work beyond the next 6 months	0%	5%
Don't know	5%	10%
N/A	0%	0%
Total	100%	100%

Q42: What is your current solar electric project pipeline?

Among the solar respondents serving the residential market, there was no reporting of an increase in residential customer inquiries in solar projects in 2018 compared to 2017. Most respondents reported a decrease, and 45% indicated a decrease of greater than 50% from 2017. Among those serving the commercial market, a quarter (24%) reported no change and more than half (57%) reported a varied range of decreases in commercial customer inquiries, while only a few (14%) reported an increase.

Table 3-34: Change in Customer Inquiries in Solar Projects (n=22)

Percent Change		Residential (n=20)	Commercial (n=21)
No change		5%	24%
1% to 24% decrease		15%	14%
25% to 49% decrease		30%	19%
50% to 74% decrease		20%	5%
75% to 100% decrease		25%	19%
Increase		0%	14%
Don't know / NA		5%	5%
	Total	100%	100%

Q43: Have you observed a decrease in customer inquiries in solar electric this year compared to last year?

## 3.5. Relationship with Energy Trust

About three-quarters of the responding trade allies (76%) are satisfied overall with Energy Trust. Respondents serving the industrial and agriculture as well as solar market sectors appear to be less satisfied with Energy Trust overall (69% and 59% respectively). Respondents were most highly satisfied with interactions with and response time from the program staff. However, half of respondents (50%) were dissatisfied with incentive payment processing time, and about two-thirds of the industrial and agriculture and solar sector allies were dissatisfied with this.

Table 3-35: Satisfaction with Energy Trust (Percent of "Satisfied")

Program Aspect	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=126)	(n=79)	(n=84)	(n=39)	(n=22)	(n=157)
Interactions with Energy Trust program staff	79%	81%	86%	82%	68%	81%
Response time to requests for information or assistance	79%	82%	83%	79%	59%	78%
Quality assurance / quality control process	71%	75%	75%	69%	59%	73%
Incentive payment processing time	53%	58%	52%	38%	32%	50%
Overall satisfaction with Energy Trust	77%	82%	76%	69%	59%	76%

Q44: How satisfied are you with Energy Trust in the following categories?

Most respondents across the market sectors (89%) reported their relationship with Energy Trust has stayed the same or improved since last year. Eight percent said it declined.

Table 3-36: Change in Relationship with Energy Trust

Type of Change		Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
		(n=126)	(n=79)	(n=84)	(n=39)	(n=22)	(n=157)
Improved		21%	24%	29%	31%	23%	24%
Stayed the same		69%	68%	65%	59%	73%	65%
Declined		7%	8%	5%	10%	5%	8%
Don't know		2%	0%	1%	0%	0%	3%
	Total	100%	100%	100%	100%	100%	100%

Q45: How has your working relationship with Energy Trust changed since last year?

Those who reported a decline in their relationship with Energy Trust commonly reported the reason was decreased incentives, slow incentive processing, or non-responsiveness to questions or requests.

Table 3-37: Reasons for the Decline in Energy Trust Satisfaction (n=13)

		Percent
Incentive decrease or sunset		23%
Incentive applications processed too slowly		15%
Energy Trust staff not responsive to my questions or requests		15%
Application, data or documentation requirements became too heavy		0%
Other (please describe)		38%
Don't know		8%
1	Total	100%

Q46: What is the main reason for the decline in satisfaction of your working relationship with Energy Trust?

Those who reported an improved relationship most commonly reported the reason was the development of a good working relationship with specific program staff or an improvement in responsiveness to questions or requests.

Table 3-38: Reasons for the Improvement in Energy Trust Satisfaction (n=38)

	Percent
Developed a good working relationship with specific Energy Trust program staff	47%
Energy Trust program staff became more responsive to my questions or requests	24%
I became more familiar with Energy Trust programs	16%
Application, data or documentation requirements became easier	3%
Incentive payments were processed quickly	3%
Other (please describe)	3%
Don't know	5%
Total	100%

Q47: What is the main reason for the decline in your working relationship with Energy Trust?

Across the market sectors, responding trade allies consider word of mouth, their company's own promotion, and consumer rating websites to be the top channels for generating businesses. The channels sponsored by Energy Trust, such as "Find a Contractor website" or other promotions, are also thought to be important by some allies.

**Table 3-39: Top Channels for Generating Business** 

Top Channels	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=126)	(n=79)	(n=84)	(n=39)	(n=22)	(n=157)
Word of mouth	86%	87%	92%	97%	91%	86%
Your company's promotions (advertising, news coverage)	48%	52%	45%	41%	41%	44%
Consumer rating websites (i.e. Yelp, Angie's List)	32%	33%	30%	28%	23%	27%
Energy Trust's Find a Contractor website	21%	24%	23%	15%	32%	19%
Energy Trust promotions (advertising, news coverage)	12%	16%	14%	18%	9%	12%
Other	14%	11%	15%	18%	5%	17%
Don't know	6%	5%	4%	3%	0%	6%

Q48: In your experience, what are the top channels for generating business for your company? (Multiple responses allowed)

When asked to provide suggestions on cooperative marketing materials that Energy Trust can provide that would support their sales, 60 respondents provided a variety of requests. Appendix C Table C-5 provides verbatim responses by market sector.

## 3.6. Trade Ally Forum and Training

Among the various types of support Energy Trust provides, or is considering providing, to trade allies, the most familiar to survey respondents are training about the programs or measure-specific technical training (79%), business development fund or cooperative marketing support (63%), and reimbursements for admission to energy conferences and training (55%). The least familiar type of support across the market sectors is travel reimbursements for energy conferences and training (21%).

Despite the familiarity with the various types of Energy Trust support to trade allies, the overall rates of use of the various services are fairly low. The Energy Trust-sponsored training or business development fund are among the most familiar services to trade allies, but relatively few reported already using them (15% and 19% respectively). Travel reimbursement for energy conferences and training is unfamiliar to most respondents, but a large portion of trade allies reported being interested in using it.

Table 3-40: Familiarity, Interest, and Already in Use of Energy Trust's Services to Trade Allies

Type of Support		Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
		(n=121)	(n=76)	(n=80)	(n=36)	(n=19)	(n=151)
Training about Energy	Familiar	80%	86%	86%	82%	81%	79%
Trust programs and	Interested	48%	43%	45%	50%	42%	51%
technical training on specific measures	Already using	14%	20%	21%	28%	21%	15%
Business development	Familiar	63%	72%	67%	66%	67%	63%
fund/cooperative marketing support	Interested	41%	45%	41%	36%	42%	42%
(Energy Trust co-brands on your ad and pays a portion of costs)	Already using	21%	22%	19%	14%	21%	19%
	Familiar	61%	62%	54%	47%	67%	55%
Energy conference, workshop, or training	Interested	56%	53%	55%	58%	58%	58%
reimbursements	Already using	12%	16%	15%	11%	16%	11%
Recognition of your firm at trade ally forum event	Familiar	43%	46%	61%	71%	67%	47%
	Interested	41%	43%	44%	44%	42%	44%
	Already using	2%	3%	6%	8%	5%	3%

Type of Support		Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
		(n=121)	(n=76)	(n=80)	(n=36)	(n=19)	(n=151)
Publicizing a Trade Ally	Familiar	44%	45%	52%	45%	62%	44%
of the Month in a	Interested	45%	49%	45%	44%	42%	45%
public/customer facing newsletter	Already using	4%	4%	6%	6%	5%	4%
Business development	Familiar	41%	42%	41%	37%	52%	37%
support such as receiving finance,	Interested	37%	41%	43%	50%	42%	40%
customer acquisition or employee retention training	Already using	3%	3%	4%	3%	5%	3%
	Familiar	25%	26%	23%	21%	29%	21%
Travel reimbursement for conference or training	Interested	59%	57%	61%	67%	79%	60%
	Already using	5%	8%	5%	3%	5%	4%

Q51: Are you familiar with the following types of support Energy Trust offers trade allies?

Respondents across the market sectors picked the following training topics almost equally as their top choices: savings calculation tools, code changes, selling the value of energy efficiency to customers, and program requirements and paperwork.

**Table 3-41: Top Topics for Training** 

Training Topic	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=106)	(n=66)	(n=69)	(n=33)	(n=16)	(n=130)
Savings calculation tools	51%	53%	58%	67%	50%	53%
Code changes	55%	50%	52%	42%	69%	52%
Selling the value of energy efficiency to customers	50%	50%	45%	39%	44%	52%
Program requirements and paperwork	51%	55%	52%	52%	50%	50%
Calculating customer incentives	38%	41%	45%	48%	31%	38%
Energy modeling	34%	32%	28%	30%	38%	34%
Other	2%	2%	4%	6%	0%	4%

Q57: Please rank the top three topics in which you'd like to receive training. (Multiple responses allowed)

Q51b: How interested would you be in the following types of support from Energy Trust?

One third of the respondents (34%) reported attending trade forums or training in the last year, while almost half (47%) reported they have never attended or have not attended in more than two years.

Table 3-42: Recent Trade Ally Forums and Training Attended

Forums and Training Attended	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
Attended	(n=118)	(n=74)	(n=78)	(n=36)	(n=19)	(n=148)
Spring 2018	20%	28%	32%	42%	16%	24%
Fall 2017	12%	15%	13%	14%	21%	10%
Spring 2017	6%	4%	9%	8%	0%	7%
Fall 2016	3%	3%	0%	0%	0%	2%
Spring 2016	1%	1%	3%	6%	5%	1%
More than 2 years ago	14%	12%	10%	8%	21%	15%
Never attended	35%	28%	27%	19%	26%	32%
Don't know	9%	8%	6%	3%	11%	9%
Total	100%	100%	100%	100%	100%	100%

Q53: When was the most recent trade ally forum, commercial event, or commercial lighting training you attended?

Almost all of respondents who have attended trade ally forums or tranining in the past (94%) found them "somewhat" or "very" informative.

When respondents who reported forums or trainings were "not informative" or "somewhat informative" were asked what could be improved to make those forums or trainings more valuable, 32 allies provided a variety of improvement suggestions. Appendix C Table C-6 provides verbatim responses by market sector.

Table 3-43: How Informative Were Trade Ally Forums and Training Attended

How Informative	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=72)	(n=51)	(n=56)	(n=29)	(n=13)	(n=95)
Not informative	7%	6%	4%	7%	8%	6%
Somewhat informative	68%	65%	68%	66%	92%	68%
Very informative	25%	29%	29%	28%	0%	25%
Total	100%	100%	100%	100%	100%	100%

Q54: How informative was the trade ally forum or event?

Seventeen percent of the responding trade allies reported that location makes it "very difficult" to attend or they are completely unable to attend trade forums and training.

Table 3-44: Degree to Which Location Prevents Attending Trade Ally Forums and Training

Degree of Prevention	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=118)	(n=74)	(n=78)	(n=36)	(n=19)	(n=148)
Completely - because of my location, I have never been able to attend	3%	3%	3%	0%	5%	2%
My location makes it very difficult, but not impossible, to attend	15%	11%	14%	19%	5%	15%
My location makes it inconvenient, but not overly difficult to attend	25%	27%	27%	25%	32%	24%
My location does not prevent me from attending	51%	51%	47%	50%	53%	52%
Other (please specify)	7%	8%	9%	6%	5%	7%
Total	100%	100%	100%	100%	100%	100%

Q55: To what degree does your location prevent you from attending an Energy Trust trade ally forum, commercial lighting training, or commercial trade ally event?

About two-thirds of respondents (64%) reported that it is at least "somewhat" important for trade ally forum or training breakout sessions to qualify for continuing education credits.

**Table 3-45: Importance of Continuing Education Credits for Trade Ally Forum or Training Breakout Sessions** 

Level of Importance	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=118)	(n=74)	(n=78)	(n=36)	(n=19)	(n=148)
Very important	19%	20%	22%	31%	37%	21%
Somewhat important	43%	39%	41%	28%	47%	43%
Not important	37%	41%	37%	42%	16%	36%
Tota	l 100%	100%	100%	100%	100%	100%

Q56: How important is it that forum, commercial lighting training, or commercial trade ally event breakout sessions qualify for continuing education credits?

research into action Results | Page 27

### 3.7. Communications, Website and *Insider* Newsletter

Respondents' most preferred communication channels for providing program information are emails, the *Insider* newsletter, and Energy Trust's website. Only a few mentioned social media as a preferred communication channel.

**Table 3-46: Preferred Communication Channels** 

Channel	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=114)	(n=71)	(n=72)	(n=34)	(n=17)	(n=140)
Email	84%	86%	85%	85%	82%	84%
<i>Insider</i> newsletter	66%	66%	67%	62%	71%	65%
Energy Trust website	59%	66%	63%	56%	59%	59%
Training sessions	42%	44%	50%	56%	41%	44%
Trade Ally Forums	39%	45%	42%	38%	24%	38%
Social media (Facebook, Twitter, LinkedIn)	17%	17%	14%	9%	6%	14%
Other	0%	0%	0%	0%	0%	0%

Q59: When receiving information about Energy Trust programs, what types of communications would you prefer? (Multiple responses allowed)

Across the market sectors, 83% of respondents reported reading the *Insider* email newsletter at least "sometimes." Ten percent are unfamiliar with the newsletter.

Table 3-47: Frequency of Reading the Insider Email Newsletter

Frequency	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=118)	(n=74)	(n=78)	(n=36)	(n=19)	(n=148)
Always	27%	30%	31%	31%	21%	27%
Sometimes	58%	57%	51%	50%	68%	56%
Never	7%	7%	5%	3%	5%	7%
Unfamiliar with Insider	8%	7%	13%	17%	5%	10%
Total	100%	100%	100%	100%	100%	100%

Q60: How often do you read Energy Trust's "Insider" email newsletter?

The single-family, multifamily, and commercial market sector respondents most commonly reported that a stronger focus on program updates and how to work with Energy Trust is what would make the

research into action Results | Page 28

*Insider* more useful. The industrial and agriculture market sector respondents most commonly said that more technical articles and industry news would make the *Insider* more useful.

Table 3-48: What Would Make the Insider More Useful

Type of Change	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=101)	(n=64)	(n=64)	(n=29)	(n=17)	(n=123)
More focus on program updates and how to work with Energy Trust	49%	52%	56%	38%	35%	46%
More technical articles and industry news	32%	33%	39%	45%	35%	33%
Improved search capabilities	10%	14%	16%	17%	12%	11%
Easier navigation	2%	3%	3%	7%	6%	2%
Other	9%	9%	6%	7%	6%	10%

Q61: What would make Insider more useful to you? (Multiple responses allowed)

The surveyed trade allies indicated an interest in a variety of types of articles in future newsletters, particularly articles focusing on common problems and solutions. Beyond that, their interests and priorities slightly differed depending on the market sector they serve. For example, trade allies serving the industrial and agriculture and solar sectors expressed interest in articles on emerging technologies, tax credits, and technical assistance or resources more often than those serving other sectors.

**Table 3-49: Types of Articles Most Wanted in Future Newsletters** 

Article Type	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=101)	(n=64)	(n=64)	(n=29)	(n=17)	(n=123)
Common problems/ solutions	71%	77%	73%	76%	76%	68%
Emerging technologies	52%	56%	66%	83%	76%	57%
Tax credits	50%	50%	48%	66%	82%	54%
Technical assistance or resources	44%	48%	50%	62%	59%	46%
Other	1%	2%	2%	0%	0%	1%

Q62: Which of the following types of articles would you most want to see in future newsletters? (Multiple responses allowed)

Two-thirds of respondents (67%) check the Energy Trust website a few times a month, and some (11%) check more frequently. Twenty percent of respondents said they never visit Energy Trust's website.

Table 3-50: Frequency of Visiting Energy Trust Website

Frequency	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=117)	(n=74)	(n=78)	(n=36)	(n=18)	(n=147)
Never	19%	15%	15%	22%	21%	20%
1 to 3 times a month	67%	65%	65%	64%	68%	67%
1 to 2 times a week	9%	14%	12%	8%	0%	7%
3 to 4 times a week	5%	5%	6%	3%	5%	4%
5 or more times a week	1%	1%	1%	3%	5%	1%
Total	100%	100%	100%	100%	100%	100%

Q63: How often do you visit Energy Trust's website?

Across the market sectors, the most commonly visited pages on the Energy Trust website are the program incentives pages, general program information pages, and program forms pages. Only a few respondents reported they typically visit the customer-facing pages.

Table 3-51: Pages on the Energy Trust Website Typically Visited

Website Page	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=89)	(n=57)	(n=61)	(n=26)	(n=15)	(n=111)
Program incentives	86%	87%	88%	82%	87%	85%
General program information	62%	60%	57%	64%	60%	61%
Program forms	54%	58%	52%	44%	47%	54%
Calendar/meetings	21%	23%	25%	31%	7%	23%
Customer-facing pages	13%	20%	12%	12%	13%	13%
Contractor search	12%	7%	9%	8%	20%	11%
Other	1%	2%	0%	0%	0%	1%

Q64: What pages do you typically visit on the Energy Trust website? (Multiple responses allowed)

Sixty percent of respondents who use the Energy Trust website rated it is "easy" to navigate. Only a few (3%) said it is difficult to navigate it.

research into action Results | Page 30

Table 3-52: Ease of Navigating Energy Trust Website

Rated Ease	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=95)	(n=63)	(n=66)	(n=28)	(n=15)	(n=117)
Very easy	14%	13%	12%	14%	13%	15%
Easy	48%	48%	42%	32%	33%	45%
Neither difficult nor easy	35%	37%	42%	50%	47%	37%
Difficult	3%	3%	3%	4%	7%	3%
Extremely difficult	0%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%

Q65: How easy is Energy Trust's website to navigate?

Paladin Risk Management is the third-party insurance tracking vendor that verifies that insurance coverage for trade allies meets Energy Trust requirements. Half of respondents reported they had no interactions with Paladin Risk Management over the past year. A quarter (26%) reported having interacted with Paladin Risk Management with no problems. About ten percent of respondents reported at least one problem with Paladin; the most prevalent issue reported was having to submit the same documentation multiple times.

Table 3-53: Interactions with Paladin Risk Management

Interactions	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=117)	(n=74)	(n=78)	(n=36)	(n=19)	(n=147)
I had no interactions with Paladin Risk Management	50%	57%	54%	56%	47%	50%
There were no problems with Paladin Risk Management	26%	23%	24%	17%	42%	26%
I had to submit the same documentation multiple times	7%	7%	6%	3%	5%	5%
It was difficult to contact someone at Paladin Risk Management to get information	3%	0%	0%	0%	5%	3%
Communication from Paladin Risk Management was not clear	3%	3%	1%	3%	0%	3%

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Interactions	Single-family Homes	Multifamily	Commercial	Industrial and Agricultural	Solar	Total
	(n=117)	(n=74)	(n=78)	(n=36)	(n=19)	(n=147)
Paladin Risk Management decisions were not consistent with Oregon law or regulations	1%	1%	1%	0%	0%	1%
Paladin Risk Management did not provide needed information in a timely manner	0%	0%	0%	0%	0%	0%
Other	4%	4%	4%	0%	5%	5%

Q66: In your interactions with Paladin Risk Management over the past year, which, if any, of the following have occurred? (Multiple responses allowed)

### 3.8. Star Rating System

The questions in this Section 3.8 were presented to only those who reported serving the single-family homes and/or solar market sectors.

Overall, three-quarters of the single-family and solar sector respondents (76%) reported they are familiar with Energy Trust's star system that is used to rate them. A quarter of the single-family homes respondents (24%) were unfamiliar with the system.

Table 3-54: Familiarity with Star System

5 W W 1 6 1 2		Single-family Homes	Solar	Total
Familiar with the System?		(n=117)	(n=19)	(n=124)
Yes		76%	84%	76%
No		24%	16%	24%
	Total	100%	100%	100%

Q67: Are you familiar with the Energy Trust "star" system for rating residential and solar trade allies?

Trade allies reported how they felt about a possible change to the rating calculation method. The proposed change is from the existing system, in which Energy Trust assigns a rating based on various metrics it collects (such as application quality and complaints proposed method) to one in which each trade ally's rating would be based only on ratings provided by customers who had completed Energy Trust projects with that company. While a plurality of respondents (43%) either had no opinion or did not know how they felt, significantly more respodents supported the change (41%) than did not support it (16%).

research into action\* Results | Page 32

Table 3-55: Opinion About Changes in Star Rating Based on Rating by Customers Only

O. i. i. T	:	Single-family Homes	Solar	Total
Opinion Toward Change		(n=89)	(n=16)	(n=94)
I support this change		40%	44%	41%
I do not support this change		17%	13%	16%
I don't have an opinion		26%	25%	26%
Don't know		17%	19%	17%
	Total	100%	100%	100%

Q68: Would you support a shift to a trade ally rating based only on ratings of customers who have completed Energy Trust projects with your company?

Trade allies who supported this shift in the rating method commented that this method would reflect the quality of their work more accurately and reduce the effect of quantity. Respondents that did not support this shift raised concerns such as that negative reviews tend to drag their ratings down more than positive ratings do, or that many people often complain without highlighting positive experiences.

A majority of the respondents reported that the current star rating system is at least "somewhat" clear (93%). But when asked how fair the system is to them, more than a quarter said (28%) it is at least a "slightly" unfair system.

Table 3-56: How Clear Is the Current Star Rating System?

al h		Single-family Homes	Solar	Total
Clarity		(n=89)	(n=16)	(n=94)
Very clear		51%	38%	50%
Somewhat clear		43%	50%	43%
Not clear		4%	6%	4%
Not sure		2%	6%	3%
	Total	100%	100%	100%

Q69: How clear is the current star rating system to you?

research into action Results | Page 33

Table 3-57: How Fair Is the Current Star Rating System?

Fairman		Single-family Homes	Solar	Total
Fairness		(n=89)	(n=16)	(n=94)
Fair		58%	50%	57%
Slightly unfair		20%	31%	21%
Not at all fair		8%	6%	7%
Not sure		13%	13%	14%
	Total	100%	100%	100%

Q70: How fair do you think the current star rating system is?

While most respondents (60%) remained neutral about how useful the rating system is to their customers, more said the rating system is useful (30%) than not useful (11%).

Table 3-58: How Useful Is the Current Star Rating System to Their Customers?

Hasfishass		Single-family Homes	Solar	Total
Usefulness		(n=89)	(n=16)	(n=94)
Not useful		11%	19%	11%
Neutral		61%	50%	60%
Useful		28%	31%	30%
	Total	100%	100%	100%

Q71: How useful do you think the current star rating system is to your customers?

Finally, when asked to provide final comments or suggestions for Energy Trust, 49 allies provided a variety of comments including many positive remarks and appreciation of Energy Trust work. Appendix C Table C-6 provides verbatim responses by market sector.

research into action Results | Page 34

## 4. Conclusions

Findings from the survey in general suggest that Energy Trust's trade ally network serves the trade ally community effectively, and has opportunities for improvement.

The respondents represent a large core of long-term members with a mixture of more recent entrants. They generally enjoy stable relationships with Energy Trust, with which satisfaction is high. Attitudes are generally positive about the star rating system, including a proposed change in the system, among single-family homes and solar respondents (the only ones surveyed on this topic).

Energy Trust programs significantly contribute to the trade allies' aggregate revenues, but most revenues still come from non-program projects, suggesting continuing room for program expansion. Some trade allies, however, expect an increase in Energy Trust projects next year. While this likely stemmed from their positive experience working with the Trust, this may also suggest the need of encouraging diversification of the allies' businesses and continuing monitoring their revenue sources to avert over-reliance on leveraging the incentive.

Trade allies prefer email, the *Insider* newsletter, and the Energy Trust website as sources of information about programs. They prefer the website, for information on incentives, general program information, and forms; and the *Insider*, for articles about common problems and their solutions, emerging technologies, tax credits, and technical assistance or resources. The *Insider* could be improved with more focus on program updates, how to work with Energy Trust, and more technical articles and industry news.

Among the various forms of Energy Trust support, trade allies are most familiar with, and interested in, trainings, cooperative marketing support, and reimbursements for conference, workshop, and training attendance. However, half of respondents have not attended any recent Energy Trust-sponsored trade ally forum or training. Energy Trust may achieve greater attendance by making trade allies more aware of the travel reimbursement for trade ally forums and making training and forums more informative and more relevant to continuing education credits.

Trade allies are interested in the idea of internships and apprenticeships offered through SummerWorks, a Worksystems program, which is a publicly funded paid summer internship program for diverse young adults ages 16-24 in the Portland Metro area.

About one-quarter of responding trade allies are minority-, women-, or veteran-owned businesses, and such businesses serve as subcontractors for about 11% of the subcontracted projects done by other trade allies.

Evidence is slightly mixed on how well trade allies serve non-English-speaking communities. More than one-quarter of responding trade allies have staff who speak at least one other language, which far exceeds the percentage of the Oregon population who cannot speak English very well (about 6%). On the other hand, on average, about 10% of sales are with customers for whom English is not the first language, which is less than the 15% of Oregonians who speak a non-English language at home. It may be worth attempting to investigate what additional barriers exist to reaching and serving non-English-speaking households.

#### Trade Ally Survey

Responses indicate that the incentive paperwork is not in general an excessive burden for trade allies, except in the case of solar incentives.

Solar trade allies generally depend on work in that segment, as it tends to make up a large percentage of their work and most such trade allies reported having no more than about a one-month pipeline of work. Solar sector trade allies experienced decreases in activity from 2017 in both the residential and commercial sectors, likely due to the sunset of the Residential Energy Tax Credit (RETC).

# Appendix A. Instrument

### A.1. Introduction

Thank you for taking our annual trade ally survey! Your feedback is very important to us and will help us improve our services to you. This survey includes both general and specific questions about your business. If you don't have an exact answer, please give us your best guess. Information collected in this survey will only be reported in the aggregate and your information will not be individually identified. As a thank-you for your time and input, you will receive a \$10 e-gift card immediately after completing the survey.

### A.2. Program Paperwork and Participation

Q1.	Please select a category that best describes your job responsibility.
>	Administrative / Office Staff (1)
>	Technician / Installer (2)
>	Project Manager / Estimator (3)
>	Owner / Principal (4)
>	Other (Please Specify) (5)
Q2.	Which market segment(s) does your company serve? (select all that apply)
>	Single-family homes (1)
>	Multifamily (two or more attached units) (2)
>	Commercial (3)
>	Industrial and agriculture (4)
>	Solar (5)
[DISPLA	Y THIS QUESTION: IF Q2 = 1]
Q2_SF.	Please choose all the types of single-family homes your company serves.
>	Manufactured homes (12)
>	Owner-occupied (13)
>	Rentals (14)

[DISPLA	AY THIS QUESTION: IF Q2 = 2]
Q2_MF	. Please choose all the types of multifamily homes your company serves.
>	Affordable housing (1)
>	Assisted living (2)
>	Campus living (3)
>	Condominiums / Homeowners Associations (HOAs) (4)
>	Individual unit owners (5)
>	Market rate (6)
[DISPLA	AY THIS QUESTION: IF Q2 = 3]
Q2_cor	mm. Please choose all the types of commercial buildings your company serves.
>	Foodservice (1)
>	Grocery (2)
>	Large commercial (3)
>	Lodging (4)
>	Small business (5)
[DISPLA	AY THIS QUESTION: IF Q2 = 4]
Q2_IA.	Please choose all the types of industrial and agricultural facilities your company serves.
>	Apparel Manufacturing (1)
>	Beverage & Tobacco Product manufacturing (2)
>	Cannabis (3)
>	Computer & Electronic manufacturing (4)
>	Food manufacturing (5)
>	General manufacturing (6)
>	Greenhouse (7)
>	Refrigerated Warehousing & Storage (8)
>	Sewage/wastewater treatment (9)
>	Small Business (10)
>	Water supply Systems (11)
>	Wood Product manufacturing (12)

#### [DISPLAY THIS QUESTION: IF Q2 = 5]

Q2\_Solar. Please choose all the types of solar markets your company serves.

- > Residential (1)
- Small commercial (2)
- ) Large commercial (3)
- Q3. How long have you been an Energy Trust trade ally?
  - ) 0 2 years (1)
  - 3 5 years (2)
  - Over 5 years (3)
  - ) Unsure (4)
- Q4. Please select all that apply to your firm.
  - My firm is minority-owned (1)
  - My firm is women-owned (2)
  - My firm is veteran-owned (3)
  - Decline to answer (4)
  - None of the above (5)
- Q5. Please provide the number of people employed at your business.
  - > Enter the number (1) \_\_\_\_\_
- Q6. How many people work at your company in each region in Oregon and SW Washington?

	0 (1)	1 (2)	2-4 (3)	5-9 (4)	10-24 (5)	25-49 (6)	50-99 (7)	100- 249 (8)	250- 499 (9)	500- 999 (10)	More than 1,000 (11)
North Coast (1)											
Portland Metro & Columbia Gorge (2)											
Willamette Valley (3)											
Southern Oregon (4)											
Central Oregon (5)											
Eastern Oregon (6)											
SW Washington (7)											
SW Washington (7)											

[DISPLAY THIS QUESTION: IF Q2 = 1, OR Q2 = 2, OR Q2 = 3, OR Q2 = 4]

Q7. For each sector, please select the counties you serve. Select all that apply.

	Q2 = 1 Residential (1)	Q2 = 2 Multifamily (2)	Q2 = 3 Commercial (3)	Q2 = 4 Industrial and Agriculture (4)
All Oregon Counties (1)				
Baker (2)				
Benton (3)				
Clackamas (4)				
Clatsop (5)				
Columbia (6)				
Coos (7)				
Crook (8)				
Curry (9)				
Deschutes (10)				
Douglas (11)				
Gilliam (12)				
Grant (13)				
Harney (14)				
Hood River (15)				
Jackson (16)				
Jefferson (17)				
Josephine (18)				
Klamath (19)				
Lake (20)				
Lane (21)				
Lincoln (22)				
Linn (23)				
Malheur (24)				
Marion (25)				
Morrow (26)				
Multnomah (27)				
Polk (28)				
Sherman (29)				

#### Trade Ally Survey

	Q2 = 1 Residential (1)	Q2 = 2 Multifamily (2)	Q2 = 3 Commercial (3)	Q2 = 4 Industrial and Agriculture (4)
Umatilla (30)				
Union (31)				
Wallowa (32)				
Wasco (33)				
Washington (34)				
Wheeler (35)				
Yamhill (36)				
SW Washington (38)				

- Q12. Approximately what percentage of your company's 2017 revenues in Oregon came from jobs participating in Energy Trust programs?
  - ) 0% (1)
  - ) 1% 24% (2)
  - > 25% 49% (3)
  - > 50% 74% (4)
  - > 75% 99% (5)
  - ) 100% (6)
  - ) Don't know (7)
- Q14. What is the **typical** distance, from your office location, that your company travels to serve a customer?
  - $\rangle$  0 25 miles (1)
  - > 26 50 miles (2)
  - > 51 75 miles (3)
  - > 76 100 miles (4)
  - ) 101 125 miles (5)
  - > Over 125 miles (6)
  - Don't know (7)

research into action\*

Q13.	What is the <b>maximum</b> distance, from your office location, that you are willing to travel to serve a customer for a typical job?
>	0 – 25 miles (1)
>	26 – 50 miles (2)
>	51 – 75 miles (3)
>	76 – 100 miles (4)
>	101 – 125 miles (5)
>	Over 125 miles (6)
>	Don't know (7)
Q17.	Do any of your staff support non-English speaking customers in filling out applications and explaining Energy Trust program offerings?
>	Yes (1)
>	No (2)
>	I don't know (3)
[DISPL/	AY THIS QUESTION: IF Q17 = 1]
Q16.	Which languages are supported by your staff? Select all that apply.
>	Chinese (1)
>	Japanese (2)
>	Russian (3)
>	Spanish (4)
>	Vietnamese (5)
>	Other (please specify) (6)
Q18.	Around what percentage of sales are associated with customers that are non-native English speakers?
>	0% (1)
>	1% - 24% (2)
>	25% - 49% (3)
>	50% - 74% (4)
>	75% - 99% (5)

>	100% (6)
>	Don't know (7)
Q19.	How are your customers most often paying for their projects? Please select and rank the three most common methods of payment by dragging the items to the box.
	3 most common methods of payment
>	Cash (1)
>	Credit card (2)
>	Financing (3)
>	Grants (4)
>	Combination of methods (6)
>	Other (please specify) (5)
Q20.	Please describe your primary customer base in your own words.
Q21.	Does your firm complete your customers' program paper work?
>	Yes, occasionally (about 25% of the time) (1)
>	Yes, sometimes (about 50% of the time) (2)
>	Yes, most of the time (about 75% of the time) (3)
>	Yes, all of the time (4)
>	No (5)
>	Don't know (6)
[DISPL	AY THIS QUESTION: IF Q21 = 1, OR Q21 = 2, AND IF Q2 != 5]
Q22.	Please select and rank the three most common reasons you did not complete most or all of the paperwork for a customer by dragging the items into the box.
	3 most common reasons
>	The paperwork is too complex or confusing (1)
>	The amount of paperwork is excessive (2)
>	I do not have access to the necessary information (3)
>	The customer prefers to complete the paperwork (4)
>	I do not have access to the application (5)
>	Other (please specify) (9)

[DISPL	AY THIS QUESTION: IF Q2 = 1, OR Q2 = 2, OR Q2 = 3, OR Q2 = 4]
Q23.	How often do you provide a discount equivalent to an Energy Trust incentive to avoid submitting paperwork?
>	Never (1)
>	1% - 24% of jobs (2)
>	25% - 49% of jobs (3)
>	50% - 74% of jobs (4)
>	75% - 99% of jobs (5)
>	100% of jobs (6)
>	Don't know (7)
Q25.	Which staff member(s), if any, of your firm have a significant role in processing applications for your customers? Select all that apply.
>	Owner or top management (1)
>	Sales staff (2)
>	Technicians (3)
>	Administrative staff (4)
>	None (5)
>	Other: (please specify) (6)
Q26.	What is the average time your company spends completing an Energy Trust application?
>	Less than 30 minutes (1)
>	30 - 60 minutes (2)
>	1 hour up to 2 hours (3)
>	More than 2 hours up to 4 hours (4)
>	More than 4 hours up to 6 hours (5)
>	More than 6 hours (6)
>	Unknown (7)
Q27.	Is the amount of time your company spends completing Energy Trust applications reasonable?
>	It is very reasonable (1)
>	It is reasonable (2)
>	It is slightly unreasonable (3)

>	It is very unreasonable (4)
<i>,</i>	I don't know (5)
>	Other (please specify) (6)
Q28.	Please provide any suggestions for how Energy Trust could improve our forms to lower the administrative costs to your company.
Q33.	In what percentage of your jobs do you use a subcontractor?
>	0% (1)
>	1% - 24% (2)
>	25% - 49% (3)
>	50% - 74% (4)
>	75% - 99% (5)
>	100% (6)
>	Don't know (7)
[DISPL	AY THIS QUESTION: IF Q33 = 2, OR Q33 = 3, OR Q33 = 4, OR Q33 = 5, OR Q33 = 6]
Q34.	What percentage of your subcontracted jobs are with minority and women-owned, and/or veteran-owned firms?
>	0% (1)
>	1% - 24% (2)
>	25% - 49% (3)
>	50% - 74% (4)
>	75% - 99% (5)
>	100% (6)
>	Don't know (7)
[DISPL	AY THIS QUESTION: IF Q33 = 2, OR Q33 = 3, OR Q33 = 4, OR Q33 = 5, OR Q33 = 6]
Q35.	What type of work do you typically subcontract?
>	Electrical (1)
>	Plumbing (2)
>	Insulation (3)
>	Heating, Ventilation, and Air Conditioning (4)

### Trade Ally Survey

>	Other (please describe) (5)
Q36.	Compared to 2017 and 2018 so far, do you anticipate a change in the proportion of your projects involving Energy Trust over the next year?
>	Expect to increase proportion of projects (1)
>	Expect to decrease proportion of projects (2)
>	Don't project a change in proportion of projects (3)
>	Don't know (4)
[DISPL	AY THIS QUESTION: IF Q36 = 2]
Q37.	What is the cause for the expected future decrease in projects involving Energy Trust?
[DISPL	AY THIS QUESTION: IF Q2 = 1]
Q38.	Energy Trust is aware of a workforce development organization that could provide a vetted pool of youth candidates interested in pursuing an apprenticeship or summer internship in your industry. This organization would handle all payroll administration and wages, employer of record services, workers' compensation issues, etc. Are you interested in utilizing such a service of services or the service of the services of the servi
>	Very interested (1)
>	Somewhat interested (2)
>	Not interested (3)
>	I don't know (4)
[DISPL	AY THIS QUESTION: IF Q38 = 1 OR Q38 = 2]
Q39.	What would be the minimum age requirement you would be interested in?
>	16 - 17 years old (1)
>	18 - 20 years old (2)
>	21 - 24 years old (3)
>	No preference (4)
>	Other (5)

### A.3. Solar Market Participation

Q40. What percent of your 2017 revenue came from non-solar jobs?

- ) 0% (1)
- ) 1% 24% (2)
- > 25% 49% (3)
- ) 50% 74% (4)
- > 75% 99% (5)
- ) 100% (6)
- ) Don't know (7)

Q41. Did the Residential Energy Tax Credit (RETC) sunset cause your solar electric business approach to change in 2018 compared to 2017?

- > Yes (1)
- ) No (2)

Don't know (3)

[DISPLAY THIS QUESTION: IF Q41 = 1]

Q41b. How has your business changed in its approach?

[Display This Question: If Q2 = 1, or Q2 = 3, or Q2 = 5]

Q42. What is your current solar electric project pipeline?

	Have no projects currently planned (1)	Have projects to cover work for next month (2)	Have projects to cover work for next 3 months (3)	Have projects to cover work for next 6 months (4)	Have projects to cover work beyond the next 6 months (5)	Don't know (6)	N/A (7)
Q2_Solar = 1 Residential (1)							
Q2_Solar = 2 Or Q2_Solar = 3 Commercial (2)							

[DISPLAY THIS QUESTION: IF Q2 = 1, OR Q2 = 3, OR Q2 = 5]

Q43. Have you observed a decrease in customer inquiries in solar electric this year compared to last year?

	No change (1)	1% - 24% decrease (2)	25% - 49% decrease (3)	50% - 74% decrease (4)	75% - 100% decrease (5)	Increase (6)	Don't know / NA (7)
Q2_Solar = 1 Residential (1)							
Q2_Solar = 2 Or Q2_Solar = 3 Commercial (2)							

### A.4. Relationship with Energy Trust

Q44. How satisfied are you with Energy Trust in the following categories?

	Very dissatisfied (1)	Dissatisfied (2)	Neutral (3)	Satisfied (4)	Very satisfied (5)	Don't know (6)
Incentive payment processing time (1)						
Interactions with Energy Trust program staff (2)						
Quality assurance/quality control process (3)						
Response time to requests for information or assistance (5)						
Overall satisfaction with Energy Trust (7)						

Q45. How has your working relationship with Energy Trust changed since last year?

- Significantly improved (1)
- Slightly improved (2)
- > Stayed the same (3)
- Slightly declined (4)
- Significantly declined (5)
- ) Don't know (6)

[DISPL	AY THIS QUESTION: IF Q45 = 4 OR Q45 = 5]
Q46.	What is the main reason for the decline in satisfaction of your working relationship with Energy Trust?
>	Energy Trust staff not responsive to my questions or requests (1)
>	Application, data or documentation requirements became too heavy (2)
>	Incentive applications processed too slowly (3)
>	Incentive decrease or sunset (4)
>	Other (please describe) (5)
>	Don't know (6)
[DISPL	AY THIS QUESTION: IF Q45 = 1 OR Q45 = 2]
Q47.	What is the main reason for the improvement in your working relationship with Energy Trust?
>	Energy Trust program staff became more responsive to my questions or requests (1)
>	Developed a good working relationship with specific Energy Trust program staff (2)
>	Application, data or documentation requirements became easier (3)
>	Incentive payments were processed quickly (4)
>	I became more familiar with Energy Trust programs (5)
>	Other (please describe) (6)
>	Don't know (7)
Q48.	In your experience, what are the top channels for generating business for your company? Please select all that apply.
>	Consumer rating websites (i.e. Yelp, Angie's List) (1)
>	Energy Trust Find a Contractor website (2)
>	Energy Trust promotions (advertising, news coverage) (3)
>	Word of mouth (4)
>	Your company's promotions (advertising, news coverage) (5)
>	Other (please describe) (6)
>	Don't know/Not sure (7)
Q49.	Are there any printed materials about energy efficiency or renewable energy for home or business customers that Energy Trust could provide that would support your sales? What topics would be most beneficial?

## A.5. Trade Ally Forum and Training

Q51. Are you familiar with the following types of support Energy Trust offers trade allies?

	Familiar (1)	Not familiar (2)
Business development fund/cooperative marketing support (Energy Trust co-brands on your ad and pays a portion of costs) (1)		
Business development support such as receiving finance, customer acquisition or employee retention training (2)		
Energy conference, workshop, or training reimbursements (3)		
Publicizing a Trade Ally of the Month in a public/customer facing newsletter (4)		
Recognition of your firm at trade ally forum event (5)		
Training about Energy Trust programs and technical training on specific measures (6)		
Travel reimbursement for conference or training (7)		

Q51b. How interested would you be in the following types of support from Energy Trust? If you are interested, Energy Trust may follow up with more information.

	Not at all interested (1)	Slightly interested (2)	Somewhat interested (3)	Very interested (4)	Already using (5)
Business development fund/cooperative marketing support (Energy Trust co-brands on your ad and pays a portion of costs) (1)					
Business development support such as receiving finance, customer acquisition or employee retention training (2)					
Energy conference, workshop, or training reimbursements (3)					
Publicizing a Trade Ally of the Month in a public/customer facing newsletter (4)					
Recognition of your firm at trade ally forum event (5)					
Training about Energy Trust programs and technical training on specific measures (6)					
Travel reimbursement for conference or training (7)					

Q57.	Please rank the top three topics in which you'd like to receive training, by dragging the topics into the box and ordering from 1 (most interest) to 3.
	Top 3 topics
>	Calculating customer incentives (1)
>	Code changes (2)
>	Energy modeling (3)
>	Program requirements and paperwork (4)
>	Savings calculation tools (5)
>	Selling the value of energy efficiency to customers (6)
>	Other, please specify (7)
Q52.	Have you ever attended an Energy Trust trade ally forum, commercial lighting training, or commercial trade ally event?
>	Yes (1)
>	No (2)
>	Don't know (3)
[DISPL	AY THIS QUESTION: IF Q52 = 1]
Q53.	When was the most recent trade ally forum, commercial event, or commercial lighting training you attended?
>	Spring 2018 (1)
>	Fall 2017 (2)
>	Spring 2017 (3)
>	Fall 2016 (4)
>	Spring 2016 (5)
>	More than two years ago (6)
>	Don't know (7)
[DISPL	AY THIS QUESTION: IF Q52 = 1]
Q54.	How informative was the trade ally forum or event?
>	Not informative (64)
>	Somewhat informative (65)

>	Very informative (66)
Q55.	To what degree does your location prevent you from attending an Energy Trust trade ally forum, commercial lighting training, or commercial trade ally event?
>	Completely - because of my location, I have never been able to attend (1)
>	My location makes it very difficult, but not impossible, to attend (2)
>	My location makes it inconvenient, but not overly difficult to attend (3)
>	My location does not prevent me from attending (4)
>	Other (please specify) (5)
Q56.	How important is it that forum, commercial lighting training, or commercial trade ally event breakout sessions qualify for continuing education credits?
>	Very important (1)
>	Somewhat important (2)
>	Not important (3)
[DISPL	AY THIS QUESTION: IF Q54 = 64 OR Q54 = 65]
Q58.	What could be improved to make the forums, commercial lighting training, or commercial trade ally events more valuable?
A.6.	Communications, Website and Insider Newsletter
Q59.	When receiving information about Energy Trust programs, what types of communications would you prefer? Drag as many items as you'd like into the box, and order them from the most preferred (1) to the least.
	Methods of communication
>	Energy Trust website (1)
>	Insider newsletter (2)
>	Email (3)
>	Social media (Facebook, Twitter, LinkedIn) (4)
>	Trade Ally Forums (5)
>	Training sessions (6)
>	Other (please specify) (7)

Q60.	How often do you read Energy Trust's Insider email newsletter?
>	Always (1)
>	Sometimes (2)
>	Never (3)
>	Unfamiliar with Insider (4)
[DISPLA	AY THIS QUESTION: IF Q60 = 1 OR Q60 = 2]
Q61.	What would make Insider more useful to you?
>	Easier navigation (please describe) (60)
>	More focus on program updates and how to work with Energy Trust (61)
>	More technical articles and industry news (62)
>	Improved search capabilities (63)
>	Other (please describe) (64)
>	None of the above (65)
[DISPLA	AY THIS QUESTION: IF Q60 = 1 OR Q60 = 2]
Q62.	Which of the following types of articles would you most want to see in future newsletters? Select all that apply.
>	Common problems/solutions (1)
>	Emerging technologies (2)
>	Technical assistance or resources (3)
>	Tax credits (4)
>	Other (please describe) (5)
>	None of the above (6)
Q63.	How often do you visit Energy Trust's website?
>	Never (1)
>	1 - 3 times a month (2)
>	1 - 2 times a week (3)
>	3 - 4 times a week (4)
>	5 or more times a week (5)

[DISPLA	AY THIS QUESTION: IF Q63 != 1]
Q64.	What pages do you typically visit on the Energy Trust website? Select all that apply.
>	Calendar/meetings (1)
>	Contractor search (2)
>	Customer-facing pages (3)
>	General program information (4)
>	Program forms (5)
>	Program incentives (6)
>	Other (please specify) (7)
>	Don't know (8)
[DISPLA	AY THIS QUESTION: IF Q63 != 1]
Q65.	How easy is Energy Trust's website to navigate?
>	Very easy (1)
>	Easy (2)
>	Neither difficult nor easy (3)
>	Difficult (4)
>	Extremely difficult (5)
Q66.	Energy Trust currently uses the insurance tracking company Paladin Risk Management to track insurance status for all trade allies and verify that policies are up to date. In your interactions with Paladin Risk Management over the past year, which, if any, of the following have occurred Select all that apply.
>	I had no interactions with Paladin Risk Management (1)
>	There were no problems with Paladin Risk Management (2)
>	Paladin Risk Management did not provide needed information in a timely manner (3)
>	I had to submit the same documentation multiple times (4)
>	It was difficult to contact someone at Paladin Risk Management to get information (5)
>	Communication from Paladin Risk Management was not clear (6)
>	Paladin Risk Management decisions were not consistent with Oregon law or regulations (7)
>	Other (please describe) (8)
>	None of the above (9)

# A.7. Star Rating System

Q67.	Are you familiar with the Energy Trust "star" system for rating residential and solar trade allies?
>	Yes (1)
>	No (2)
[SKIP T	TO Q67 = 2]
Q68.	Would you support a shift to a trade ally rating based only on ratings of customers who have completed Energy Trust projects with your company? For example, customers would provide a 1-5 star rating along with a narrative review which would be aggregated into a 1-5 rating for an Energy Trust ally. The rating and reviews would be available on the Find a Contractor tool.
>	I support this change (1)
>	I do not support this change (2)
>	I don't have an opinion (3)
>	Don't know (4)
>	[Display This Question: If Q68 = 1 or Q68 = 2]
>	Q68b Please explain why you would or would not support this change.
>	Q69 How clear is the current star rating system to you?
>	Very clear (1)
>	Somewhat clear (2)
>	Not clear (3)
>	Not sure (4)
Q70.	How fair do you think the current star rating system is?
>	Fair (1)
>	Slightly unfair (2)
>	Not at all fair (3)
>	Not sure (4)
Q71.	How useful do you think the current star rating system is to your customers?
>	Not useful (1)
>	Neutral (2)
>	Useful (3)

### Trade Ally Survey

Q72.	Do you have any final comments or suggestions for Energy Trust?
Q73.	Please type in your name and email address so we can send a thank you \$10 e-gift card.
>	Your name (1)
>	Email address (2)
Q74.	Finally, would you like to be contacted by an Energy Trust representative for further discussion?
>	Yes (1)
>	No (2)
[DISPL/	AY THIS QUESTION: IF ACTIVEPELIGHTING = 1]
PE ligh	ting We'd like to interview you or one of your company's representatives later for Energy Trust's

OK to be contacted (1)

box.

End Please click the "Submit" button to record your responses. You should receive an email shortly from "Tango Card" for the e-gift card.

Production Efficiency program. If you'd not like to be contacted for this interview, please uncheck the

Thank you very much for your time!

# Appendix B. Tables by Focus Region

Table B-1: The Number of Years As Energy Trust Trade Ally

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
0 - 2 years	13%	7%	0%	4%	9%	0%	25%	15%	0%	11%
3 - 5 years	17%	21%	25%	21%	9%	0%	0%	17%	0%	17%
Over 5 years	67%	72%	50%	64%	73%	67%	75%	63%	100%	67%
Unsure	4%	0%	25%	11%	9%	33%	0%	4%	0%	6%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q3: How long have you been an Energy Trust trade ally?

**Table B-2: 2017 Revenues from Energy Trust Projects** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
0%	4%	3%	0%	0%	0%	0%	25%	5%	0%	4%
1% - 24%	55%	45%	100%	29%	27%	0%	50%	30%	100%	41%
25% - 49%	9%	14%	0%	21%	27%	0%	13%	23%	0%	16%
50% - 74%	9%	17%	0%	21%	0%	33%	0%	21%	0%	14%
75% - 99%	15%	10%	0%	25%	27%	0%	0%	12%	0%	14%
100%	4%	0%	0%	0%	0%	0%	13%	0%	0%	2%
Don't know	4%	10%	0%	4%	18%	67%	0%	9%	0%	8%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q12: Approximately what percentage of your company's 2017 revenues in Oregon came from jobs participating in Energy Trust programs?

**Table B-3: Typical Distance to Customers** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
0 – 25 miles	68%	48%	50%	57%	55%	67%	63%	36%	0%	53%
26 – 50 miles	17%	41%	50%	25%	36%	33%	38%	38%	100%	31%
51 – 75 miles	9%	7%	0%	11%	9%	0%	0%	10%	0%	8%
76 – 100 miles	2%	0%	0%	0%	0%	0%	0%	10%	0%	3%
101 – 125 miles	0%	0%	0%	7%	0%	0%	0%	5%	0%	2%
Over 125 miles	2%	3%	0%	0%	0%	0%	0%	2%	0%	2%
Don't know	2%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q14: What is the typical distance, from your office location, that your company travels to serve a customer?

**Table B-4: Maximum Distance to Customers** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
0 – 25 miles	15%	14%	25%	0%	18%	0%	25%	5%	0%	10%
26 – 50 miles	28%	28%	25%	18%	27%	33%	13%	10%	0%	21%
51 – 75 miles	17%	17%	50%	25%	18%	0%	25%	12%	100%	18%
76 – 100 miles	17%	21%	0%	21%	18%	0%	25%	24%	0%	20%
101 – 125 miles	4%	3%	0%	11%	0%	0%	0%	7%	0%	5%
Over 125 miles	15%	14%	0%	18%	9%	67%	13%	38%	0%	21%
Don't know	4%	3%	0%	7%	9%	0%	0%	5%	0%	5%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q13: What is the maximum distance, from your office location, that your company travels to serve a customer for a typical job?

Table B-5: Minority-, Women-, and Veteran-Owned Businesses

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Minority-owned	6%	0%	0%	4%	9%	0%	13%	11%	0%	6%
Women-owned	10%	7%	25%	11%	18%	0%	13%	17%	0%	12%
Veteran-owned	8%	17%	0%	7%	18%	33%	0%	7%	0%	9%

Q4: minority-owned, women-owned, and veteran-owned businesses.

**Table B-6: Languages Supported** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Chinese	2%	3%	0%	0%	0%	0%	0%	2%	0%	2%
Japanese	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Russian	2%	0%	0%	0%	0%	0%	0%	2%	0%	1%
Spanish	28%	31%	25%	21%	18%	0%	13%	17%	100%	23%
Vietnamese	4%	0%	0%	0%	0%	0%	0%	2%	0%	2%
Other languages	2%	3%	0%	4%	0%	0%	13%	5%	100%	4%
Any non-English language	32%	31%	25%	25%	18%	0%	13%	24%	100%	27%

Q16: Which languages are your staff able to support?

Table B-7: Sales Associated with Customers Whose English is Not the First Language

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
0%	26%	28%	75%	30%	45%	33%	0%	31%	0%	29%
1% - 24%	57%	55%	25%	59%	36%	33%	75%	60%	100%	56%
25% - 49%	4%	0%	0%	4%	0%	0%	0%	2%	0%	2%
50% - 74%	0%	3%	0%	0%	0%	0%	0%	0%	0%	1%
75% - 99%	2%	0%	0%	0%	0%	0%	0%	0%	0%	1%
100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Don't know	11%	14%	0%	7%	18%	33%	25%	7%	0%	11%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q18: Around what percentage of sales are associated with customers that are non-native English speakers?

**Table B-8: Methods of Payment** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Cash	94%	95%	100%	100%	88%	100%	71%	97%	0%	95%
Credit card	63%	64%	100%	83%	63%	67%	86%	69%	0%	70%
Financing	89%	59%	33%	56%	88%	67%	86%	69%	0%	72%
Grant	11%	23%	0%	11%	13%	0%	0%	19%	0%	14%
Other	9%	0%	0%	11%	0%	0%	14%	13%	0%	8%
Combination	11%	27%	33%	28%	25%	33%	0%	25%	0%	21%

Q19: How are your customers most often paying for their projects?

**Table B-9: Frequency of Completing Program Paperwork for Customers?** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Yes, occasionally (about 25% of the time)	7%	3%	0%	4%	20%	0%	13%	5%	100%	7%
Yes, sometimes (about 50% of the time)	7%	10%	0%	15%	10%	0%	0%	5%	0%	8%
Yes, most of the time (about 75% of the time)	23%	17%	67%	8%	20%	0%	25%	28%	0%	21%
Yes, all of the time	43%	69%	33%	65%	50%	50%	63%	55%	0%	55%
No	18%	0%	0%	8%	0%	50%	0%	5%	0%	8%
Don't know	2%	0%	0%	0%	0%	0%	0%	3%	0%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q21: Does your firm complete your customers' program paperwork?

Table B-10: Reasons for Not Completing the Program Paperwork

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
The paperwork is too complex or confusing.	0%	25%	0%	0%	33%	0%	0%	25%	0%	13%
The amount of paperwork is excessive.	33%	25%	0%	20%	33%	0%	100%	50%	0%	33%
I don't have access to the necessary information.	67%	0%	0%	40%	100%	0%	0%	50%	0%	46%
The customer prefers to complete the paperwork.	83%	75%	0%	40%	33%	0%	100%	25%	0%	54%

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
I don't have access to the application.	17%	0%	0%	40%	33%	0%	0%	0%	0%	17%
Other reason	33%	0%	0%	0%	0%	0%	0%	0%	0%	8%

Q22: Please select and rank the three most common reasons you did not complete most or all of the paperwork for a customer by dragging the items into each box.

Table B-11: Frequency of Providing Discount to Avoid Paperwork

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Never	81%	89%	100%	86%	60%	100%	100%	90%	100%	86%
1% - 24% of jobs	9%	0%	0%	5%	0%	0%	0%	0%	0%	3%
25% - 49% of jobs	0%	4%	0%	5%	10%	0%	0%	3%	0%	3%
50% - 74% of jobs	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
75% - 99% of jobs	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
100% of jobs	0%	0%	0%	0%	0%	0%	0%	3%	0%	1%
Don't know	9%	7%	0%	5%	30%	0%	0%	5%	0%	8%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q23: How often do you provide a discount equivalent to an Energy Trust incentive to avoid submitting paperwork?

**Table B-12: Staff Who Process Energy Trust Applications** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Owner or top management	36%	38%	0%	58%	67%	0%	25%	63%	0%	46%
Sales staff	25%	21%	0%	8%	0%	0%	13%	23%	0%	18%
Technicians	9%	10%	0%	4%	0%	0%	13%	5%	0%	7%
Administrative staff	43%	55%	100%	33%	33%	50%	50%	40%	100%	44%
None	9%	0%	0%	8%	0%	50%	0%	0%	0%	4%
Other	11%	7%	0%	4%	11%	0%	25%	3%	0%	8%

Q25: Which staff member(s), if any, of your firm have a significant role in processing applications for your customers? Select all that apply.

**Table B-13: Average Time Spent on Completing an Energy Trust Application** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Less than 30 minutes	32%	34%	67%	46%	56%	100%	75%	38%	100%	41%
30 - 60 minutes	27%	38%	33%	25%	22%	0%	13%	25%	0%	27%
1 hour up to 2 hours	16%	7%	0%	8%	0%	0%	0%	23%	0%	13%
More than 2 hours up to 4 hours	5%	3%	0%	13%	0%	0%	0%	8%	0%	6%
More than 4 hours up to 6 hours	0%	3%	0%	0%	0%	0%	0%	0%	0%	1%
More than 6 hours	0%	3%	0%	0%	0%	0%	0%	3%	0%	1%
Unknown	20%	10%	0%	8%	22%	0%	13%	5%	0%	12%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q26: What is the average time your company spends completing an Energy Trust application?

Table B-14: Amount of Time Spent on the Application Reasonable?

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
It is very reasonable	16%	24%	0%	38%	13%	50%	25%	21%	0%	22%
It is reasonable	48%	45%	100%	33%	63%	0%	38%	46%	100%	46%
It is slightly unreasonable	16%	17%	0%	21%	0%	0%	25%	10%	0%	15%
It is very unreasonable	5%	3%	0%	0%	0%	50%	0%	13%	0%	6%
I don't know	11%	7%	0%	8%	25%	0%	13%	5%	0%	9%
Other (please specify)	5%	3%	0%	0%	0%	0%	0%	5%	0%	3%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q27: Is the amount of time your company spends completing Energy Trust applications reasonable?

Table B-15: Anticipated Change in the Energy Trust Projects Next Year Comparing with 2017/2018

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Expect to increase proportion of projects	32%	24%	33%	25%	25%	50%	50%	33%	0%	30%
Expect to decrease proportion of projects	14%	28%	33%	29%	0%	0%	0%	15%	100%	18%
Don't project a change in proportion of projects	43%	38%	0%	33%	50%	50%	38%	41%	0%	39%
Don't know	11%	10%	33%	13%	25%	0%	13%	10%	0%	12%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q36: Compared to 2017 and 2018 so far, do you anticipate a change in the proportion of your projects involving Energy Trust over the next year?

Table B-16: Interest in Energy Trust's Internship Program Offer

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Very interested	27%	28%	0%	21%	0%	0%	13%	31%	100%	24%
Somewhat interested	21%	44%	67%	32%	29%	100%	63%	41%	0%	37%
Not interested	36%	24%	0%	42%	43%	0%	0%	17%	0%	27%
I don't know	15%	4%	33%	5%	29%	0%	25%	10%	0%	12%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q38: Interest in ETO's internship or apprenticeship program.

Table B-17: Minimum Age Requirement for Internship or Apprenticeship

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
16 - 17 years old	19%	0%	0%	0%	0%	50%	0%	14%	0%	9%
18 - 20 years old	50%	56%	50%	40%	100%	0%	50%	57%	100%	53%
21 - 24 years old	0%	28%	50%	20%	0%	0%	33%	14%	0%	17%
No preference	31%	17%	0%	40%	0%	50%	17%	14%	0%	22%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q39: What would be the minimum age requirement you would be interested in?

**Table B-18: Proportion of Jobs Using Subcontractors** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
0%	11%	31%	33%	33%	25%	50%	38%	31%	100%	27%
1% - 24%	41%	38%	0%	46%	13%	0%	50%	33%	0%	37%
25% - 49%	11%	14%	33%	13%	0%	0%	0%	8%	0%	10%
50% - 74%	9%	3%	33%	4%	0%	0%	0%	8%	0%	6%
75% - 99%	14%	0%	0%	0%	38%	50%	0%	5%	0%	8%
100%	14%	14%	0%	4%	13%	0%	13%	15%	0%	12%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q33: In what percentage of your jobs do you use a subcontractor?

Table B-19: Proportion of Subcontractors That are Minority-, Women-, or Veteran-Owned

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
0%	21%	20%	50%	31%	20%	0%	60%	30%	0%	26%
1% - 24%	33%	20%	50%	25%	0%	0%	20%	26%	0%	26%
25% - 49%	0%	0%	0%	0%	0%	100%	20%	11%	0%	4%
50% - 74%	3%	5%	0%	0%	20%	0%	0%	0%	0%	3%
75% - 99%	3%	0%	0%	0%	0%	0%	0%	0%	0%	1%
100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q34: What percentage of your subcontracted jobs are with minority and women-owned, and/or veteran-owned firms?

Table B-20: Types of Work Typically Subcontracted

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Electrical	82%	80%	100%	75%	100%	100%	60%	56%	0%	75%
Plumbing	44%	20%	50%	25%	60%	100%	60%	19%	0%	33%
Insulation	23%	10%	50%	6%	40%	100%	20%	15%	0%	18%
Heating, ventilation, and air conditioning	31%	10%	0%	0%	60%	100%	20%	19%	0%	21%
Other	33%	20%	0%	25%	20%	0%	40%	44%	0%	31%

Q35: What type of work do you typically subcontract?

Table B-21: Non-Solar Jobs of 2017 Revenue (n=22)

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
0%	14%	40%	0%	25%	0%	0%	0%	33%	0%	27%
1% - 24%	29%	20%	0%	25%	0%	0%	0%	33%	0%	27%
25% - 49%	14%	20%	0%	25%	0%	0%	0%	0%	0%	14%
50% - 74%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
75% - 99%	43%	20%	0%	25%	0%	0%	0%	33%	0%	32%
100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Don't know	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q40: What percent of your 2017 revenue came from non-solar jobs?

Table B-22: Impact of RETC Sunset (n=22)

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Yes	57%	60%	0%	100%	0%	0%	0%	67%	0%	68%
No	0%	20%	0%	0%	0%	0%	0%	33%	0%	14%
Don't know	43%	20%	0%	0%	0%	0%	0%	0%	0%	18%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q41: Did the Residential Energy Tax Credit (RETC) sunset cause your solar electric business approach to change in 2018 compared to 2017?

**Table B-23: Satisfaction with Energy Trust** 

	Satisfaction	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Incentive	Dissatisfied	20%	21%	0%	22%	13%	50%	0%	31%	0%	22%
payment processing time	Neutral	16%	38%	0%	22%	50%	0%	25%	21%	0%	24%
processing time	Satisfied	57%	41%	67%	43%	38%	50%	75%	49%	100%	50%
	Don't know	7%	0%	33%	13%	0%	0%	0%	0%	0%	4%
Interactions	Dissatisfied	5%	3%	0%	9%	13%	50%	0%	5%	0%	6%
with Energy Trust program	Neutral	14%	10%	0%	13%	25%	0%	0%	15%	0%	13%
staff	Satisfied	82%	86%	100%	74%	63%	50%	100%	79%	100%	81%
	Don't know	0%	0%	0%	4%	0%	0%	0%	0%	0%	1%
Quality	Dissatisfied	7%	10%	0%	4%	0%	0%	0%	13%	0%	8%
assurance / quality control	Neutral	14%	17%	33%	17%	25%	50%	25%	15%	0%	17%
process	Satisfied	77%	72%	67%	70%	75%	50%	75%	69%	100%	73%
	Don't know	2%	0%	0%	9%	0%	0%	0%	3%	0%	3%

	Satisfaction	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Response time	Dissatisfied	7%	14%	0%	4%	13%	0%	0%	13%	0%	9%
to requests for information or	Neutral	11%	10%	0%	17%	25%	50%	0%	8%	0%	11%
assistance	Satisfied	82%	76%	67%	74%	63%	50%	100%	79%	100%	78%
	Don't know	0%	0%	33%	4%	0%	0%	0%	0%	0%	1%
Overall	Dissatisfied	2%	10%	0%	4%	0%	0%	0%	8%	0%	5%
satisfaction with Energy Trust	Neutral	20%	14%	33%	17%	25%	50%	13%	21%	0%	19%
2	Satisfied	77%	76%	67%	78%	75%	50%	88%	72%	100%	76%
	Don't know	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Q44: How satisfied are you with Energy Trust in the following categories?

Table B-24: Change in Relationship with Energy Trust

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Improved	30%	24%	33%	13%	0%	50%	38%	26%	0%	24%
Stayed the same	50%	69%	33%	78%	100%	50%	63%	67%	100%	65%
Declined	11%	7%	33%	9%	0%	0%	0%	8%	0%	8%
Don't know	9%	0%	0%	0%	0%	0%	0%	0%	0%	3%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q45: How has your working relationship with Energy Trust changed since last year?

**Table B-25: Top Channels for Generating Business** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused
Consumer rating websites (i.e. Yelp, Angie's List)	34%	28%	33%	17%	13%	0%	25%	28%	0%
Energy Trust Find a Contractor website	18%	34%	0%	13%	0%	0%	13%	18%	100%
Energy Trust promotions (advertising, news coverage)	11%	24%	0%	4%	0%	0%	0%	15%	0%
Word of mouth	86%	86%	100%	91%	100%	50%	88%	82%	0%
Your company's promotions (advertising, news coverage)	34%	41%	33%	39%	25%	0%	75%	59%	100%
Other	23%	10%	0%	13%	0%	50%	13%	23%	0%

Q48: In your experience, what are the top channels for generating business for your company?

Table B-26: Familiarity with Energy Trust's Services to Trade Allies

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Business development fund/cooperative marketing support (Energy Trust co-brands on your ad and pays a portion of costs)	60%	64%	50%	70%	25%	100%	75%	64%	100%	63%
Business development support such as receiving finance, customer acquisition or employee retention training	35%	46%	0%	30%	13%	50%	50%	38%	100%	37%
Energy conference, workshop, or training reimbursements	60%	50%	0%	52%	25%	50%	63%	62%	100%	55%

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Publicizing a Trade Ally of the Month in a public/customer facing newsletter	53%	43%	0%	57%	13%	100%	25%	38%	0%	44%
Recognition of your firm at trade ally forum event	47%	39%	0%	48%	38%	100%	25%	56%	100%	47%
Training about Energy Trust programs and technical training on specific measures	86%	79%	100%	65%	50%	100%	88%	82%	100%	79%
Travel reimbursement for conference or training	21%	7%	0%	26%	0%	0%	25%	33%	100%	21%

Q51: Are you familiar with the following types of support Energy Trust offers trade allies?

Table B-27: Familiarity, Interest, and Already in Use of Energy Trust's Services to Trade Allies

		Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Business development	Not at all interested	19%	32%	0%	22%	38%	0%	25%	14%	0%	21%
fund/cooperative marketing	Slightly interested	10%	25%	0%	22%	38%	0%	25%	19%	0%	19%
support (Energy Trust co-brands on your ad and	Somewhat interested	19%	11%	0%	9%	13%	0%	25%	16%	0%	15%
pays a portion of costs)	Very interested	26%	21%	100%	17%	13%	50%	25%	35%	100%	27%
	Already using	26%	11%	0%	30%	0%	50%	0%	16%	0%	19%

		Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Business development	Not at all interested	24%	36%	0%	26%	50%	0%	50%	24%	0%	28%
support such as receiving finance, customer	Slightly interested	24%	32%	0%	43%	25%	50%	25%	24%	0%	28%
acquisition or employee	Somewhat interested	26%	18%	0%	9%	13%	0%	25%	22%	0%	19%
retention training	Very interested	21%	14%	100%	13%	13%	50%	0%	30%	100%	21%
	Already using	5%	0%	0%	9%	0%	0%	0%	0%	0%	3%
Energy conference,	Not at all interested	12%	18%	0%	9%	38%	0%	13%	11%	0%	13%
workshop, or training	Slightly interested	17%	21%	0%	22%	13%	0%	38%	11%	0%	17%
reimbursements	Somewhat interested	31%	25%	0%	30%	25%	50%	13%	30%	0%	28%
	Very interested	26%	29%	100%	26%	25%	50%	25%	35%	100%	30%
	Already using	14%	7%	0%	13%	0%	0%	13%	14%	0%	11%
Q51b_4 Publicizing a	Not at all interested	26%	36%	50%	17%	50%	0%	13%	24%	0%	26%
Trade Ally of the Month in a	Slightly interested	17%	29%	0%	43%	25%	0%	38%	19%	0%	25%
public/customer facing newsletter	Somewhat interested	29%	14%	0%	13%	25%	50%	38%	24%	0%	23%
	Very interested	21%	18%	50%	22%	0%	50%	13%	30%	100%	23%
	Already using	7%	4%	0%	4%	0%	0%	0%	3%	0%	4%

		Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Q51b_5 Recognition of	Not at all interested	26%	43%	50%	26%	38%	0%	0%	35%	0%	30%
your firm at trade ally forum event	Slightly interested	12%	32%	0%	30%	38%	0%	25%	22%	0%	23%
	Somewhat interested	31%	7%	50%	13%	25%	50%	75%	19%	100%	24%
	Very interested	26%	14%	0%	30%	0%	50%	0%	19%	0%	20%
	Already using	5%	4%	0%	0%	0%	0%	0%	5%	0%	3%
Q51b_6 Training about Energy	Not at all interested	12%	18%	0%	13%	0%	0%	13%	8%	0%	11%
Trust programs and technical	Slightly interested	14%	32%	50%	35%	38%	0%	38%	14%	0%	23%
training on specific measures	Somewhat interested	36%	29%	0%	22%	25%	0%	13%	35%	0%	29%
	Very interested	19%	14%	50%	22%	25%	50%	25%	24%	100%	22%
	Already using	19%	7%	0%	9%	13%	50%	13%	19%	0%	15%
Q51b_7 Travel reimbursement	Not at all interested	19%	21%	0%	26%	25%	0%	25%	19%	0%	21%
for conference or training	Slightly interested	10%	21%	0%	26%	25%	0%	13%	11%	0%	15%
	Somewhat interested	29%	25%	0%	13%	25%	50%	25%	41%	0%	28%
	Very interested	33%	32%	100%	30%	25%	50%	25%	30%	100%	32%
	Already using	10%	0%	0%	4%	0%	0%	13%	0%	0%	4%

Q51b: How interested would you be in the following types of support from Energy Trust?

**Table B-28: Top Topics for Training** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Calculating customer incentives	38%	40%	0%	57%	50%	50%	25%	26%	100%	38%
Code changes	56%	68%	50%	38%	38%	50%	50%	45%	100%	52%
Energy modeling	38%	36%	100%	19%	25%	0%	25%	42%	0%	34%
Program requirements and paperwork	38%	48%	0%	62%	88%	0%	38%	55%	100%	50%
Savings calculation tools	56%	44%	50%	52%	50%	100%	63%	55%	0%	53%
Selling the value of energy efficiency to customers	50%	44%	100%	52%	63%	50%	75%	48%	0%	52%
Other	6%	0%	0%	5%	0%	0%	0%	6%	0%	4%

Q57: Please rank the top three topics in which you'd like to receive training.

Table B-29: Recent Trade Ally Forums and Training Attended

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Never attended	30%	32%	50%	35%	63%	50%	38%	22%	0%	32%
Spring 2018	15%	21%	0%	35%	13%	50%	25%	31%	0%	24%
Fall 2017	8%	11%	0%	0%	13%	0%	25%	17%	0%	10%
Spring 2017	10%	0%	0%	9%	0%	0%	0%	8%	100%	7%
Fall 2016	5%	0%	0%	0%	0%	0%	0%	3%	0%	2%
Spring 2016	3%	4%	0%	0%	0%	0%	0%	0%	0%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q53: When was the most recent trade ally forum, commercial event, or commercial lighting training you attended?

Table B-30: How Informative Trade Forums and Tranings Attended

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Not informative	0%	18%	0%	7%	0%	0%	0%	7%	0%	6%
Somewhat informative	81%	53%	0%	67%	100%	100%	100%	59%	100%	68%
Very informative	19%	29%	100%	27%	0%	0%	0%	33%	0%	25%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q54: How informative was the trade ally forum or event?

Table B-31: Degree To Which Location Prevents from Attending Trade Forums and Training

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Completely - because of my location, I have never been able to attend	3%	4%	0%	4%	0%	0%	0%	0%	0%	2%
My location makes it very difficult, but not impossible, to attend	3%	36%	50%	17%	13%	100%	0%	8%	0%	15%
My location makes it inconvenient, but not overly difficult to attend	15%	21%	0%	39%	25%	0%	50%	19%	100%	24%
My location does not prevent me from attending	75%	18%	50%	35%	63%	0%	50%	67%	0%	52%
Other (please specify)	5%	21%	0%	4%	0%	0%	0%	6%	0%	7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q55: To what degree does your location prevent you from attending an Energy Trust trade ally forum, commercial lighting training, or commercial trade ally event?

Table B-32: Importance of Breakout Sessions Quality for Continuing Education Credits

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Very important	23%	21%	0%	22%	13%	100%	0%	22%	0%	21%
Somewhat important	50%	32%	50%	52%	38%	0%	38%	42%	0%	43%
Not important	28%	46%	50%	26%	50%	0%	63%	36%	100%	36%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q56: How important is it that forum, commercial lighting training, or commercial trade ally event breakout sessions qualify for continuing education credits?

**Table B-33: Preferred Communication Channels** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused
Energy Trust website	60%	61%	100%	61%	63%	50%	63%	52%	100%
<i>Insider</i> newsletter	60%	61%	50%	65%	63%	50%	88%	70%	100%
Email	80%	86%	100%	87%	100%	50%	88%	82%	100%
Social media (Facebook, Twitter, LinkedIn)	11%	14%	0%	13%	0%	0%	25%	21%	0%
Trade Ally Forums	29%	46%	0%	43%	38%	50%	38%	39%	0%
Training sessions	37%	57%	50%	35%	63%	50%	38%	45%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%

Q59: When receiving information about Energy Trust programs, what types of communications would you prefer?

Table B-34: Frequency of Reading Insider Email Newsletter

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Always	28%	29%	50%	35%	0%	50%	38%	19%	100%	27%
Sometimes	50%	57%	50%	57%	63%	50%	38%	67%	0%	56%
Never	10%	7%	0%	9%	13%	0%	13%	0%	0%	7%
Unfamiliar with <i>Insider</i>	13%	7%	0%	0%	25%	0%	13%	14%	0%	10%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q60: How often do you read Energy Trust's "Insider" email newsletter?

Table B-35: What Would Make the Insider More Useful

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused
Easier navigation	0%	4%	0%	0%	0%	0%	0%	6%	0%
More focus on program updates and how to work with Energy Trust	39%	50%	0%	48%	80%	50%	50%	42%	100%
More technical articles and industry news	39%	46%	0%	24%	0%	0%	50%	29%	100%
Improved search capabilities	0%	17%	0%	14%	20%	50%	17%	13%	0%
Other	19%	8%	0%	5%	0%	0%	0%	10%	0%

Q61: What would make *Insider* more useful to you?

Table B-36: Types of Articles Most Wanted in Future Newsletters

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused
Common problems/solutions	61%	75%	100%	67%	80%	100%	50%	68%	100%

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused
Emerging technologies	48%	58%	100%	52%	60%	100%	67%	58%	100%
Technical assistance or resources	39%	58%	100%	43%	80%	0%	50%	35%	100%
Tax credits	55%	50%	100%	48%	60%	0%	33%	65%	0%
Other	0%	0%	0%	0%	0%	0%	0%	3%	0%

Q62: Which of the following types of articles would you most want to see in future newsletters?

Table B-37: Frequency of Visiting Energy Trust Website

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Never	15%	25%	0%	18%	63%	0%	13%	19%	0%	20%
1 - 3 times a month	75%	61%	100%	64%	38%	50%	88%	67%	100%	67%
1 - 2 times a week	5%	7%	0%	9%	0%	50%	0%	11%	0%	7%
3 - 4 times a week	5%	7%	0%	9%	0%	0%	0%	0%	0%	4%
5 or more times a week	0%	0%	0%	0%	0%	0%	0%	3%	0%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q63: How often do you visit Energy Trust's website?

Table B-38: Pages on the Energy Trust Website Typically Visited

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused
Calendar/meetings	18%	20%	0%	25%	50%	0%	14%	37%	0%
Contractor search	6%	16%	0%	25%	38%	100%	0%	4%	100%

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused
Customer-facing pages	6%	16%	0%	13%	25%	0%	0%	26%	0%
General program information	45%	65%	50%	75%	88%	0%	29%	74%	100%
Program forms	47%	52%	50%	63%	50%	50%	43%	64%	0%
Program incentives	82%	90%	100%	83%	63%	50%	86%	89%	100%
Other	3%	0%	0%	0%	0%	0%	0%	0%	0%

Q64: What pages do you typically visit on the Energy Trust website?

Table B-39: Ease of Navigating Energy Trust Website

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Very easy	6%	14%	0%	22%	0%	0%	0%	28%	0%	15%
Easy	62%	29%	100%	28%	0%	0%	43%	52%	100%	45%
Neither difficult nor easy	26%	57%	0%	44%	100%	100%	57%	17%	0%	37%
Difficult	6%	0%	0%	6%	0%	0%	0%	3%	0%	3%
Extremely difficult	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q65: How easy is Energy Trust's website to navigate?

**Table B-40: Interactions with Paladin Risk Management** 

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused
I had no interactions with Paladin Risk Management	50%	57%	0%	36%	38%	50%	88%	50%	0%

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused
There were no problems with Paladin Risk Management	20%	21%	50%	45%	25%	0%	13%	25%	100%
Paladin Risk Management did not provide needed information in a timely manner	0%	0%	0%	0%	0%	0%	0%	0%	0%
I had to submit the same documentation multiple times	5%	4%	0%	5%	13%	50%	0%	6%	0%
It was difficult to contact someone at Paladin Risk Management to get information	3%	4%	0%	5%	13%	0%	0%	0%	0%
Communication from Paladin Risk Management was not clear	0%	4%	0%	5%	0%	0%	0%	6%	0%
Paladin Risk Management decisions were not consistent with Oregon law or regulations	0%	0%	0%	0%	0%	50%	0%	0%	0%
Other	8%	7%	0%	0%	0%	0%	0%	6%	0%

Q66: In your interactions with Paladin Risk Management over the past year, which, if any, of the following have occurred?

Table B-41: Opinion About Changes in Star Rating Based on Rating By Completed Customers Only

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
I support this change	25%	37%	100%	56%	33%	0%	50%	50%	0%	41%
I do not support this change	21%	16%	0%	17%	0%	0%	0%	14%	100%	16%
I don't have an opinion	33%	26%	0%	28%	33%	0%	25%	18%	0%	26%
Don't know	21%	21%	0%	0%	33%	100%	25%	18%	0%	17%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q68: Would you support a shift to a trade ally rating based only on ratings of customers who have completed Energy Trust projects with your company?

Table B-42: How Clear Is the Current Star Rating System?

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Very clear	46%	47%	100%	44%	0%	100%	0%	68%	100%	50%
Somewhat clear	46%	42%	0%	56%	67%	0%	100%	23%	0%	43%
Not clear	4%	5%	0%	0%	0%	0%	0%	9%	0%	4%
Not sure	4%	5%	0%	0%	33%	0%	0%	0%	0%	3%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q69: How clear is the current star rating system to you?

Table B-43: How Fair Is the Current Star Rating System?

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Fair	54%	63%	100%	50%	33%	0%	50%	64%	100%	57%
Slightly unfair	33%	26%	0%	17%	0%	0%	0%	18%	0%	21%
Not at all fair	4%	5%	0%	11%	0%	0%	25%	9%	0%	7%
Not sure	8%	5%	0%	22%	67%	100%	25%	9%	0%	14%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q70: How fair do you think the current star rating system is?

Table B-44: How Useful Is the Current Star Rating System to Their Customers?

	Portland & Gorge	Willamette Valley	North Coast	Southern Oregon	Central Oregon	Eastern Oregon	SW Washington	Multiple areas	Refused	Total
Not useful	4%	5%	0%	17%	0%	0%	25%	18%	0%	11%
Neutral	67%	63%	100%	39%	100%	100%	50%	59%	0%	60%
Useful	29%	32%	0%	44%	0%	0%	25%	23%	100%	30%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Q71: How useful do you think the current star rating system is to your customers?

# Appendix C. Open-Ended Responses

# C.1. Q20: Description of Customer Base

# Table C-1: Please describe your primary customer base in your own words.

Single-Family Homes Sector
service and retrofits
40 and older. upper income. Al homes are for 700,000.00 to several million
40-75 year-olds in the middle and upper middle class
Ages 35-65 Couples
average homeowners or small business owners wanting to save money on their energy bills
Basically, clients that want things done right the first time. Quality is more important than price.
Builders
Clients looking for a tailored, custom install and service company.
Commercial and Industrial Business Owner
Commercial businesses & gov entities- E. of cascades
contractor
contractors
Contractors
Contractors and home owners.
Contractors and residential customers
County low income weatherization work that we have contracts for.
C-Stores, Gas stations, food markets, Service calls, remodel, service change's, Etc.
Custom and semi-custom home builders
Customer base is repairing HVAC equipment and installation.
Customer who are concerned with energy conservation and green power sources
Depressed economy single family homes majority 20 + year old homes
Electrical contractors and end users (industrial, agricultural, commercial facilities)
Engineers, seniors and Millennials
Established residents with access to cash or financing, long-term homeowners in primarily traditional older homes (pre-1960). Interestingly, most of our clients have dogs. Currently, nearly all of our clients are referrals or

repeats.

## **Single-Family Homes Sector**

existing homes home owners

Existing homes, aging water heaters electric and gas.

Tankless and heat pump water heaters.

First time homeowners, people moving in from out of the area.

**General Contractors** 

Home and/or business owners leaning interested in saving money and reducing their carbon footprint.

Home builders participating in the EPS New Homes program

**HOME OWNERS** 

Home owners

home owners

Home Owners in existing homes, some contractors.

Homeowner looking to do upgrades on their home

Homeowners

Homeowners

Homeowners 30-60's

Homeowners between the ages of 25-75.

Homeowners looking for better heating/cooling options

Homeowners looming to add warmth and comfort to their space. We show them energy efficient options and the benefit of how our fireplaces do so.

Homeowners only

Age 50+

Home built prior to 2000

I install for Lowes. A mix. Mostly lower income homeowners

Local families

longtime clients and new clients that have moved to the area, we also have builders that we have working with for years on new construction homes, new construction bid jobs

low to moderate income

Low to moderate income.

Lower income customers

MAINLY REPLACE AND SERVICE FURNACES, AIR CONDITIONERS AND HEAT PUMPS. MOST ARE EXISTING CUSTOMERS.

majority of my customers are homeowners (residential) looking to upgrade their windows and doors with more efficient and energy star rated products.

Manufactured home owner, renters and property managers

#### **Single-Family Homes Sector**

Market Rate & Affordable, Single Family & Multifamily, Production Builders / Project Teams.

Mid aged to retirement age Caucasian - Many single females of retirement age

Middle - lower income customers who desire affordable, cost effective new windows.

Middle aged white professionals

Middle Class Families

Middle to upper class

Moderate or low income Portlanders, largely people of color.

Modest income with electric resistance heat - 40-60 years old

Most of our customers qualify for Savings within reach. Good diversity of age . All have a need for some type of HVAC work.

Mostly residential with some (10%) commercial. New home buyers wanting to upgrade. Low-income housing heat pump systems through community action programs.

Neil Kelly mostly serves high end clients but our solar and home performance division caters to every client.

**New Construction customers** 

New construction spec home buyers

Older people that can afford solar power

Our core clientele is the typical middle-class family.

Our customer base is 75% single parent households, typically between 40 and 80% of the area median income.

Our customer base is single family homeowners over the age of 30 who are upgrading their heating and air system or putting a new system in. They are very interested in getting incentives for their systems and are interested in saving energy with higher efficiency equipment.

Our customers are primarily home owners and builders

Our primary customer base is located in Lane County although we work throughout the state of Oregon.

Our primary customer base is residential home owners looking to offset their electric bill. Mainly PGE

Our primary customer base is retrofit for residential homes.

Over 40 homeowners

Owners

People looking for comfort as well as saving money on there utility bill

Pioneer tries to help all our customers with their install needs. We don't have a primary customer base.

Portland homeowners with equity in their property.

primarily residential single family dwelling.

Primary customer base is residential and commercial

Primary home owners

## Trade Ally Survey

# **Single-Family Homes Sector** PRIMARY RESIDENTAL SERVICE AND SMALL COMMERCIAL SERVICE AND INSTALLATIONS Residential and commercial as well as refrigeration. Residential and Commercial clients in north east Oregon and South East Washington. residential and commercial remodeling Residential customers in Oregon 1/3 and Washington 2/3. All sizes and economic spectrum. Residential gas furnaces and air conditioners residential heating & cooling contractor Residential home owners residential home owners Residential home owners and the few property managers/rental owners that want quality work done reasonably priced. Residential homeowners that are looking at increasing the value and energy efficiency of their home. residential homes Residential new construction and remodeling Residential Retrofit Residential Single Family Dwelling Residential single family homes replacing old equipment. Residential, commercial, industrial Retired and retro/remodels Retired people, low income **Retiring couples** Retro retro homes.. Rural, small town homeowners Single family homes Single family homes. Home owner, not renters or rentals Use to offset their personal power needs. Single family residential single family residential Single family residents. Moderate income.

Single family seeking minor home improvement replacing house full of windows.

#### **Single-Family Homes Sector**

Single family- white middle class.

Multi-family- Affluent business owners.

small commercial businesses and residential

Some small and large commercial/agricultural, but a fair amount of 50+ individuals looking to retire in the next 5-7 years.

They are of all different ethnic groups and we have found they are mostly middle income

upper middle class professionals many own small businesses

**VARIED** 

We aim for customers wanting more efficient equipment.

We are all over the place with this one. Most are existing customers or word of mouth

We serve about 60% new construction and 40% remodel/retrofit. Products include windows and doors as well as cabinetry, siding, metal roofing, locks and skylights.

We serve all types of customers.

We service all electrical needs

## **Multifamily Sector**

service and retrofits

average homeowners or small business owners wanting to save money on their energy bills

Clients looking for a tailored, custom install and service company.

Commercial and Industrial Business Owner

Commercial businesses & gov entities- E. of cascades

contractors

Contractors

Contractors and home owners.

Contractors and residential customers

County low income weatherization work that we have contracts for.

C-Stores, Gas stations, food markets, Service calls, remodel, service change's, Etc.

Custom and semi-custom home builders

Customer base is repairing HVAC equipment and installation.

Customer who are concerned with energy conservation and green power sources

Depressed economy single family homes majority 20 + year old homes

Electrical contractors and end users (industrial, agricultural, commercial facilities)

#### **Multifamily Sector**

Established residents with access to cash or financing, long-term homeowners in primarily traditional older homes (pre-1960). Interestingly, most of our clients have dogs. Currently, nearly all of our clients are referrals or repeats.

Existing homes, aging water heaters electric and gas.

Tankless and heat pump water heaters.

Home and/or business owners leaning interested in saving money and reducing their carbon footprint.

**HOME OWNERS** 

home owners

Home Owners in existing homes, some contractors.

Homeowner looking to do upgrades on their home

Homeowners looking for better heating/cooling options

Homeowners looming to add warmth and comfort to their space. We show them energy efficient options and the benefit of how our fireplaces do so.

Local families

Low to moderate income.

Lower income customers

majority of my customers are homeowners (residential) looking to upgrade their windows and doors with more efficient and energy star rated products.

Market Rate & Affordable, Single Family & Multifamily, Production Builders / Project Teams.

Mid aged to retirement age Caucasian - Many single females of retirement age

Middle - lower income customers who desire affordable, cost effective new windows.

Middle to upper class

Moderate or low income Portlanders, largely people of color.

Modest income with electric resistance heat - 40-60 years old

Most of our customers qualify for Savings within reach. Good diversity of age . All have a need for some type of HVAC work.

Mostly residential with some (10%) commercial. New home buyers wanting to upgrade. Low-income housing heat pump systems through community action programs.

Neil Kelly mostly serves high end clients but our solar and home performance division caters to every client.

**New Construction customers** 

Our core clientele is the typical middle-class family.

Our customer base is single family homeowners over the age of 30 who are upgrading their heating and air system or putting a new system in. They are very interested in getting incentives for their systems and are interested in saving energy with higher efficiency equipment.

Our customers are primarily home owners and builders

# **Multifamily Sector**

Our primary customer base is located in Lane County although we work throughout the state of Oregon.

Our primary customer base is residential home owners looking to offset their electric bill. Mainly PGE

Our primary customer base is retrofit for residential homes.

Over 40 homeowners

Owners

People looking for comfort as well as saving money on there utility bill

Pioneer tries to help all our customers with their install needs. We don't have a primary customer base.

primarily residential single family dwelling.

Primary customer base is residential and commercial

Primary home owners

PRIMARY RESIDENTAL SERVICE AND SMALL COMMERCIAL SERVICE AND INSTALLATIONS

Residential and commercial as well as refrigeration.

Residential customers in Oregon 1/3 and Washington 2/3. All sizes and economic spectrum.

Residential home owners

residential home owners

Residential home owners and the few property managers/rental owners that want quality work done reasonably priced.

Residential homeowners that are looking at increasing the value and energy efficiency of their home.

Residential Retrofit

Residential Single Family Dwelling

Residential single family homes replacing old equipment.

Residential, commercial, industrial

Retired and retro/remodels

Retro

retro homes..

Rural, small town homeowners

Single family residential

single family residential

Single family residents. Moderate income.

Single family- white middle class.

Multi-family- Affluent business owners.

They are of all different ethnic groups and we have found they are mostly middle income

We are all over the place with this one. Most are existing customers or word of mouth

# **Multifamily Sector**

We service all electrical needs

Residential home buyers

commercial and retail

small to large commercial

#### **Commercial Sector**

service and retrofits

average homeowners or small business owners wanting to save money on their energy bills

Clients looking for a tailored, custom install and service company.

Commercial and Industrial Business Owner

Commercial businesses & gov entities- E. of cascades

contractors

Contractors and home owners.

C-Stores, Gas stations, food markets, Service calls, remodel, service change's, Etc.

Customer base is repairing HVAC equipment and installation.

Customer who are concerned with energy conservation and green power sources

Depressed economy single family homes majority 20 + year old homes

Electrical contractors and end users (industrial, agricultural, commercial facilities)

Established residents with access to cash or financing, long-term homeowners in primarily traditional older homes (pre-1960). Interestingly, most of our clients have dogs. Currently, nearly all of our clients are referrals or repeats.

Home and/or business owners leaning interested in saving money and reducing their carbon footprint.

**HOME OWNERS** 

Homeowners looking for better heating/cooling options

Local families

Low to moderate income.

Middle to upper class

Modest income with electric resistance heat - 40-60 years old

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#### **Commercial Sector**

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Over 40 homeowners

**Owners** 

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Primary home owners

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Residential customers in Oregon 1/3 and Washington 2/3. All sizes and economic spectrum.

Residential home owners

residential home owners

Residential home owners and the few property managers/rental owners that want quality work done reasonably priced.

Residential Single Family Dwelling

Residential single family homes replacing old equipment.

Residential, commercial, industrial

Retro

retro homes..

Rural, small town homeowners

Single family residential

single family residential

Single family residents. Moderate income.

We are all over the place with this one. Most are existing customers or word of mouth

We service all electrical needs

commercial and retail

#### **Commercial Sector**

small to large commercial

longtime clients and new clients that have moved to the area, we also have builders that we have working with for years on new construction homes, new construction bid jobs

Middle Class Families

Older people that can afford solar power

Residential and Commercial clients in north east Oregon and South East Washington.

residential and commercial remodeling

small commercial businesses and residential

Some small and large commercial/agricultural, but a fair amount of 50+ individuals looking to retire in the next 5-7 years.

#### VARIED

We serve all types of customers.

- 1) Customers who have heard of us from existing customer and desire our services.
- 2) Small Businesses with large potential savings and difficulty accomplishing without our help.
- 3) Non-profits and small government / education with high potential savings and difficulty accomplishing without our help.

Building owners looking to upgrade their facilities for new tenants

Cannabis growers exclusively.

Commercial

Commercial & Industrial

Commercial and industrial customers

Commercial customers, medical, small business

Commercial electrical contractors

General contractor sublet work

Manufacturing

My customer base consists mostly of small businesses, Credit Unions, body repair shops, garbage facilities.

Primarily manufacturers and processing plants

Repeat customers or ones we're referred to. We don't advertise other than having a website.

restaurant and bar owners, breweries, convenience stores, schools, hospitals, and other government entities.

Small to medium business. Property management

**Smaller customers** 

Those anxious to upgrade their facilities, but who feel they need an ally to help them 'get back some of their money', which they believe is theirs. But that is going to the state based on the 3% energy bill add-on, which came into being with the legislation that created the Energy Trust. They are seeing their trade allies in the marketplace as their assistance agents to help them navigate what has become a quite large state bureaucracy

#### **Commercial Sector**

known as the ETO. They are seeing the ETO paying out substantial sums of money to 3rd parties from outside of the state. Out of state firms hired by the ETO to manage ETO projects funds, rather than paying out larger and appropriate incentives to them for having invested the 'lion's share' of the cost of upgrading their facilities to higher energy efficiency.

Those that require our specialty.

We have a very broad customer base from Mom & Pop businesses to large industrial accounts.

We predominantly do Refrigeration service and installation work for grocery stores, markets, wholesale grocery sales, distribution facilities and refrigerated food delivery trucks(non semi truck type) including Preventative Maintenance. We do service and installation of HVAC systems for the above listed type locations including exhaust systems and including Preventative Maintenance. We also sell service related parts.

#### **Industrial and Agricultural Sector**

service and retrofits

Commercial and Industrial Business Owner

Commercial businesses & gov entities- E. of cascades

C-Stores, Gas stations, food markets, Service calls, remodel, service change's, Etc.

Depressed economy single family homes majority 20 + year old homes

Electrical contractors and end users (industrial, agricultural, commercial facilities)

Home and/or business owners leaning interested in saving money and reducing their carbon footprint.

**HOME OWNERS** 

Middle to upper class

Our customers are primarily home owners and builders

Our primary customer base is located in Lane County although we work throughout the state of Oregon.

Our primary customer base is residential home owners looking to offset their electric bill. Mainly PGE

People looking for comfort as well as saving money on there utility bill

Primary customer base is residential and commercial

Primary home owners

Residential customers in Oregon 1/3 and Washington 2/3. All sizes and economic spectrum.

Residential, commercial, industrial

single family residential

We are all over the place with this one. Most are existing customers or word of mouth

commercial and retail

small to large commercial

Residential and Commercial clients in north east Oregon and South East Washington.

#### **Industrial and Agricultural Sector**

Some small and large commercial/agricultural, but a fair amount of 50+ individuals looking to retire in the next 5-7 years.

- 1) Customers who have heard of us from existing customer and desire our services.
- 2) Small Businesses with large potential savings and difficulty accomplishing without our help.
- 3) Non-profits and small government / education with high potential savings and difficulty accomplishing without our help.

Building owners looking to upgrade their facilities for new tenants

Cannabis growers exclusively.

Commercial

Commercial & Industrial

Commercial and industrial customers

Commercial electrical contractors

General contractor sublet work

Manufacturing

My customer base consists mostly of small businesses, Credit Unions, body repair shops, garbage facilities.

Primarily manufacturers and processing plants

Repeat customers or ones we're referred to. We don't advertise other than having a website.

Small to medium business. Property management

Those that require our specialty.

We have a very broad customer base from Mom & Pop businesses to large industrial accounts.

**Farmers** 

Greenhouses and ornamental nurseries.

Some cannabis.

Production agriculture

#### **Solar Sector**

Commercial businesses & gov entities- E. of cascades

C-Stores, Gas stations, food markets, Service calls, remodel, service change's, Etc.

Electrical contractors and end users (industrial, agricultural, commercial facilities)

Home and/or business owners leaning interested in saving money and reducing their carbon footprint.

Our primary customer base is residential home owners looking to offset their electric bill. Mainly PGE

Primary customer base is residential and commercial

Residential, commercial, industrial

single family residential

## **Solar Sector**

small to large commercial

Residential and Commercial clients in north east Oregon and South East Washington.

Some small and large commercial/agricultural, but a fair amount of 50+ individuals looking to retire in the next 5-7 years.

Commercial

General contractor sublet work

Those that require our specialty.

contractors

Local families

Neil Kelly mostly serves high end clients but our solar and home performance division caters to every client.

small commercial businesses and residential

Single family homes.

Home owner, not renters or rentals

Use to offset their personal power needs.

Home owners wanting to save money by going solar and do something good for the environment.

People that are tired of paying high energy bills

People trying to eliminate the utility power bill

Residential, Small Commercial, Agricultural

Upper-middle class, with environmental inclinations

# C.2. Q28: Improvement Suggestions About Forms

# Table C-2: Please provide any suggestions for how Energy Trust could improve our forms to lower the administrative costs to your company.

# **Single-Family Homes Sector**

All the information about the home should be cut. There is no reason for you to know the sq ft of the home and crap like that. If you want to know that just look it up on portlandmaps or cmaps. That is what we have to do to get the information for you.

Allow changes to applications before tech review- allow edits and uploads and not be blocked out.

allow for all required docs to be submitted as one file. Allow for drop down menus for design requirements

Allow for auto fill settings like old powerclerk. Example: Customers address same as site address

Avoid multiple signatures.

Be aware of the duplication of information on documents required.

#### **Single-Family Homes Sector**

By comparison, Washington's incentive program takes about 15 mins to register virtually the same information and there is never any review or rejections over the line diagrams or any other doc's. I presume that if it passes electrical inspections then that is sufficient. My biggest complaint is that it has been taking on the average about 5 months from submitting verification paperwork to receive a check. Quite unacceptable really.

Carry over features or templates

direct all forms to the customer for completion

don't know any at this point

Forms are basic and simple to use. Mostly do all applications online.

Get rid of the one-size-fits-all Form 320C and go back to specific forms for each measure....

Good question

Less is quicker

I am a window replacement company, I feel the payouts should be changed to .27 -.30  $\,$  \$1.75 sq ft

.26 or less \$4.00 sq ft

I don't use them enough for them to have a measurable impact on our admin costs.

I feel they are fine, no changes needed.

I fill out my part of form and scan and send it to customer with brief instructions. But I am sometimes late filling out and sending the forms partly because I wait until I have a volume of them to do. And even that way some customers leave something out - usually the invoice.

Can you see an easier way?

I have a Mac computer.. I apply online for all of my Customers. I have been penalized for missing info several times. There has been a couple occasions where I forgot to send in required documents.. But several times I did attach All required documents via pdf files. I was told by YOUR employee that your software is not compatible with some Apple products. I have been waiting about 3 months for a savings within reach rebate. I will no longer offer this to my customers, I will not wait 3 months for reimbursement.

I think its fine

I think the forms are working fine

I would like to have more communication with the rep and my account. There are some things that I feel needs to be addressed to our office regarding getting help with the benefits from your company

if the questions on the paper form followed the same template as the website form it would make things faster

Incorporate an auto calculate in the program for load calculations, tsrf, one line drawings and shade analysis

Instant Incentive website not working; you don't know until you fill out everything & hit submit, then it says sorry and lose everything submitted.

It's hard to add more convenience w/o adding confusion. We'd love a commercial instant incentive or ? for small commercial work. No pre-inspection, maybe pics instead? Or minimum incentive that requires smaller form??

It has been awhile since I have filled out the forms so I am uncertain of the newer versions

It is reasonable enough

#### **Single-Family Homes Sector**

It would be great if there was a simple array builder in Powerclerk that could show the major components and the other required information.

It's about the same time as other companies we work with. Use to it

It's great the way it is.

Its pretty simple and nice to be able to do it online.

Make the online application savable and able to resume. Make one item signed versus two things needing signature (invoice and incentive form).

Have one form that all customers sign and we tick which program it falls under. I'm always trying to remember which form for what.

Finding the application on the website be a TOP HIT for trade allies.

Making sure someone can pick up the phone at ETO and answer a question right away.

Make the paperwork specific to the jobs instead of having them all on one form. It would save money on paper

Make them writeable and electronically signable

Making submitting easier and consistent. With having to send signed copy and our invoice it can get difficult. And if there is a problem b4 going to homeowner or denying it maybe an email or call to the trade ally we are supposed be partners.

More detailed 190l.

need to consult people filling out forms to have specific suggestions. We do general remodeling jobs so do not do this on a regular basis.

No suggestions, paper work does not take long to complete, and very easy to submit

None - the forms are easy to fill out

Not much, maybe auto populate address while typing.

Occasionally we forget to print off the form for the client that states we are filling out and filing the application on their behalf. So then when I go to submit the application online, I have to email the client the form and then wait for them to return it before I can proceed. Big time killer.

Online fillable forms

Online is the best

Only apply online--very easy.

Overall it is pretty good for the information you need

Paperwork is self explanatory and simple.

Please provide us with a sheet to calculate the total of sqftage to make it easier to match your calculation.

Please remove the term "packing slip" from the form. There is no such thing as a packing slip in the window industry.

Provide a clearer explanation of what it is that you are asking for. Require less technical information.

right now the forms are working for the majority of our customers

Simple...ask a knowledgeable contractor with exceeding program background and knowledge to critique the existing form and than ACTUALLY take his advice and implement. By now, you know who is doing this survey.

Sometimes the online system is a hassle and doesn't seem to want to work. But I think the bugs have been worked out so far. I know I have uploaded all pages plus extra to be safe and will be told I am missing information and know that I am not.

Staff is usually confused by the general questions that don't apply to all of the measures. Trying to collect information that doesn't apply is a waste.

streamline commercial process

Streamline documents

the ability to fill out forms electronically would be great. It would make it easier for customer's that couldn't come into the office to sign.

The current system is pretty good. We have learned how to do it and the process is smooth thanks to the help of Rick Flacco.

The Energy Trust could fill them out for us

#### THE FORMS ARE VERY EFFICIENT AND EASY TO UNDERSTAND

The main thing that makes the process take longer is your website. It is often not functioning, which would be fine if it just said it was down, but it has you go through the entire process, then when you hit submit it says it's down.

The number of different programs and forms to process them can be confusing. Even though all the forms ask the same basic questions, you have different processes and forms for each program.

The paperwork is just fine for line of construction.

The solar applications I fill out are good.

There are A LOT of different forms. Seems like it could be streamlined into one long form

There are quite a few steps and submissions. The largest problem has been in the time it takes for the home owner to get their applications approved and in the meantime, the incentive has dropped. Makes for an unhappy customer even though they know it is not our fault.

Too much detail required, too much back and forth for the review process with information that is not needed or is assumed without the need to provide additional information or documentation

Use more judgement in your requirements.

We are small scale so we typically only fill out a few per year.

we have not filled out any form for projects this year. Most of my project have been certified through Earth Advantage and that process has been very easy

We seem to have it mastered, so no recommendations at this time.

We think you guys do a great job at keeping paperwork updated and available for us

Web based docusign format. Something we can fill in the blanks electronically and submit.

write them in English...

Your forms are simple and fine but the process for submitting corrections could use some work.

#### **Multifamily Sector**

Give us samples of filled out applications.

separate labor and material and make custom solutions easier to input

Allow changes to applications before tech review- allow edits and uploads and not be blocked out.

allow for all required docs to be submitted as one file. Allow for drop down menus for design requirements

Allow for auto fill settings like old powerclerk. Example: Customers address same as site address

Avoid multiple signatures.

Be aware of the duplication of information on documents required.

By comparison, Washington's incentive program takes about 15 mins to register virtually the same information and there is never any review or rejections over the line diagrams or any other doc's. I presume that if it passes electrical inspections then that is sufficient. My biggest complaint is that it has been taking on the average about 5 months from submitting verification paperwork to receive a check. Quite unacceptable really.

direct all forms to the customer for completion

don't know any at this point

Forms are basic and simple to use. Mostly do all applications online.

Get rid of the one-size-fits-all Form 320C and go back to specific forms for each measure....

Good question. Less is quicker

I feel they are fine, no changes needed.

I fill out my part of form and scan and send it to customer with brief instructions. But I am sometimes late filling out and sending the forms partly because I wait until I have a volume of them to do. And even that way some customers leave something out - usually the invoice. Can you see an easier way?

I have a Mac computer.. I apply online for all of my Customers. I have been penalized for missing info several times. There has been a couple occasions where I forgot to send in required documents.. But several times I did attach All required documents via pdf files. I was told by YOUR employee that your software is not compatible with some Apple products. I have been waiting about 3 months for a savings within reach rebate. I will no longer offer this to my customers, I will not wait 3 months for reimbursement.

I think its fine

I think the forms are working fine

if the questions on the paper form followed the same template as the website form it would make things faster

Incorporate an auto calculate in the program for load calculations, tsrf, one line drawings and shade analysis

Instant Incentive website not working; you don't know until you fill out everything & hit submit, then it says sorry and lose everything submitted.

It's hard to add more convenience w/o adding confusion. We'd love a commercial instant incentive or ? for small commercial work. No preinspection, maybe pics instead? Or minimum incentive that requires smaller form??

# **Multifamily Sector**

It is reasonable enough

Make the online application savable and able to resume. Make one item signed versus two things needing signature (invoice and incentive form).

Have one form that all customers sign and we tick which program it falls under. I'm always trying to remember which form for what.

Finding the application on the website be a TOP HIT for trade allies.

Making sure someone can pick up the phone at ETO and answer a question right away.

Make the paperwork specific to the jobs instead of having them all on one form. It would save money on paper

Making submitting easier and consistent. With having to send signed copy and our invoice it can get difficult. And if there is a problem b4 going to homeowner or denying it maybe an email or call to the trade ally we are supposed be partners.

More detailed 190l.

No suggestions, paper work does not take long to complete, and very easy to submit

Not much, maybe auto populate address while typing.

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Only apply online--very easy.

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Staff is usually confused by the general questions that don't apply to all of the measures. Trying to collect information that doesn't apply is a waste.

streamline commercial process

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The main thing that makes the process take longer is your website. It is often not functioning, which would be fine if it just said it was down, but it has you go through the entire process, then when you hit submit it says it's down.

#### **Multifamily Sector**

The number of different programs and forms to process them can be confusing. Even though all the forms ask the same basic questions, you have different processes and forms for each program.

The paperwork is just fine for line of construction.

Use more judgement in your requirements.

We think you guys do a great job at keeping paperwork updated and available for us

Web based docusign format. Something we can fill in the blanks electronically and submit.

write them in English...

#### **Commercial Sector**

Forget the foolish market sectors, unreasonable time to perform calculations, etc. that supposedly lead to an incentive offer. Hot customers don't wait.

Forms are being upgraded consistently.

make all part numbers the same LOL

Pay per kilowatt saved.

Many "rural" customers are multi-industry, and every project we do requires some custom solutions. Getting custom approval, requesting treatment as custom, and trying to keep project on-track for our customer is a very time-consuming process.

Pay quicker. MUCH quicker. Electronic payments preferable, like other utilities (i.e. PSE) for select trade allies. Incentive processing is timely and the staff is wonderful; the accounts payable portion ("6 to 8 weeks to receive a check") can be a killer - especially for new businesses, especially for cannabis businesses.

Roll back the processes to where there was trust that the payers of the 3% are trying to pull a fast one over on the program bureaucrats by trying to get some of their money back. i.e. where does the requirement to try to calculate 'cost-effectiveness' before a meaningful review of the situation has occurred?

Understanding that the 3rd program managers are just as self-motivated as the fund contributors, to try to keep or get back as much of the 3% for themselves as possible vs paying out larger incentives levels needed to get the fund contributors to pay the even greater sums needed to complete a project. With the focused end goal needing to remain 'to gain as much energy efficiency in the market as possible' so we don't cook the planet via excesses CO2 emissions.

Or are the claims true by these 3rd parties that the ETO is calling all these shots, in order to minimize incentives based on the utility influence to not 'lose too much revenue' through too much energy efficiency improvements in Oregon's business infrastructure via either the original legislation that created the ETO, utility ETO board members or via their ongoing large influence at the OPUC over the ETO?

Seems pretty well thought out to me

Simplify forms

We normally wouldn't fill them out for our customers so I don't think anything is needed at this time to save us on administrative cost.

It would be great if there was a simple array builder in Powerclerk that could show the major components and the other required information.

It's great the way it is.

need to consult people filling out forms to have specific suggestions. We do general remodeling jobs so do not do this on a regular basis.

The solar applications I fill out are good.

There are A LOT of different forms. Seems like it could be streamlined into one long form

Too much detail required, too much back and forth for the review process with information that is not needed or is assumed without the need to provide additional information or documentation

separate labor and material and make custom solutions easier to input

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It is reasonable enough

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More detailed 190l.

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The paperwork is just fine for line of construction.

Use more judgement in your requirements.

write them in English...

# Industrial and Agricultural Sector

Forget the foolish market sectors, unreasonable time to perform calculations, etc. that supposedly lead to an incentive offer. Hot customers don't wait.

Pay per kilowatt saved.

Many "rural" customers are multi-industry, and every project we do requires some custom solutions. Getting custom approval, requesting treatment as custom, and trying to keep project on-track for our customer is a very time-consuming process.

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# **Industrial and Agricultural Sector**

separate labor and material and make custom solutions easier to input

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The Energy Trust could fill them out for us

write them in English...

# **Solar Sector**

It's not your forms, but the additional info you require. For Solar, that means the schematics and voltage drop calculations

More streamlining

There are quite a few steps and submissions. The largest problem has been in the time it takes for the home owner to get their applications approved and in the meantime, the incentive has dropped. Makes for an unhappy customer even though they know it is not our fault.

Too much detail required, too much back and forth for the review process with information that is not needed or is assumed without the need to provide additional information or documentation

Use more judgement in your requirements.

Forget the foolish market sectors, unreasonable time to perform calculations, etc. that supposedly lead to an incentive offer. Hot customers don't wait.

Simplify forms

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It would be great if there was a simple array builder in Powerclerk that could show the major components and the other required information.

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Provide a clearer explanation of what it is that you are asking for. Require less technical information.

write them in English...

# C.3. Q37: Cause of Expected Decrease in Energy Trust Projects

# Table C-3: What is the cause for the expected future decrease in projects involving Energy Trust?

Single-Family Homes Sector
a lack in interest by the ETO to properly incentivize residential systems
Building Energy code
Cost effectiveness for the builders with regards to incentives versus costs
ECONOMY
Loss of state tax credits.
no coverage from Energy Trust
not enough of an incentive, too much paperwork and extra time consuming inspections
Owner choices
Solar installs, loss of State tax credit.
We got a different salesman who sells lower end equipment without incentives.
All the ready close by stores we have already done. There is lots of work in the area now so no real need to travel.
decline in incentives
Decreased incentives for existing heat pumps.
incentives to homeowners ,owners
Lack of incentive programs.
Less incentives will drive down interest in programs.
Measures have changed along with the incentives offered for HVAC systems. Less are available.
Multiple large remodel projects on our calendar.
no Oregon tax credit for residence

No rebate for natural gas anymore

The fact no longer offers the home energy reviews has had a very sizable impact on the leads related to Energy Trust incentive seekers

There are very few furnace credits available and that is a lot of our residential business.

# **Multifamily Sector**

Incentives for fixtures and controls have dropped significantly

The incentives are a joke. We can't compete with Smart Watt that give incentives of 63% and trade allies can only get 10% to 20%. Trade allies are getting shafted. Small business will not invest in a capitol improvement it the return of investment is longer than their lease. So the ETO allows Smart watt to provide an incentive of 63% and we lose the business.

All the ready close by stores we have already done. There is lots of work in the area now so no real need to travel.

decline in incentives

Decreased incentives for existing heat pumps.

incentives to homeowners, owners

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The fact no longer offers the home energy reviews has had a very sizable impact on the leads related to Energy Trust incentive seekers

There are very few furnace credits available and that is a lot of our residential business.

#### **Commercial Sector**

ETO is much more difficult for payment and processing than BPA territories. "Custom" treatment is more difficult to access and get approval for, and ETO projects are more-often mis-processed.

I see the 3rd parties managing the ETO processes growing and their back east and Texas ownerships needing ever increased profits from programs like the ETO. This is resulting in concerted efforts to squeeze ETO incentives down, efforts to shift more and more of the program \$ over to prescriptive paths all in an effort to increase profits under the cloak of 'protecting rate payer dollars. This is making the programs less and less relevant to owners since after a point, the incentives are not worth the hassle of dealing with the ETO (i.e. incremental over code decisions, change usage of a space and incentives are officially now are only based on incremental \$, stopping energy waste is deemed to be fuel switching after project delaying processes, criteria for decisions are being kept in the dark as they are being changed/shifted).

So reliance on the ETO programs is over time a riskier and riskier proposition.

More work outside of Oregon, in addition to an increase in volume in Oregon.

**ECONOMY** 

Loss of state tax credits.

not enough of an incentive, too much paperwork and extra time consuming inspections

Incentives for fixtures and controls have dropped significantly

The incentives are a joke. We can't compete with Smart Watt that give incentives of 63% and trade allies can only get 10% to 20%. Trade allies are getting shafted. Small business will not invest in a capitol improvement it the return of investment is longer than their lease. So the ETO allows Smart watt to provide an incentive of 63% and we lose the business.

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Multiple large remodel projects on our calendar.

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# **Industrial and Agricultural Sector**

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More work outside of Oregon, in addition to an increase in volume in Oregon.

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All the ready close by stores we have already done. There is lots of work in the area now so no real need to travel.

Lack of incentive programs.

No rebate for natural gas anymore

#### **Solar Sector**

Sunset of the RETC has caused fewer people to buy solar

We are doing more business in Washington.

a lack in interest by the ETO to properly incentivize residential systems

Solar installs, loss of State tax credit.

not enough of an incentive, too much paperwork and extra time consuming inspections

decline in incentives

no Oregon tax credit for residence

Incentives for fixtures and controls have dropped significantly

All the ready close by stores we have already done. There is lots of work in the area now so no real need to travel.

# C.4. Q49: Cooperative Marketing Materials Suggestions

Table C-4: Are there any printed materials about energy efficiency or renewable energy for home or business customers that Energy Trust could provide that would support your sales? What topics would be most beneficial?

# **Single-Family Homes Sector**

A brochure that explained the program for windows would be helpful.

A combo sheet talking about federal tax credit and ETO incentives

A general overview of residential incentives in a brochure.

A single sheet handout for each home upgrade detailing the cash incentive available to the home owner with a brief description as to how to process and submit the paperwork would be helpful to hand out to the customer. The flyer having your branding on it would be powerful to the customer.

Absolutely! Financial and environmental benefits of solar over time.

Any materials regarding ducted heat pumps and ductless heat pumps vs forced air electric furnaces.

Any promoting duct-less installations

Anything we could post on our social media to spread the word:)

Appliance or equipment comparisons

banners

Better EPS marketing tools for Realtors and contractors.

Call out cards, technical perspectives...

Co-Branded handouts would be helpful.

Current supply seems to be adequate

Describing the performance between single pane old windows compared to double pane new windows. The most beneficial topic is cash incentives and the instant cash that we can offer immediately.

Documents showing the monthly energy savings per home

**Ductless Systems** 

Easy tips to improve home energy efficiency.

**Energy Savings** 

Energy savings regarding new windows.

energy savings/money savings for high efficiency systems.

Existing program materials are fine

First, reduce the seriously flawed manufactured brochure to reflex the best customer cost effective program ever which is the MOBE program. Don't just list it in the same grouping with free LED lamps. Promote it singly and boldly within the brochure. Second, stop the general ETO acknowledgment promotions and use the funds to directly promote the MOBE program regionally through news releases or print ads matching the program with the area trade ally.

General pamphlet related to home energy improvements and percentages of energy loss

Hourly costs to run appliances

**HVAC** incentives

I already have a link to you on my website.

Incentive literature both for current programs and SWR. Perhaps a flyer pertaining to our industry explaining ETO incentives.

incentives available

Indoor air quality, importance of changing filter

industry-specific studies such as benefits of LED to schools, grocery, etc.

**Inverter Heat Pumps** 

just spreading the word that solar makes sense in Oregon

More instant rebate fliers like we ran a couple of years ago.

More programs for water heaters

Most of its online

most of my customers are already motivated and have found some info on their own. Most are surprised at how attainable zero energy certification can be

Our customers don't typically request energy information.

Promoting our company as a primary installer of energy efficient water heaters such as tankless and heat pump water heaters.

Rebate amounts

simple primers for homeowners and small commercial property owners on what incentives and other resources are available (online tools etc.)

staying up to date on lighting incentives is biggest thing.

The new 2018 MACRS 100% Bonus Depreciation for businesses purchasing equipment. Little to no businesses are aware of the new MACRS. We researched and prepared a breakdown of the MACRS 100% Bonus Depreciation with our CPA.

truck decals literature showing coverage to hand to customer

Variable speed blowers and high HSPF heat pumps

We don't really have any printed literature that we give to our customers, but something that specifically outlines the window rebate program, like a small brochure, would be great.

We refer clients to ETO website add'l information on those topics.

Window weatherization form showing how Low E/lower U value performance helps homeowners with NW summer/winter weather

Yes, energy savings about HVAC efficiency

Yes! Materials would be great! A general flyer with the incentives and how to apply would be fantastic!

# **Multifamily Sector**

A brochure that explained the program for windows would be helpful.

A combo sheet talking about federal tax credit and ETO incentives

A general overview of residential incentives in a brochure.

Absolutely! Financial and environmental benefits of solar over time.

Any materials regarding ducted heat pumps and ductless heat pumps vs forced air electric furnaces.

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**Ductless Systems** 

Easy tips to improve home energy efficiency.

# **Multifamily Sector**

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energy savings/money savings for high efficiency systems.

Existing program materials are fine

General pamphlet related to home energy improvements and percentages of energy loss

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**HVAC** incentives

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Window weatherization form showing how Low E/lower U value performance helps homeowners with NW summer/winter weather

Yes, energy savings about HVAC efficiency

#### **Commercial Sector**

"Understanding HVAC SEER Ratings"

"LED Lighting Retrofit Component Suppliers for Refrigerated Cases and Fixtures"

Case studies are always good. My focus is compressed air, so more of those would be handy

Compressed Air & Leak Repair.

Customer proposals that include payments from 3rd parties!

We often will find a donor to help pay for customers portion of project cost, and that currently does not work well with Commercial Lighting Tool.

ETO marketing is spot on. Sector-specific events with multi-stakeholder participation is effective and puts a (positive!) face on the utility EE work.

Maintenance costs

simple primers for homeowners and small commercial property owners on what incentives and other resources are available (online tools etc.)

A combo sheet talking about federal tax credit and ETO incentives

A general overview of residential incentives in a brochure.

Absolutely! Financial and environmental benefits of solar over time.

Any materials regarding ducted heat pumps and ductless heat pumps vs forced air electric furnaces.

Any promoting duct-less installations

Anything we could post on our social media to spread the word:)

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We refer clients to ETO website add'l information on those topics.

Window weatherization form showing how Low E/lower U value performance helps homeowners with NW summer/winter weather

Yes, energy savings about HVAC efficiency

# **Industrial and Agricultural Sector**

More on agricultural applications

Case studies are always good. My focus is compressed air, so more of those would be handy

Compressed Air & Leak Repair.

Customer proposals that include payments from 3rd parties!

We often will find a donor to help pay for customers portion of project cost, and that currently does not work well with Commercial Lighting Tool.

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Most of its online

The new 2018 MACRS 100% Bonus Depreciation for businesses purchasing equipment. Little to no businesses are aware of the new MACRS. We researched and prepared a breakdown of the MACRS 100% Bonus Depreciation with our CPA.

# **Solar Sector**

How power costs are calculated on commercial buildings

How solar works. I think people are interested.

Co-Branded handouts would be helpful.

just spreading the word that solar makes sense in Oregon

A combo sheet talking about federal tax credit and ETO incentives

Absolutely! Financial and environmental benefits of solar over time.

I already have a link to you on my website.

More instant rebate fliers like we ran a couple of years ago.

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# C.5. Q58: Improvement Suggestions on Forums, Training, Events

# Table C-5: What could be improved to make the forums, commercial lighting training, or commercial trade ally events more valuable?

# **Single-Family Homes Sector**

choose different locations for smaller events

condense the time of them.

ensuring a break out event applicable to trades being present

Good question.... quality listing and sincere response to trade ally inquiries and concerns. To do so in a timely manner.

Have meeting held in different county and not just in Portland

Have them in areas besides Portland, Medford, and Bend...

I am a window replacement company, too much time spent on Solar and Heat pumps, HVAC. The 3+ hour forum only concerns me for 5 min

I deal in lighting

I many cases the Trust Employees speak to their favorite products rather than the best solutions. They tend to state opinions rather than fact.

Less talking at us, more talking with us.

Manufacturer training or input regarding efficiency requirements.

Material related to codes and HVAC.

Mini technical seminars that can be promoted separately in advance of event

More CEUs, networking opportunities

more residential gas furnace incentives

More Session Options

Not sure. more on lighting if you are a solar contractor is always nice.

Sales and Marketing / lead generation

Set up a group of like contractors with Energy Trust guy for their category. Have some questions and answer, best practices, discussion about the future, things you guys prefer to see, problems you guys see, etc.

Streamline application process and improving rebate time frame. Should not have to wait 3 month for my rebate checks.

That other ally's I talk to that say they will call me, call me.

They normally give us any new information

Update on energy savings

We went to the event for window weatherization and only the last 10 minutes of the entire seminar was spent on windows. It was a waste of our time.

Webinar improvements. Much less of a strain on daily schedule etc.

# **Multifamily Sector**

Include education about financing projects

It would be nice to get more advanced training

choose different locations for smaller events

ensuring a break out event applicable to trades being present

Have meeting held in different county and not just in Portland

Have them in areas besides Portland, Medford, and Bend...

I deal in lighting

I many cases the Trust Employees speak to their favorite products rather than the best solutions. They tend to state opinions rather than fact.

Less talking at us, more talking with us.

Manufacturer training or input regarding efficiency requirements.

More CEUs, networking opportunities

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That other ally's I talk to that say they will call me, call me.

They normally give us any new information

Update on energy savings

Webinar improvements. Much less of a strain on daily schedule etc.

#### **Commercial Sector**

Less general blaw. more practical detail

More central location in the Portland area.

More sales info

Share EEM best practices i.e. what innovative actions are others doing on their projects

**More Session Options** 

It would be nice to get more advanced training

choose different locations for smaller events

ensuring a break out event applicable to trades being present

Have meeting held in different county and not just in Portland

Have them in areas besides Portland, Medford, and Bend...

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Set up a group of like contractors with Energy Trust guy for their category. Have some questions and answer, best practices, discussion about the future, things you guys prefer to see, problems you guys see, etc.

Streamline application process and improving rebate time frame. Should not have to wait 3 month for my rebate checks.

That other ally's I talk to that say they will call me, call me.

They normally give us any new information

# **Industrial and Agricultural Sector**

You had nothing that pertained to our trade agriculture

Less general blaw. more practical detail

More central location in the Portland area.

More sales info

It would be nice to get more advanced training

choose different locations for smaller events

ensuring a break out event applicable to trades being present

I many cases the Trust Employees speak to their favorite products rather than the best solutions. They tend to state opinions rather than fact.

Less talking at us, more talking with us.

Streamline application process and improving rebate time frame. Should not have to wait 3 month for my rebate checks.

That other ally's I talk to that say they will call me, call me.

They normally give us any new information

#### **Solar Sector**

Less general blaw. more practical detail

It would be nice to get more advanced training

Less talking at us, more talking with us.

# C.6. Q72: Final Comments and Suggestions for Energy Trust

# Table C-6: Do you have any final comments or suggestions for Energy Trust?

## **Single-Family Homes Sector**

Anything to streamline the paperwork would help. The information you request is not how our invoices/bids come in so it takes a lot of extra work to break it out in the way you want it.

Bring back incentives for existing heat pumps.

Bring forums to the Salem.

By completing this survey it sounds like our company could benefit from more information.

Change window incentive payouts

.27-.30 \$1.75 .26 or lower \$4.00

With the new S4 technology .27 is easy to obtain and should not be given maximum \$4 pay out.

Changes in eto co.op mid yr. when companies plan up to 12 months in advance and take co op amounts into factor. Are disruptive. Especially when at last forum you were promoting more use of the funds. Its like inviting more people to dinner when you k ow you don't have enough food.

Decrease the amount of paperwork required for energy trust incentives with an auto calculation system, increase the cash incentives to the customers

For the Energy Trust staff (not your program subs)....put more emphasis on helping the "end use customer" (residential preferably) reduce their energy consumption and utility cost than satisfying the PUC and their ridiculously cost effective calculation formulas. Include a little practical and common sense for the good. Much like you did in the beginning.

Great program- keep it going

Having the personal representatives is the best thing that you guys ever did! Love Rick Flacco. He does his job well!!!!

I appreciate Rick Flacco very much. He has been instrumental in our success with Energy Trust residential programs and is always willing to assist where he can.

I have been very disappointed with the turn around times from Energy Trust this last quarter. 3 + weeks to just mark a system as received and several more weeks before it is reserved. 3+ weeks for changes to be approved is my biggest disappointment as it is usually an as-built, so it adds a month before you can request verification.

Verification are also taking up to 3 months to be completed from when it is selected in powerclerk. Add the time it takes to receive the check and you are waiting over a quarter from completion to receive your payment. It felt like the verifiers did not have the resources to complete their tasks in a timely manor or were short on man power...

I look forward to the webinar tomorrow.:)

I think that the amount of paperwork and the time consuming nature of the application process, review, and inspections are cumbersome and should be streamlined. Some of the inspection requirements are ridiculous and seem random. The whole additional inspection requirement is excessive. These excessive requirements make for more expensive systems to the customers, and don't provide any additional value. Customers are extremely cost conscious and price is the major factor in whether a customer purchases a solar system or not.

I would like to see the Energy Trust providing insight about the future of electricity in Oregon in terms of policy and sharing insights about energy efficiency on the West Coast and around the country.

I would support a combination of the proposed customer rating system with the existing rating system and a shift from 3 stars to five.

Improved phone assistance. I have been an ally for 10 plus years and have really seen a decline in the knowledge and availability of reaching a qualified assistant when calling in.

Please bring back the Home Energy Review process. I cant stress enough how much this equates to actual projects moving forward.

In general, I'm very happy with Energy Trust and I love working with you.

Instead of dinging allies for incomplete paperwork that is sent in by us (not the customer), it would be nice to respond to the sender that there is more paperwork needed, instead of penalizing for a missing field.

It was extremely difficult to get used to in the beginning, but better now and the people we work with are great (esp. Rick Flacco & crew). Simplifying/combining all the groups (residential, 2-4plex & multi) would be great, but we understand there are huge differences & financial reasons for the incentives.

You may contact us about the youth employment possibilities, but please don't call about other inquires. You may email other questions.

It's becoming harder to qualify projects for energy incentives and as such the number of applications keep going down. As that goes down then the star system is affected which can hurt the contractor by no fault of their own. I am hoping to see the program be enriched so that more consumers have access to incentives for energy upgrades in the future.

Keep doing what you're doing!

Keep on doing your forums, they are good for your trade allies.

Keep up the good work

Keep up the good work, ETO! Especially you, Shep!

Love being able to work with Energy Trust and provide better options and incentives for our customers. Everyone at Energy Trust have been very helpful when I need assistance with anything.

Thank you

Love the website

None

Thank you

Cyran Appler over here on the east side is great to work with

None, overall you are doing a good job - the new program contractor is slowly but surely getting up to speed

Our company doesn't have much to do with ETO as much of our work is in Columbia County and there is no longer a credit for gas furnaces. Customers in Washington County we normally take advantage of the ductless rebate and on occasion the Heat Pump rebate. Our Sales staff is good about educating customers about the ETO program and information available on the web site.

Put the incentive application front and center on trade ally pages

Quicker rebates, easier and less paperwork.

Thank you and keep up the good work!

thanks for all the good work

We lost our local contact and I have not heard that he was replaced, I now have no one to contact for help/.

We love working with Eric Falk -- he is such a support and great source of information. Anytime we have questions we have amazing response, and we are thankful for that!

You can contact me further if you need clarification. I have nothing further to add.

YOU GUYS ARE AWESOME!

You guys do a great job!!

# **Multifamily Sector**

Bring back incentives for existing heat pumps.

By completing this survey it sounds like our company could benefit from more information.

Changes in ETO coop mid yr. when companies plan up to 12 months in advance and take co op amounts into factor. Are disruptive. Especially when at last forum you were promoting more use of the funds. Its like inviting more people to dinner when you k ow you don't have enough food.

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Keep on doing your forums, they are good for your trade allies.

Keep up the good work

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You guys do a great job!!

## **Commercial Sector**

"Rural" projects, especially small ones, are often overlooked for years (thus having extreme energy waste), and often require custom solutions. BPA works well with these situations, but ETO seems unwilling to accommodate custom treatment of these situations. Allowing a pay-per-kW or allowing easier custom access, or providing some alternative method for these rural / "poor" would be beneficial to ETO mission AND the customer AND the Trade Ally

Consider offering kWh incentives for interactive effects of a single measure (like the RTF does when determining UES values), and cap incremental costs at the PROJECT rather than the measure-level so non-measure level costs (freight, engineering, etc.) can be more easily captured. And of course please work on the time to pay customers & vendors.

Recent move to Docusign is great! two thumbs up.

I'd like to know why the ETO is leaning more and more heavily on false 'cost-effectiveness' criteria to screen out projects and reduce incentives?

In Oregon we benefit from a federally subsidized hydro system that keeps kwh costs down. Yet when Pac Power burns a lump of coal or PGE a therm of gas to generate power, it has the same impact on our globe as a 25cent/kwh burned or saved in California. Yet through the current cost-effectiveness evaluations, we as a region are being allowed to be 'the worst' polluters while claiming to be a 'progressive state'.

When the cost of therm of gas is not including the cost to fix the aquifers in the Dakotas after fracking, the therm is not calculating cost-effectiveness correctly. Why is the ETO being manipulated by the energy firms (the energy efficiency program management firms and the utilities) into believing their cost-effectiveness evaluations are correct and accurate?

If the reason is the ETO's original legislation, why is there no effort to amend the legislation so Oregon can 'get off the bench' and 'get back into the anti-Climate Change game'? Oregon engineering firms and contractors used to be the sustainability leaders of the nation and the world. Now innovation is being/has been so wrung out of the ETO processes, and the state has fallen well out of the top ten of innovative states in the nation. Innovation when it comes to actual projects being incented and pursued, and pretty much nowhere in the world.

Why is the ETO sitting back counting the 3% contributor's dollars for them, and just allowing this leadership position to slip away, promoting east coast and Texas based program managers to simply squeeze the programs for greater and greater profits all to simply be sent out of state and counted on Wall Street?

Keep up the good work - it can be hard to find savings as systems improve over time.

My biggest struggle, being a sole employee, is trying to figure out who it is I'm supposed to talk to about various issues. Personnel changes with the organization keep me confused. When I do find the right person, I always get great assistance, but a lot of the time, I have already talked to 2 or 3 people, thereby wasting their time and mine.

plan events further ahead. Simplify forms, Fire most of the Program Managers, expedite incentive payments. More detailed training sessions.

Please keep up the good work.

## Thanks

Time for processing paperwork, 120L, 140L, etc. needs to greatly improve. It effects my business performance and ability to do my jobs waiting on paperwork processing and the tremendous time it is now taking to process rebate payments.

Anything to streamline the paperwork would help. The information you request is not how our invoices/bids come in so it takes a lot of extra work to break it out in the way you want it.

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I think that the amount of paperwork and the time consuming nature of the application process, review, and inspections are cumbersome and should be streamlined. Some of the inspection requirements are ridiculous and seem random. The whole additional inspection requirement is excessive. These excessive requirements make for more expensive systems to the customers, and don't provide any additional value. Customers are extremely cost conscious and price is the major factor in whether a customer purchases a solar system or not.

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I would support a combination of the proposed customer rating system with the existing rating system and a shift from 3 stars to five.

Love the website

Quicker rebates, easier and less paperwork.

## **Solar Sector**

Please raise the solar electric incentive!

# **Solar Sector**

We love the ETL and thank you for helping us make a great living

I think that the amount of paperwork and the time consuming nature of the application process, review, and inspections are cumbersome and should be streamlined. Some of the inspection requirements are ridiculous and seem random. The whole additional inspection requirement is excessive. These excessive requirements make for more expensive systems to the customers, and don't provide any additional value. Customers are extremely cost conscious and price is the major factor in whether a customer purchases a solar system or not.

thanks for all the good work

plan events further ahead. Simplify forms, Fire most of the Program Managers, expedite incentive payments. More detailed training sessions.

I have been very disappointed with the turn around times from Energy Trust this last quarter. 3 + weeks to just mark a system as received and several more weeks before it is reserved. 3+ weeks for changes to be approved is my biggest disappointment as it is usually an as-built, so it adds a month before you can request verification. Verification are also taking up to 3 months to be completed from when it is selected in powerclerk. Add the time it takes to receive the check and you are waiting over a quarter from completion to receive your payment. It felt like the verifiers did not have the resources to complete their tasks in a timely manor or were short on man power...

Decrease the amount of paperwork required for energy trust incentives with an auto calculation system, increase the cash incentives to the customers

I would support a combination of the proposed customer rating system with the existing rating system and a shift from 3 stars to five.

Quicker rebates, easier and less paperwork.