Trade Ally Interviews 2023

A Report for Energy Trust of Oregon

Final Report Submitted by Evergreen Economics

May 23, 2024

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1 Executive Summary

Energy Trust of Oregon deploys a Trade Ally Network to provide 1) training for and support to contractors; 2) referrals to customers; and 3) information about Energy Trust standards, incentives, and quality requirements. Supporting the Trade Ally Network helps to fulfill Energy Trust's mission to bring affordable clean energy to all.

In the past, Energy Trust distributed an online survey to solicit feedback from its Trade Ally Network. Energy Trust has placed a greater emphasis on fostering a more collaborative and discussion-oriented relationship with the trade allies; with this in mind, Energy Trust hired Evergreen Economics and BrightLine Group (the Evergreen team) to conduct interviews to hear directly from trade allies in a more personal way.

1.1 Research Topics and Methodology

The four main research topics the study addressed are:

1. Demographic and firmographic characteristics of trade ally firms;
2. Compensation and benefits;
3. Professional workforce development practices, tools, and courses; and
4. Barriers and opportunities.

The Evergreen team conducted phone interviews and offered a $100 gift card incentive for trade ally participation. The interviews each took between 20 and 90 minutes and covered all research questions identified by the team, as well as some additional questions requested by the Oregon Department of Energy (ODOE).

We utilized a multi-modal recruitment effort to leverage Energy Trust's existing relationships, in-person events, and traditional recruitment methods such as email, phone, and mailers. Overall, this recruitment approach was successful, and we met all interview completion targets by sector with an overall response rate of 43 percent.

To gather representative information from key segments of Energy Trust's Trade Ally Network, we designed our sample to achieve a 90/10 confidence and precision target across sectors (residential, commercial, industrial, and renewables). We also targeted firms with certain characteristics to explore how different characteristics impacted their responses. The targeted characteristics included early and later trade allies (defined by when the firm joined the Trade Ally Network), firms certified by or self-identified in alignment with Oregon's Certification Office for Business Inclusion and Diversity (COBID), and trade allies that do not have a Portland office.

Table 1 summarizes the program data we used to segment the trade ally population, by sector and targeted characteristics.

Table 1: Summary of Sample and Response Rates

Sector	Active Trade Allies[1]	Sampled	Target	Completed	Response Rate
Serves Residential Sector	599	215	62	68	32%
Serves Commercial Sector	307	163	56	82	50%
Serves Industrial Sector	78	78	37	45	58%
Serves Renewables Sector	60	61	33	37	56%
Targeted Characteristics	**Active Trade Allies**	**Sampled**	**Target**	**Completed**	**Response Rate**
Early Trade Allies (2012 and before)	405	175	59	79	45%
Later Trade Allies (2013 to present)	341	167	57	69	41%
COBID-Certified or Self-Identified	68	67	35	36	61%
Trade Allies with No Portland Office	445	195	60	77	39%
Overall	**746**	**342**	**140 – 180**	**148**	**43%**

1.2 Findings

The Evergreen team documented all interview responses and summarized them by the variables of importance listed below:

- COBID enrollment
- Firm size
- Number of projects completed annually
- Percentage of projects that used Energy Trust incentives
- Whether the firm has an office in Portland city limits
- Primary service area
- Sectors served
- Years involved with Energy Trust

Table 2 through Table 5 document headline findings from each section, and each includes the corresponding sections where the reader can find more detail, such as quotes from the interviews, additional context, and statistical significance.

[1] For this research, we defined active trade allies as those that have completed one or more projects since 2022.

Table 2: Summary of Findings – Demographic and Firmographic Characteristics

Section	Findings
3.1.1	**Sixty-one percent of respondents were not aware of what COBID certification** is. Even respondents from firms that were COBID-certified were often not aware that their firms were COBID-certified.
3.1.2	**Forty-nine percent of respondent firms can only support customers in English**. Southern and Central Oregon firms were more likely to only support customers in English (75%), and firms that serve Portland were less likely to only support customers in English (35%).
3.1.2	**Twenty-one percent of owners of firms said they are interested in hiring to support more languages** in the future.
3.1.3	Most trade ally firm owners self-identified as Caucasian (82%) and male (76%).

Table 3: Summary of Findings – Compensation and Benefits

Section	Findings
3.2.1	**Forty-four percent of respondents reported that they faced some internal bottlenecks with projects and workflow due to challenges in hiring employees**. Trade allies that serve Eastern Oregon were more likely to report impacts due to hiring challenges.
3.2.1	**Twelve percent of firms interviewed reported that their employees were enrolled in a union**. Firms that serve commercial or industrial customers were more likely to be enrolled.
3.2.2	**Ninety-four percent of respondents reported that their firm provides some sort of non-wage benefits**, such as health care, paid time off, retirement, paid training, sick days, and company vehicles.
3.2.2	Owners and non-owners both reported that culture, wages, and flexibility of work were the **most important reasons employees stay with their firm.**
3.2.2	**Fifty-nine percent of firms reported working with clients that require wage reporting**. The most common challenge reported with working with clients that require wage reporting was paperwork.

Table 4: Summary of Findings – Professional Workforce and Development Practices and Tools

Section	Findings
3.3.1	**A majority of trade allies reported that their firm offers training resources (95%).** The most common training resources offered were on-the-job (45%) and manufacturer product training (18%).
3.3.2	**Almost half (45%) of respondents think there are gaps in training** offered by their firm. Firms that have been involved with Energy Trust for less than four years were more likely to report gaps (71%).
3.3.3	**Eighty-four percent of respondents said they were interested in Energy Trust offering professional development resources**, and 44 percent said they were extremely interested.
3.3.4	**Most respondents (93%) are interested in pursuing new work** that may result from the Inflation Reduction Act (IRA) to support residential energy efficiency**,** and many (63%) would require additional training to complete the types of projects that may arise from the IRA.

Table 5: Summary of Findings – Barriers and Opportunities for Trade Allies

Section	Findings
3.4.1	**Twenty-eight percent of firms reported that they were at their limit** in meeting demand over the last year. Firms that complete more than 500 projects a year were more likely to report they were at their limit.
3.4.1	**Half of all trade allies (50%) said they anticipated demand in the next year to be greater than the current year,** almost half (43%) reported that they expected it to stay the same, and only a few anticipated that demand would decrease (7%). Note that we conducted some interviews in 2023 and some in 2024.
3.4.2	**Most firms (73%) are extremely interested in increasing their project volume** over the next year. Many firms that reported they were at their limit still reported that they are interested in increasing project volume.
3.4.3	The most common **barriers to taking on more projects** were labor constraints, supply chain issues, and demand (mostly reported by firms with low demand that want to increase project volume).
3.4.4	Despite some firms reporting they are unable to meet demand, a **majority of respondents (92%) noted that they are interested in Energy Trust's help with lead generation.** Other types of support that trade allies would like were more trainings (including on incentives), co-branding, and industry updates.

Memo

To: Energy Trust Board of Directors

From: Cody Kleinsmith, Evaluation Project Manager
Cameron Starr, Sr. Customer Service Strategy Manager
Ashley Prentice, Project Manager – Trade Ally Operations
Tom Beverly, Trade Ally Network Manager

cc:

Date: July 1st, 2024

Re: Staff Response to the 2023 Trade Ally Interviews Study

The 2023 Trade Ally Interviews study gathered a wide range of information from a representative sample of Energy Trust trade allies using qualitative interviews. The last trade ally research project performed in 2018 gathered information via an online survey. In this edition of the trade ally research, Energy Trust opted for a more discussion- and relationship-based format to engage with trade allies to better capture the nuance of their unique circumstances, attitudes and opinions. The 2023 study focused on four key areas: demographic and firmographic characteristics, compensation and benefits, professional and workforce development, and barriers and opportunities. A total of 148 trade allies participated in this research across different characteristics of interest including the sector they serve, length of time they've worked with Energy Trust, Business Oregon's Certification Office for Business Inclusion and Diversity (COBID) certification status and region(s) served.

The 2023 study found Energy Trust's Trade Ally Network is likely more diverse than in 2018. The rates of woman-owned and minority-owned trade allies have increased (12% to 24% and 6% to 18% respectively) from the 2018 study, though the different methods between the two studies mean they are not direct comparisons. The rate of trade allies able to serve customers in a language other than English has also increased, from 27% in 2018 to 51% in 2023, with Spanish still the most common non-English language supported. Diversifying the Trade Ally Network remains a priority for Energy Trust, and trade ally programming such as the Contractor Development Pathway, peer mentorship, expansion of Business Development Funds, and launch of a Small Business Trade Ally Resource Network will continue to support these goals. The study also found low awareness of COBID certification and its purpose. Energy Trust will continue to support COBID certification by not only spreading awareness but also assisting trade allies in getting certified. Energy Trust will also continue to provide a self-identification pathway for trade allies that are not engaged in public contracting. Residential contractors, for example, are often less likely to be certified as a result.

A common theme of the responses was the toll that Energy Trust's administrative rules and processes have on trade allies. The study also found a low rate of union enrollment (12%) with an especially low rate among residential-focused trade allies. Energy Trust's regulatory framework and cost-effectiveness rules that determine incentive amounts can be challenging for trade allies with higher labor costs, including many union-enrolled firms. Energy Trust is committed to assisting union-enrolled firms with joining the Trade Ally Network and finding specific offers and programs that work for them. In a recent example, a trade ally on the South Coast who faced these cost barriers to working with Energy Trust was able to collaborate with Energy Trust staff and found that the direct-install lighting offer's incentive structure could work for their business.

Trade allies, especially residential-focused trade allies, also expressed concerns and hesitancy with working on projects that have wage-reporting requirements, such as those that fall under the Davis-Bacon Act, a federal law that requires local prevailing wages be paid and reported on federally funded construction contracts. More paperwork and administrative burden led to some firms, often smaller firms, avoiding contracts subject to those requirements. As Energy Trust begins working with more federal programs – such as Solar for All, which will have wage reporting requirements – we will explore ways to reduce the burden of additional administrative and reporting requirements for trade allies. Streamlining forms and administrative processes will continue to be a key focus area for Energy Trust's existing processes as well to support trade allies in taking on more work and accelerating the acquisition of energy efficiency and renewable energy resources.

Trade allies had a wide variety of ideas about opportunities to work with Energy Trust in service of our goals. Trainings that Energy Trust could offer were top of mind for many trade allies. This aligns with Energy Trust's existing efforts, such as the Contractor Development Pathway, and also highlights some opportunities that Energy Trust will develop. At future Trade Ally Forums, Energy Trust will offer a project lifecycle training to help trade allies understand each step in the process of working with Energy Trust, from customer sales to incentive application and administration to project close out. The forums will also highlight technical training opportunities, marketing and cobranding opportunities, and other resources for trade allies that Energy Trust will develop and offer.

This study was successful both in terms of engaging with trade allies and developing effective learning outcomes. Due to the success of this study, future trade ally research projects will continue to be conducted in a similar manner using qualitative interviews and a relationship focused approach. To allow for Energy Trust to implement and learn from findings of this study, the next iteration of this research should be conducted in roughly three years.

2 Introduction

This section introduces the study background, including research objectives, and presents the sample design and methodology for the research.

2.1 Study Background and Research Objectives

Energy Trust of Oregon is an independent nonprofit organization dedicated to delivering energy efficiency and renewable power benefits to utility customers. Energy Trust's Trade Ally Network is made up of over 1,600 independent contractors that help deliver incentives to their customers. Enrolled contractors receive support from Energy Trust including training, business development fund access, and referrals to customers. Energy Trust's stated goal is to bring affordable clean energy to all. To help realize this goal, Energy Trust is working to expand its network and is actively seeking to diversify it by enrolling businesses owned by people of color, women, veterans, and those certified by Oregon's Certification Office for Business Inclusion and Diversity (COBID).[2]

In the past, Energy Trust has collected information and solicited feedback from its Trade Ally Network through an online survey effort. This survey was last distributed in 2018. Energy Trust has placed greater emphasis on fostering a more collaborative and discussion-oriented relationship with its trade allies. With this in mind, for this research study, Energy Trust invested in a more personal interview format to engage Trade Ally Network members at a deeper level, and hired Evergreen Economics and BrightLine Group (the Evergreen team) to conduct this research.

The four main research topics the study addressed are listed below:

1. Demographic and firmographic characteristics of trade ally firms;
2. Compensation and benefits;
3. Professional workforce development practices, tools, and courses; and
4. Barriers and opportunities.

Within each research topic, there are several research questions Energy Trust sought to answer through the trade ally interviews. A full list of research questions is listed in Appendix A: Research Questions. During the kickoff phase of this research, the Evergreen team and Energy Trust met to discuss priorities and nuance surrounding the questions to ensure that the discussions with trade allies would provide rich information to support Energy Trust's goals.

[2] Retrieved from https://www.energytrust.org/about/what-we-do/trade-ally-network/

2.2 Sample Design

During the research kickoff meeting, we discussed Energy Trust's needs so that we could prioritize key segments and ensure we allocated resources efficiently to maximize the value of the research. After the call, we finalized a detailed sample plan using the dataset of active trade allies. For this research, we defined active trade allies as those that have completed one or more projects since 2022.[3] A total of 746 active trade allies were captured in the program data. To achieve a 90/10 confidence and precision target across sectors and for other characteristics of interest, we estimated that we needed to complete a total of 165 to 175 interviews. Given the amount of overlap in characteristics within the population, we were able to hit our targets with 148 interviews.

In Table 6, we detail the number of active, sampled, targeted, and interviewed trade allies by their defining characteristics. While we ended up meeting all targets, we focused primarily on meeting the sector targets. The targeted characteristics were important for cross-cutting comparison of firms by different characteristics, such as when firms enrolled in the network, whether they were COBID-certified, and whether they had an office with a Portland address. On average, we achieved a 43 percent response rate.[4]

[3] Provided by Energy Trust in September 2023.

[4] Note that we stopped recruitment for groups once we reached the targeted number of interviews.

Table 6: Summary of Sample and Response Rates

Sector	Active Trade Allies[5]	Sampled	Target	Completed	Response Rate
Serves Residential Sector	599	215	62	68	32%
Serves Commercial Sector	307	163	56	82	50%
Serves Industrial Sector	78	78	37	45	58%
Serves Renewable Sector	60	61	33	37	56%
Targeted Characteristics	**Active Trade Allies**	**Sampled**	**Target**	**Completed**	**Response Rate**
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Overall	**746**	**342**	**140 – 180**	**148**	**43%**

2.3 Methodology

In this section, we provide an overview of the recruitment effort employed for the study and the approach we used for documenting responses.

We offered a $100 gift card incentive for trade ally participation. Interviews were conducted over the phone in English, with the option to schedule with a Spanish-speaking interviewer if preferred. No trade allies responded that they would prefer to do the interview in Spanish, but the option was available, and we included a Spanish summary of the interview effort and our request to interview trade allies in all recruitment materials to ensure access.

During the research planning phase, we designed the interviews to take 30 minutes to complete. However, with the addition of questions to support Oregon Department of Energy (ODOE) efforts for firms that serve residential customers, we found that many residential interviews took longer, between 45 minutes and one hour to complete. There was a significant range in interview duration due to participant availability, response length, and applicable follow up questions. In some cases, if the respondent noted that they had limited time, we shortened the interview to focus on the key questions. In others, respondents provided extensive feedback and took longer to get through all questions. On average, interviews took between 30 to 40 minutes to complete,

[5] For this research, we defined active trade allies as those that have completed one or more projects since 2022.

with at least 33 interviews taking longer than 45 minutes and at least 14 taking fewer than 25 minutes.[6]

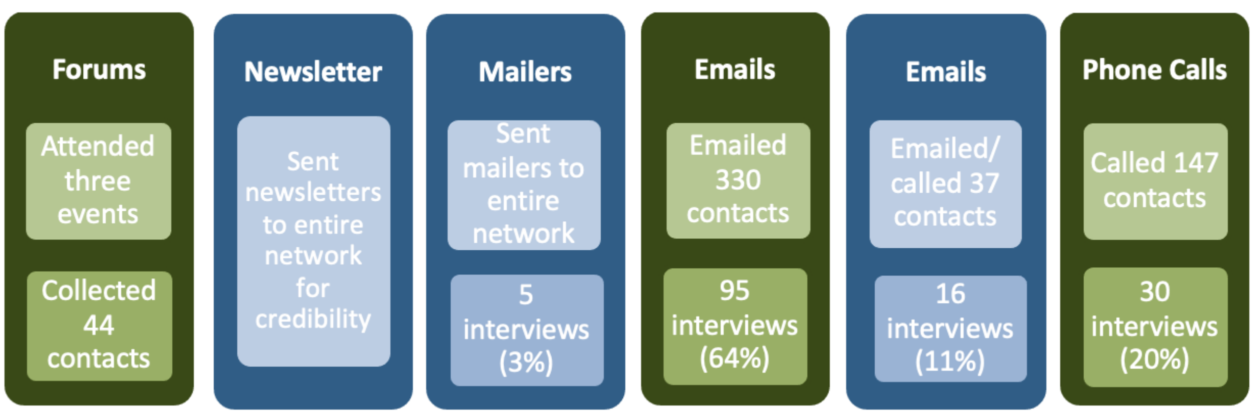
2.3.1 Recruitment

To recruit contacts, we developed a multi-modal approach. Our recruitment approach leveraged Energy Trust's existing relationships through the Insider Newsletter, and personal emails and phone calls from the Program Management Contractor (PMC) account managers. The Evergreen team also attended in-person Trade Ally Forums and conducted more traditional recruitment methods such as email, phone, and mailers.

Figure 1 displays the different modes used by the teams, with the Evergreen team's activities in green and Energy Trust's in blue. Overall, this recruitment approach was successful, with most interviews (64%) coming from email recruitment, and others coming through phone (20%), Energy Trust emails (11%) and Energy Trust mailers (3%). Of the 342 contacts in our sample, only 22 declined to participate by stating they were not interested or were too busy.

Note that it is unclear how much of an indirect "bump" Energy Trust's emails and mailers had on the overall recruitment rate, as the Evergreen team's email and phone call outreach occurred after Energy Trust's; it is highly likely that numerous participants were more interested in participating once we reached out directly because they were made aware of the study from Energy Trust. Overall, the recruitment success required teamwork and coordination across the Evergreen and Energy Trust teams.

Figure 1: Recruitment Strategies by Evergreen Team and Energy Trust



[6] We only recorded duration for 128 of 148 interviews for internal tracking purposes.

Next, we provide detail for each recruitment step, including findings. The steps covered are listed in chronological order, beginning with Trade Ally Forums in October 2023 through phone call recruitment ending in March 2024.

Trade Ally Forums

As part of Energy Trust's effort to be more collaborative and conversational than previous survey efforts, Evergreen staff attended three Trade Ally Forums in Portland (October 19, 2023), Grants Pass (October 26, 2023), and Bend (October 27, 2023) to meet trade allies in person. The forums provide an overview of upcoming incentive information, program updates, technical training, and an opportunity to network with industry equipment vendors. Because the forums were occurring at the start of the data collection effort, we leveraged the opportunity to meet trade allies in person.

Evergreen staff attended the three different locations because of the variation in firm types that typically attend each gathering and to provide equal opportunity to engage with rural and urban trade allies—by sending representatives to each forum, we were able to collect sample information from different groups. One Evergreen staff member attended each event with Evergreen and Energy Trust co-branded materials and set up a booth with information for attendees.

We included a one-page description of the research as well as a sign-up sheet for trade allies to provide a contact number, firm information, and best time to call. To encourage attendees to stop by the booth, we entered everyone that signed up to be contacted into a drawing for a gift card. Energy Trust staff also lent Energy Trust's logo for the information sheet and introduced the Evergreen team and the research during opening remarks of the forums.

Trade allies that our team talked to and received contact information from during the in-person trade ally forums were considerably more likely to complete an interview. Regularly sampled trade allies (n=294) had a response rate of 40 percent, and Trade Ally Forum attendees (n=44) had a 59 percent response rate.

Energy Trust Insider Newsletter and Mailers

The Evergreen team developed copy for the monthly Trade Ally Newsletter to describe the study and lend credibility to our recruitment efforts. The team also helped develop a postcard mailer to be sent to trade ally firms with physical addresses. These materials are located in Appendix B: Data Collection Materials.

While we only received five eligible inbound contacts directly from the mailer and newsletter outreach, we found that many contacts were familiar with the study when we recruited them, and we attribute some of the successes of these efforts to that awareness.

Evergreen Team Email Recruitment

After attending the Trade Ally Forums, the Evergreen team sent emails to invite sampled firms to participate in the research. Due to the groundwork laid by the Energy Trust team and the recognition from the Trade Ally Forums, we scheduled 64 percent of all interviews through just email outreach. Once we emailed all contacts a total of three times, we collaborated with Energy Trust program leads to engage with nonresponsive contacts.

Energy Trust Emails and Phone Calls

Energy Trust program team leaders and Program Management Contractor (PMC) account managers have valuable relationships with members of the Trade Ally Network. To leverage these relationships, we sent 208 unresponsive contacts to the Energy Trust team for follow-up. In total, Energy Trust staff sent emails to or called 37 contacts to encourage them to participate in the study. Of those, 16 firms scheduled an interview (11% of all interviews).

Evergreen Team Phone Recruitment

Finally, phone recruitment allowed us to reach contacts who do not regularly check email or for whom we had outdated contact information; phone recruitment also made it easier to convince those who reported they were short on time to participate. Many firms that were recruited through phone calls mentioned they had not seen the email and asked us to resend it or provided a new email address to send it to. Others, upon talking through the research and explaining why Energy Trust is interested in hearing from them, were willing to stay on the call and conduct the interview. Overall, about 20 percent of all scheduled interviews were from phone recruitment.

To be responsive to contacts that cited time as a barrier to participating in this research, we offered a 20-minute version of the interview. Notably, contacts that selected the 20-minute version often stayed longer after the initial 20 minutes to complete the full interview, indicating that they enjoyed giving feedback and felt the time was valuable.

2.3.2 Documenting Responses

The Evergreen team documented responses in an Excel workbook, with each set of responses from each respondent as columns and with each question as a row. We sought to document verbatim responses and then summarized them when applicable (i.e., to “yes” or “no” for a question intended to solicit a yes or no response). The respondent characteristics were also included for each response column, allowing us to analyze across the sampling dimensions.

2.3.3 Statistical Significance

The findings shared in this report are statistically significant at the 90/10 confidence interval, unless otherwise noted. Any confidence interval estimated from a small sample has the potential to overstate confidence (i.e., estimating unrealistically tight error bounds) if the sample measurements are similar by random chance (if none of the natural outliers made it into the sample).

Statistically significant differences between groups are visualized in tables throughout this section using shading to help the reader identify which statistics were compared. In Table 7, we report on trade allies that responded "Yes" to a question, and show an example of statistically significant differences across a given firm characteristic.

In this case, firms that fall under Category 1 are statistically significantly different than firms that fall under Category 3. In situations where there are two categories within a topic that are statistically significantly different, we denote with matching symbols to track which are being compared. In the example, firms that fall under Category 1 and firms that fall under Category 3 are linked with the asterisk subscript (*) and firms that fall under Category 2 and firms that fall under Category 3 were also statistically different from one another, so we denote it with a dagger subscript (†) to show that it is a different combination. Throughout the study findings section, there may be multiple groups that are statistically significantly different from another. To help identify those, we use a combination of shading and symbols.

Table 7: Example for Statistical Significance Reporting

Firm Characteristics	Category	N	% Responded Yes
Firm Characteristic	Category 1	62	47%*
	Category 2	30	43%†
	Category 3	25	16%*†
	Category 4	17	35%
	Category 5	6	50%
	Category 6	3	0%

*†The differences between corresponding groups are statistically significant at the 90 percent confidence interval.

3 Findings

This section reports on findings from the interviews, organized by research topic. Detailed research questions are located in Appendix A: Research Questions. We analyzed all variables listed in Table 8 for each question and reported on differences in this section if they were statistically significant at the 90 percent confidence interval.

Table 8: Variables for Analysis

Category	Source	Options
COBID Enrollment	Program Data	• Enrolled • Not Enrolled
Firm Size	Self-Report	• Very Small (1 – 4 employees) • Small (5 – 10 employees) • Medium (11 – 39 employees) • Large (40 – 119 employees) • Very Large (More than 120 employees)
Number of Projects Annually	Self-Report	• Less than 40 projects annually • Between 41 – 200 projects • Between 201 – 500 projects • More than 500 projects
Percentage of Projects with Energy Trust Incentives	Self-Report	• Less than 20% of projects use incentives • Between 21 – 50% of projects • Between 51 – 75% of projects • More than 76% of projects
Portland Office	Program Data	• Office location listed in Portland • Office location not in Portland
Primary Service Area	Self-Report	• Entire State • Portland • Willamette Valley • Southern and Central Oregon • Eastern Oregon • Coastal Oregon
Sectors Served	Program Data	• Serves commercial customers • Serves industrial customers • Serves multifamily customers • Serves residential customers
Years Involved with Energy Trust	Self-Report	• Less than 4 years with Energy Trust • Between 4 and 9 years • Between 10 and 15 years • More than 15 years

Program Data versus Self-Reported Data

Note that in Table 8, some variables for analysis were pulled from program data while others are self-reports from the interviews. Service area, for example, was reported by the interviewee when we asked, "What areas of the state do you primarily serve?" Many firms may serve multiple areas, or "go to where the work is," but asking about their primary service area helps to categorize the firms by geography more specifically.

Generally, if the program data were available and reliable, we used program data; otherwise, we used self-report data from the interviews.

Often, we saw discrepancies between COBID enrollment in the program data and whether the respondent knew if their firm was COBID enrolled (Table 9). Only 35 and 23 percent of firms reported a COBID status that was consistent with what the evaluation team saw in the program data (% enrolled and % not enrolled, respectively); many respondents simply were unaware of their firm's COBID status.

Table 9: Self Report versus Program Data – COBID Enrollment

	Self-Reported		
Program Data	**Enrolled in COBID**	**Not Enrolled in COBID**	**Don't Know**
Enrolled in COBID (n=37)	**35%**	14%	51%
Not Enrolled in COBID (n=108)	5%	**23%**	72%

This discrepancy is likely due to several factors. First, interviewed contacts were not always owners of the firm, and therefore may not have been aware of their firm's COBID enrollment status. Second, COBID eligibility is fluid and can change. For example, a certified small business could grow and lose their COBID certification. Finally, program data may not be complete for all certified firms. Throughout the history of the program to May 2023, self-attestation was a way for firms to convey to Energy Trust that they are COBID certified without submitting their certification number if they did not have it on hand. In those cases, firms would need to email Energy Trust to attest that they are COBID certified. Until May 2023, if a firm did not have its certification number available, it would have been marked in the program data as a non-COBID firm, even if it was technically qualified.

Another discrepancy we saw between the program data and the self-reported answers was the sectors served. Sectors served by firms can change often depending on what customers they serve. In general, trade allies reported more sectors than were listed in the program data (38% reported more, 15% reported less). It is likely that some firms complete projects for certain sectors without incentives from Energy Trust programs, either due to lack of awareness or, importantly, because they are not completing energy efficiency or renewable projects for those customers.

For findings to be actionable, we used the program data when running analyses on COBID enrollment and sectors served throughout this report.

Sample Size Discrepancies

This findings section will report on counts and percentages of characteristics and responses to questions throughout. Though we completed 148 interviews in total, not all of those we interviewed responded to every question. The most common reason why some questions were not answered by all respondents was that many questions were only for firms that said they serve residential customers (n=106 respondents said they serve residential customers). Another reason was that the interviewee did not have time to complete the full interview within the allotted 30 minutes. While we do not have specific data on which questions were skipped due to time constraints versus questions that the respondents refused to answer, our team noted that most skipped questions were due to time and not to a refusal to answer.

3.1 Demographic and Firmographic Characteristics

This section reports on findings from questions related to demographic and firmographic characteristics of firms and their owners, as well as implications for hiring.

3.1.1 COBID Enrollment

The Certification Office for Business Inclusion and Diversity (COBID) certifies firms through the Business Oregon office. The primary goal of certification is to level the playing field for providing certified firms a fair opportunity to compete for government contracts regardless of owner ethnicity, gender, disability, or firm size.[7]

COBID enrollment is a key metric by which Energy Trust currently tracks demographic and firmographic characteristics of the firms involved in its Trade Ally Network. Approximately half of the COBID-certified firms we interviewed were women business enterprises (WBEs) or emerging small businesses (ESBs) (Table 10). About half of interviewed firms were certified under more than one designation (41%), and veteran business enterprises (VBEs) were the least common.[8]

[7] Retrieved from https://www.oregon.gov/biz/programs/cobid/pages/default.aspx

[8] The most common pairing of firms that had more than one designation mostly included WBEs (n=11). The most common pairings were WBEs and ESBs (n=5), and WBEs and MBEs (n=5).

Table 10: COBID Certification Types Interviewed

COBID Enrollment Type	Count	Percentage
Women Business Enterprise	17	46%
Emerging Small Business	16	43%
Minority Business Enterprise	15	41%
Disadvantaged Business Enterprise	8	22%
Veteran Business Enterprise	3	8%
More than One Designation	15	41%
Any COBID Certification	**37**	**100%**

COBID Awareness and Understanding

When it comes to awareness of COBID in general, however, only 39 percent reported that they knew what COBID certification was. Predictably, interviewees from firms that were certified as enrolled in COBID in the program data were more likely to be aware of COBID certifications than those that were not enrolled (56% vs 32%, respectively). There were some geographic differences, such as firms that serve the entire state versus other areas, and firms with Portland offices (Table 11).

For detail on how to interpret statistically significant differences, please reference Section 2.3.3.

Table 11: COBID Awareness (n varies)

Firm Characteristics	Category	N	% Aware of COBID
All Trade Allies Interviewed		**145**	**39%**
COBID Certified	Not Enrolled	106	32%*
	Enrolled	36	56%*
Primary Service Area	Entire State	62	47%*
	Portland	30	43%†
	Willamette Valley	25	16%*†
	Southern and Central Oregon	17	35%
	Eastern Oregon	6	50%
	Coastal Oregon	3	0%

Firm Characteristics	Category	N	% Aware of COBID
Office Location	Portland Office	67	49%*
	No Portland Office	75	28%*

*†The differences between corresponding groups are statistically significant at the 90 percent confidence interval.

Of the 148 interviews completed, 53 were with owners or founders of the firms. Owners were slightly more likely to be aware of what COBID certification is, but not significantly (Table 12).

Table 12: COBID Awareness by Company Role

Company Role	N	% Aware of COBID
Owner	53	45%
Non-Owner	92	35%
Total	**145**	**39%**

When we asked those we interviewed about what they understood about COBID certification, most respondents who were aware of certification were able to provide some form of a description that confirmed their awareness. The most common response (n=13) we heard was that COBID designations can make it easier to win contracts, but they did not mention the goal of the certification, which is to provide all firms fair opportunities by leveling the playing field. Respondents instead tended to focus on the outcomes of COBID enrollment, illustrated by one respondent who said, "for some government contractors, we have to check a few boxes to be more competitive."

Only three interviewees acknowledged the core tenet of COBID certification. One respondent summarized the program as "trying to help in the equity crisis in the state and help disadvantaged areas of the state."

Three of the firms we interviewed were frustrated with COBID certification. Two firms responded that it was unfair to their firms to compete against firms with certifications just because they are not women-owned or some other COBID designation. The third reported that they appreciate the opportunities provided by the certification, but there are a lot of problems with the program. Specifically, this respondent criticized the amount of time it took to complete COBID paperwork and how challenging communication with Business Oregon was throughout the process.

On administrative burdens, only two firms responded that they did not re-enroll for COBID certification because it was too much of an administrative burden; they also mentioned that the certification was only beneficial for firms that serve commercial customers.

3.1.2 Non-English Language Support

We also asked about language, which is another metric to track demographic and firmographic characteristics. About half (49%) of all interviewed firms reported that they only had English-speaking employees, and over a third (38%) responded that they had English and Spanish-speaking employees to support customers. Only 12 percent of firms had employees that spoke a language other than English or Spanish. Of the 18 respondents that said their firm can support English and another language, 15 of them also included Spanish. Almost half of trade ally firms can therefore support Spanish-speaking customers.[9]

We also found that firms that serve residential customers were more likely to be able to serve customers in both English and Spanish compared to firms that do not serve residential customers. One interviewed firm that serves commercial customers supported this and mentioned they do not need to hire for other languages because the commercial customers they serve mostly speak English. They responded, “[we have] no practical need because we’re in the commercial sector, and with the size of our projects, [we] haven't run across any non-English speakers.” Statistically significant differences between geographies served, customers served, amount of Energy Trust incentives used, and firm size are denoted in Table 13.

Table 13: Languages Supported (n varies)

Firm Characteristics		N	English Only	English and Spanish	English and Another Language
All Trade Allies Interviewed		**146**	**49%**	**38%**	**12%**
Primary Service Area	Entire State	62	48%*	32%*	19%*
	Portland	31	35%*	48%*	16%†
	Willamette Valley	25	48%*	48%*	0%*†
	Southern and Central Oregon	17	75%*	25%*	0%*†
	Eastern Oregon	6	50%*	50%*	0%*†

[9] Thirty-eight percent of firms reported English and Spanish (n=56) and most of the 12 percent of firms that said English and another language also spoke Spanish (n=15). In total, 71 respondents said their firm can support Spanish speakers (49% of all respondents)

Firm Characteristics		N	English Only	English and Spanish	English and Another Language
	Coastal Oregon	3	100%*	0%*	0%*†
Residential Customers	Serves Residential	67	45%	49%*	6%
	Does Not Serve Residential	76	54%	28%*	18%
Energy Trust Incentive Use	Less than 20% of Projects Use Incentives	19	68%*	16%*†	16%
	Between 21 – 50%	48	42%	48%*	10%
	Between 51 – 75%	24	33%*	46%†	21%
	More than 76% of Projects Use Incentives	45	62%	29%	9%
Firm Size	Very Small Company	31	67%*	32%	0%*
	Small Company	40	53%	33%	15%*
	Medium Company	39	37%*	46%	21%*
	Large Company	19	37%	58%	5%
	Very Large Company	15	53%	27%	20%*

*† The differences between corresponding groups are statistically significant at the 90 percent confidence interval.

Support in Other Languages

Most firms (85%, n=76) reported that they do not encounter challenges serving customers due to language barriers. Of those that reported challenges (n=11), only three responded that they use a translator to serve those customers, and the others did not specify how they overcome the challenges.

We heard from some interviewed trade allies that there was usually a way to address the language barrier, such as:

- Someone in the customer's family speaks English;
- Customers speak enough English that they can get by without technical jargon; or
- They had access to translation apps.

One specific need that came up in a few different interviews was for non-English marketing materials. One interviewed trade ally noted that a lot of the Energy Trust documentation they send their customers is in English. Even though their firm has the ability to serve Spanish speakers, they do not have access to Energy Trust materials in Spanish.

Hiring to Support Other Languages

We also asked owners of firms (n=52) if they plan to hire employees to support communication in additional languages. Approximately one in five respondents said they are interested in hiring to support more languages (21%). Of those, three mentioned that hiring in general is more important than hiring to support languages. Two quotes that capture the sentiments of this group include: "if someone that spoke another language would apply, that would be a bonus," and "yes, but we want to make sure we give equal opportunities to folks based on skill."

A smaller group of respondents prioritized non-English language skills when hiring. One firm said they were specifically looking to hire someone to speak French because they are interested in expanding into Spokane and Seattle, which have high percentages of French speakers. Another firm was primarily Spanish-speaking and mentioned that they seek to only hire Spanish speakers due to their company mission to support minority and Hispanic workers. They noted that hiring diverse workers was not a challenge for them due to their network connections, indicating that firms with hiring challenges could benefit from tapping into other community networks.

Other languages supported by trade allies are listed in Table 14.

Table 14: Non-English Languages Supported (n=142)

Languages Supported [10]	N
Spanish	69
Italian	5
French	5
Russian	3
Chinese/Mandarin	2
Afghani	1
South Sudan	1
Portuguese	1
Korean	1
Urdu/Hindi	1

[10] We acknowledge that some entries reported here are not languages and/or are not specific enough to determine what population they would serve. However, we report on what interviewees said in the interviews.

Languages Supported [10]	N
Filipino	1
Tribal Language	1
Ukrainian	1

3.1.3 Race and Gender of Owners

During the interviews, the evaluation team asked company owners to describe their race and gender for categorization purposes. If the firm was owned by two people of different races, we categorized them as "Multiple races." Most trade ally company owners identified as Caucasian (82%, Table 15) and male (76%, Table 16).

Table 15: Self-Reported Race of Owners

Primary Service Area	N	Caucasian	Asian	Hispanic or Latino	Middle Eastern	African American	Native American	Multiple Races
All Owners	**43**	**82%**	**7%**	**2%**	**2%**	**2%**	**2%**	**2%**
Entire State	16	81%	13%	-	-	-	6%	-
Portland	10	70%	-	10%	10%	-	-	10%
Willamette Valley	6	83%	-	-	-	17%	-	-
Southern and Central Oregon	6	83%	17%	-	-	-	-	-
Eastern Oregon	2	100%	-	-	-	-	-	-
Coastal Oregon	3	100%	-	-	-	-	-	-

Table 16: Self-Reported Gender of Owners

Primary Service Area	N	Male	Female
All Owners	**46**	**76%**	**24%**
Entire State	16	75%	25%
Portland	10	70%	30%
Willamette Valley	6	-	100%
Southern and Central Oregon	7	86%	14%
Eastern Oregon	2	50%	50%
Coastal Oregon	3	67%	33%

We also asked non-owners if they knew how their firm owner identified. Of those that felt comfortable answering about their firm owners' race and gender (n=71, n=69, respectively), most reported their firm owners to be Caucasian (87%) and male (80%).

Owners we spoke with were sometimes uncomfortable with answering these questions, and 15 percent of them declined to respond. Non-owners were even more uncomfortable answering on behalf of the owner of the firm and declined to answer 38 percent of the time.

During the interview effort, the Evergreen team approached Energy Trust about the hesitancy to respond to this question. Tracking the race and gender of owners is important to Energy Trust to understand the demographic makeup of their Trade Ally Network firm owners; therefore, we continued to ask these questions with modifications. After discussing the issue with Energy Trust, we included a longer introduction to the race and gender questions that explained why we were asking and what Energy Trust plans to do with the information. We also gave participants a more explicit opt-out option if they did not feel comfortable answering. After this change, we found that respondents were less likely to decline to respond to these questions (Table 17). While these differences are not statistically significant, it is valuable to think about framing when approaching trade allies about topics that may be sensitive.

Table 17: Decline to Respond to Race and Gender Questions

Company Role	Before or After Question Change	N	% Declined to Respond
Owners	Before	23	22%
	After	30	10%
Non-Owners	Before	38	32%
	After	56	23%

Diversity in Hiring

We asked firms that serve residential customers whether they have had challenges retaining or hiring diverse employees, and 102 interviewees (of 104 that serve residential customers) responded. Approximately one in five respondents said there have been challenges (20%). There were no statistically significant differences between different types of firms. Of the firms that reported challenges (n=20), most reported that a lack of diverse applicants was a barrier (70%). Other reasons included that their company is too small to focus on diversity (20%), and that hiring in general is challenging (10%).

Two illustrative quotes are provided below:

- "The engineering industry in general is not a very diverse pool."

- "I focus on hiring the person and have several different ethnicities come through the firm. If you do a good job, that's all that counts and nothing else matters. If you are a good person and I can trust them, that's all that matters. I like to keep it simple."

Some specific challenges that trade ally firms reported were:

- A lack of knowledge about where to hire more diverse workers;
- Concern about not knowing how to accommodate other genders and races; and
- Worry about new, more diverse workers feeling welcome in the environment.

3.2 Compensation and Benefits

Hiring workers will be important for growing the energy efficiency sector in Oregon. We started this round of questions by asking respondents whether they faced any challenges in hiring, then sought detail on what benefits they offer to entice employees to stay. This section reports on findings from questions related to hiring challenges, compensation and benefits, and union enrollment.

3.2.1 Hiring Challenges

Less than half of all respondents (44%) reported that they faced some internal bottlenecks with projects and workflow due to challenges in hiring employees. Trade allies that serve Coastal Oregon and Eastern Oregon were more likely to report impacts due to hiring challenges (Table 18).

Table 18: Internal Bottlenecks with Projects Due to Hiring Challenges (n varies)

Firm Characteristics	Category	N	% Reported Challenges
	All Trade Allies	**132**	**44%**
Primary Service Area	Entire State	55	40%*
	Southern and Central Oregon	15	40%
	Willamette Valley	23	43%
	Portland	29	41%
	Eastern Oregon	5	80%*
	Coastal Oregon	3	100%

* The differences between groups are statistically significant at the 90 percent confidence interval.

Of the respondents that said they faced impacts of hiring challenges (n=58), many responded that all positions were impacted (41%). Of those, there were significant differences in firms by COBID enrollment and by sectors served (Table 19).

Table 19: All Positions Impacted Due to Hiring Challenges (n varies)

Firm Characteristics	Category	N	% Reported All Positions Impacted
All Trade Allies with Hiring Challenges		**58**	**41%**
COBID Certified	Not Enrolled	20	65%*
	Enrolled	38	29%*
Sector Served	Industrial	18	17%†
	No Industrial Customers	40	52%†
	Residential	30	63%±
	No Residential Customers	28	18%±

*†± The differences between groups are statistically significant at the 90 percent confidence interval.

About a quarter of respondents (26%) mentioned technicians or installers, and other common responses included operations (including office managers, project managers, and admin), electricians, and sales. Table 20 shows the prevalence of all responses.

Table 20: Positions Impacted Due to Hiring Challenges (n=58)

Position	% of Respondents
All Positions Impacted	41%
Technicians/Installers	26%
Operations	12%
Electricians	10%
Sales	10%
Service	7%
Analysts	3%
Design	3%
Marketing	3%
Warehouse	2%

Of all respondents that reported hiring challenges (n=15), firms that install HVAC equipment most frequently (60%) reported the need for technicians or installers.[11] A common thread was that there were not enough qualified or experienced technicians or installers to hire. One respondent said, “Many have not worked in HVAC in the past and we would like to alleviate some of that.” When pressed on how this barrier could be alleviated, they responded that they may require training due to their lack of industry knowledge.

Another common response was difficulty in hiring electricians. One interviewed trade ally from a solar PV installation firm reported that electricians were in high demand and mentioned that it is hard to compete with union shops because electricians will want the benefit of higher wages. They said, “[we] pay [our] electricians well but it's hard to compete with union shops for electricians.” This likely indicates a preference for subcontracting electrical work, rather than hiring electricians due to the competitive wages provided by electrician firms.

Union Employees

Twelve percent of firms reported that their employees were enrolled in a union. Firms that serve commercial or industrial customers were more likely to be enrolled compared to firms that do not serve commercial or industrial customers (Table 21).

Table 21: Union Employees

Firm Characteristics	Category	N	% with Unionized Employees
All Trade Allies		**139**	**12%**
Sector Served	Commercial	78	19%*
	No Commercial Customers	59	2%*
	Residential	65	5%†
	No Residential Customers	72	18%†
	Industrial	44	22%±
	No Industrial Customers	93	6%±

*†± The differences between corresponding groups are statistically significant at the 90 percent confidence interval.

[11] Others included one solar firm, one electrical firm, one glass/windows firm, one air compressor firm, and two that did not specify their industry.

The firms that reported that the company employees were enrolled in a union (n=16) mostly worked in the electrical (8), HVAC (6), lighting (5), or solar (4) industries. Note that many firms reported working in multiple industries. Furthermore, nine reported they were enrolled in their local International Brotherhood of Electrical Workers (IBEW) chapter. The other seven did not know or did not specify the union.

3.2.2 Benefits

We asked respondents about benefits provided to employees of their company. Many respondents said they receive the "typical benefits" or "all benefits," but when pressed, listed only a few of the options.[12]

Of the 136 interviewees that responded to questions about benefits offered, only eight reported that they only received a wage. The most commonly offered benefits are listed below:

- Healthcare (98)
- Paid time off (79)
- Retirement (76)
- Paid training (31)
- Sick days (31)
- Company vehicles (30)

Some offerings that were reported by less than 10 respondents included flexible schedules (9), life insurance (6), gym benefit (4), remote work options (4), heath savings accounts (3), commission (3), company phones (1), store discounts (1), commuter reimbursement (1), and employee assistance program (1).

We also asked respondents what they believe is the most important reason that people stay at their firm; we report on the responses by whether they were the owner of their firm or not. Of the 104 responses, culture, wages, and flexibility were identified by both owners and non-owners as the most important reasons for staying at their firms (Table 22).

[12] If collection of specific benefits is valuable to Energy Trust, this question should be modified to ask yes or no for each benefit of interest.

Table 22: Most Important Reason Employees Stay with Firm, by Owners and Non-Owners (n varies, multiple responses allowed)

Reason	Non-Owners (n=70)	Owners (n=34)
Culture	66%	68%
Wages	42%	53%
Flexibility	21%	21%
Stability	4%	12%
Bonus/Profits	4%	-
Advancement	4%	-
Work/Life Balance	3%	-

Clients with Wage Reporting Requirements

We asked trade allies whether they work with clients that have wage reporting requirements (i.e., through the Davis-Bacon and Related Acts). Clients that require wage reporting often perform work on federally funded or assisted contracts of public buildings or public works and often have different requirements for contractors.[13]

More than half of respondents (59%, n=135) reported working with clients that have wage reporting requirements. There were many statistically significant differences by primary service area, sector served, and firm size (Table 23).

For this analysis, we added descriptive notes to help the reader understand where statistically significant differences lie.

Table 23: Working with Wage Reporting Clients (n varies)

Firm Characteristics	Category	N	% Work with Wage Reporting Clients	Descriptive Notes
All Trade Allies		**135**	**59%**	
Primary Service Area	Entire State	59	69%[*]	• Eastern Oregon is different than all groups
	Southern and Central Oregon	14	71%[±]	
	Willamette Valley	23	35%[*†]	

[13] For more information on Davis-Bacon and Related Acts, please see the Department of Labor website.

Firm Characteristics	Category	N	% Work with Wage Reporting Clients	Descriptive Notes
	Portland	29	45%*†	except Coastal Oregon • Entire state is different than Willamette Valley and Portland
	Eastern Oregon	5	100%$^{*\dagger\pm}$	
	Coastal Oregon	3	33%	
Sector Served	Commercial	76	71%*	
	No Commercial Customers	56	43%*	
	Residential	60	48%†	
	No Residential Customers	72	68%†	
Firm Size	Very Small	27	42%*	• Extra large firms are different than all others • Large firms are different than very small firms and small firms
	Small	38	47%†	
	Medium	38	61%$^{\pm}$	
	Large	17	82%*†	
	Extra Large	13	92%$^{*\dagger\pm}$	

*†± The differences between corresponding groups are statistically significant at the 90 percent confidence interval.

We asked respondents who worked with clients with wage reporting requirements (n=80) what differences there are in working with these clients versus others. A quarter (25%) of respondents said there were no differences. Of the respondents that did say there was a difference, the most common difference was that prevailing wage clients required more administrative work such as paperwork (37%). Other differences mentioned are listed in Table 24.

Table 24: Differences with Working with Wage Reporting Clients (n=80)

Difference	Example	Percentage of Responses
No Difference		**25%**
More Paperwork	"[A lot of] documentation and invoicing. We have to show hours worked and show proof wage was paid. It causes extra time and steps."	37%
More Expensive	"A lot more overhead cost for the company"	11%
More Time	"With extra qualifications, it does take more time and money. So that's challenging but we factor it into bidding, administration, and labor."	9%
The Jobs Pay More	"Our electricians like getting paid a little bit more on those jobs."	5%
Projects Have Higher Quality Standards	"Higher expectations, quality assurance standards"	5%
Types of Clients	"A lot of government and municipality work"	4%
More Transparency	"We do have to be open with our specs."	3%
Other	"Payments can be delayed…they tend to hold onto payment for up to 90 days, so I don't do a lot of that for that reason."	3%

We also asked all trade allies about challenges serving clients that require wage reporting, and 79 people responded, including 12 interviewees that said they do not serve these clients.

While about half (49%) of respondents said that there were no challenges, some reported that the differences mentioned in serving these clients presented challenges. In particular, paperwork (21%), time (12%), and cost (5%) were cited. A small group (8%) mentioned that project fit was a challenge (Table 25).

Table 25: Project Fit Challenges (n=6)

Trade Ally Firms that Serve Clients with Wage Reporting Requirements (n=4)	Trade Ally Firms that Do Not Serve Clients with Wage Reporting Requirements (n=2)
"[The challenge is that those projects] typically get awarded to larger and more established firms."	"This is not an avenue that we go down. **Wage reporting itself is not a barrier,** those projects are just not projects that are in our wheelhouse."
"[These projects] tend to be highly competitive. We don't tend to pursue them as much because we are so busy with much more profitable projects."	"Not really the type of work we do."

According to some smaller firms, the administrative and time burden from working with clients with wage reporting requirements created a barrier to working on these projects because they do not have the capacity. One firm responded that they would have to hire more people to take on these projects, and another mentioned that they had to hire union workers specifically for the projects, which was challenging. One respondent mentioned that there are issues with how solar installers are classified, so they end up getting paid a lot less than market rate.

3.3 Professional Workforce Development Practices and Tools

This section reports on the training resources utilized by trade allies, gaps in trainings, and the potential for Energy Trust support. We started by asking about the training resources that trade allies use, making a distinction between in-house or internal resources offered by the firm and resources from external organizations that the firm utilizes. Next, we asked about perceived gaps in training and what types of resources are missing. We then looked into the potential for Energy Trust support and what types of resources trade allies are interested in. Finally, we cover the types of work that trade allies are interested in and would need training for, anticipating increased federal funding from the Inflation Reduction Act (IRA).

3.3.1 Training Resources

The majority of trade allies reported offering training resources to their employees (95%). The most common types of internal training resources offered by firms are on-the-job training (45%), manufacturer product training (18%), and continuing education training (12%, Table 26). Firms tend to use external resources for specific technical training such as manufacturer product training (41%) and installation training (12%).

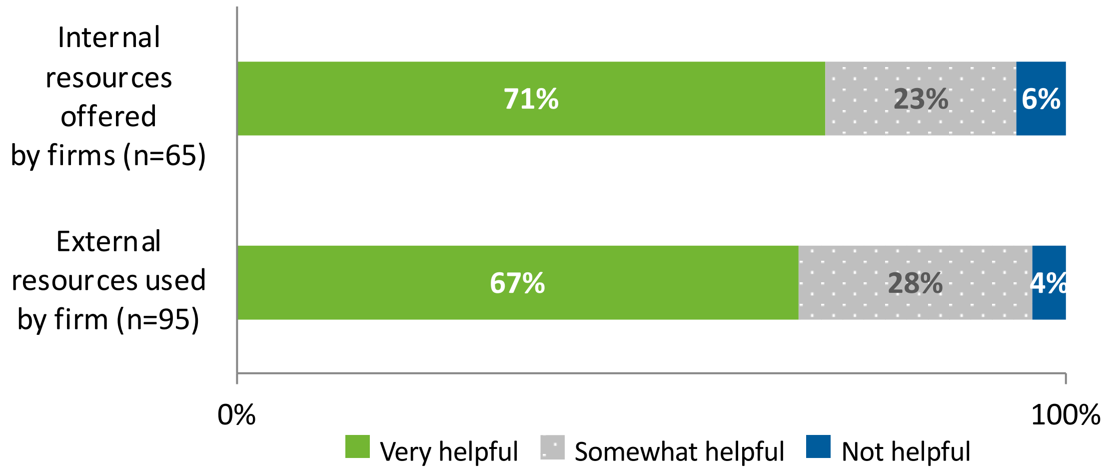
Table 26: Training Resources

Resource	Internal Resources Offered by Firm (n=139)	External Resources Used by Firm (n=148)
On-the-Job Training	45%	1%
Manufacturer Product Training	18%	41%
Continuing Education Training	12%	7%
Installation Training	10%	12%
Apprenticeship	5%	3%
Sales Training	4%	3%
Certification Program	2%	8%
Other	13%[14]	31%[15]
None	17%	16%

We then asked respondents who had participated in these trainings how helpful they were (Figure 2)—specifically, how helpful internal resources are for career development and how helpful external resources are generally. Respondents reported that in-house resources offered by their firms were just as helpful as external resources (71% vs. 67%).

[14] Resources included in 'other internal resources offered by the firm' include unspecified in-house trainings, industry trainings, safety trainings, licensing trainings, incentives trainings, and staff meetings.
[15] Resources included in 'other external resources used by the firm' include unspecified trainings, licensing classes, safety trainings, conferences, and trainings from other organizations. A complete list of these organizations is listed on the next page.

Figure 2: Usefulness of Training Resources Available (n varies)



Of the respondents who reported that the resources are either somewhat helpful or not helpful, the most common reason for this rating is that the trainings are not specialized enough to be particularly useful. As respondents put it, the trainings are either "not technical enough" or are simply "useful if needed" and "depends on [your] role at the company."

Respondents reported using training resources from the following external organizations:

- Energy Trust of Oregon (28)
- Utilities (14)
- ENERGY STAR (3)
- American Architectural Manufacturers Association (AAMA)[16] (2)
- Bonneville Power Administration (2)
- Occupational Safety and Health Administration (2)
- Department of Energy (1)
- Other[17] (12)

[16] Note that respondents told us that they used training resources from "AAMA." During analysis, we post-coded the response and assumed they were referring to the American Architectural Manufacturers Association.

[17] The following organizations were mentioned by one respondent: Air Conditioning Contractors of America (ACCA), Association of Energy Engineers (AEE), BuildingGreen, CLEAResult, Compressed Air and Gas Institute (CAGI), Construction Contractors Board (CCB), Electric Vehicle Infrastructure Training Program (EVITP), James Hardie, North American Technician Excellence (NATE), Oregon Solar Lobby, Resource Innovation Institute (RII), and Solar Energy International (SEI).

In addition to training resources that trade allies use, we also asked respondents about training resources that they have heard about but are not using. Most respondents said they were aware of specific trainings from different organizations, such as Energy Trust, ENERGY STAR, the Occupational Safety and Health Administration, and the Construction Contractor Board. The types of trainings mentioned include the following:

- Specific trainings from different organizations (23)
    - Licensing, seminars, safety trainings, etc.
- Manufacturer product training (6)
- Certification programs (2)
- Installation trainings (1)
- Sales training (1)

Of the 19 respondents who had heard of additional resources but were not using them and provided reasons why, time and scheduling was reported as the most common barrier to participation (n=10). Trade allies reported that they were either too busy for additional trainings, that they were not made aware of the trainings in time to schedule them, and that it was challenging to find the balance between sending employees to training sessions and ensuring that they are taking on enough projects to sustain operations (from a financial standpoint). One quote that summarized this group's sentiment is captured below:

- "[It is a challenge to allocate] time to pull employees from projects and put them on days of training without pay and income to the company."

Similarly, respondents reported that the cost of the trainings (as opposed to lost opportunity of not working on paying projects) was a barrier to participating in additional trainings (n=8). Three trade allies also mentioned that some resources are not accessible, either due to their location or because they were not offered in Spanish.

The portion of respondents who said that the resources are not useful or that they have no need for the trainings is relatively small (n=3), implying that while these firms are interested in participating in these trainings, they face other barriers.

3.3.2 Gaps in Training

In addition to asking about existing training resources, we also asked trade allies about training resources that may be missing at their firm.

Skill Gaps in Training

Close to half of respondents (45%, n=112) said they think there are gaps in training offered by their firm. Interestingly, owners are more likely than non-owners to report that there are gaps in training (56% vs. 38%). This difference is not statistically significant but may be because owners have a more comprehensive understanding of the trainings offered at their firm and their firm's limitations in what types of projects they are able to complete.

Additionally, companies that have been involved with Energy Trust for more than 15 years were less likely to report that there were gaps in trainings compared to companies that have been involved for less than four years (Table 27).

Table 27: Reported Gaps in Training

Firm Characteristics	Category	N	% Reported Gaps
All Trade Allies		**112**	**45%**
Energy Trust Involvement	Less than 4 Years	21	71%*
	Between 4 – 9 Years	28	43%
	Between 10 – 15 Years	29	45%
	More than 15 Years	28	32%*

* The differences are statistically significant at the 95 percent confidence interval.

Respondents reported most commonly experiencing training gaps in specific technical or industry-specific knowledge (17), creating standardized onboarding and training plans (5), and incentive training (3).

- Technical / industry-specific knowledge (17)
- Onboarding / training plan (5)
- Incentive training (3)
- Energy efficiency knowledge (2)
- Administrative tasks (2)
- Safety training (2)
- Product training (2)

Career Advancement Gaps

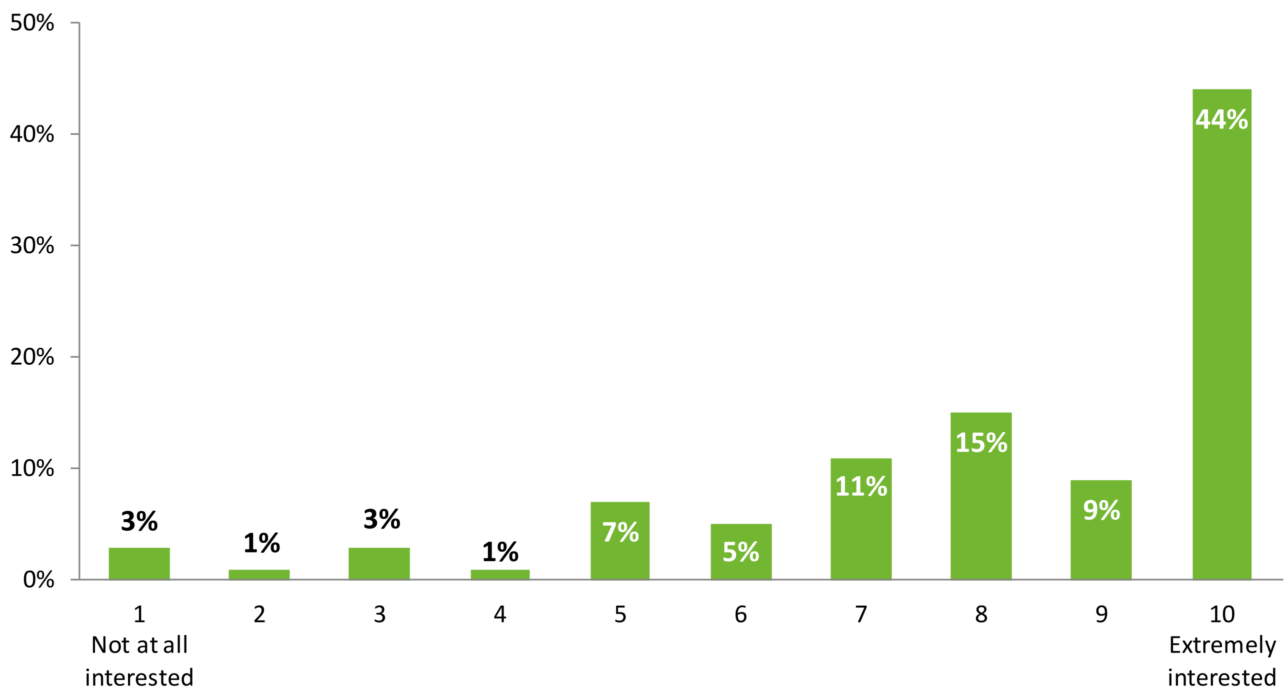
The 15 respondents who reported not having enough resources were asked about the types of training resources they would like to see. The most requested resource was technical training (n=4), with respondents citing that these trainings can be expensive to offer themselves and that they prefer hands-on work to online trainings. Additionally, respondents expressed interest in administrative trainings such as project management, bookkeeping, and information on how to complete incentive paperwork (n=3), along with marketing training for help expanding their customer base and enhancing web design (n=2). Teambuilding support was also requested to improve communication skills and create a cohesive team (n=2).

Those who reported not having enough resources stated that they lacked trainings for both technical and soft skills. The interest in soft skill trainings suggests a recognition of the importance of administrative and interpersonal skills as individuals progress into managerial roles, where the emphasis shifts from technical proficiency to effective leadership and communication.

3.3.3 Potential for Energy Trust Support for Training

Energy Trust offers various resources to its Trade Ally Network. We asked in the survey how interested respondents would be in professional development resources. Approximately half of the respondents (44%) said they were "extremely interested" in Energy Trust offering professional development resources to members of its Trade Ally Network (Figure 3).

Figure 3: Interest in Training Resources from Energy Trust (n=148)



We found some geographic differences in the proportion of firms that were extremely interested in training resources from Energy Trust; these are denoted as statistically significant in Table 28. We also found statistically significant differences in this level of interest based on how long the firms were engaged with Energy Trust.

Table 28: Interest in Resources from Energy Trust

Firm Characteristics	Category	N	% Extremely Interested[18]
All Trade Allies		**148**	**54%**
Primary Service Area	Entire State	63	40%*
	Portland	31	71%*
	Willamette Valley	24	46%†
	Southern and Central Oregon	18	83%†
	Eastern Oregon	6	50%
	Coastal Oregon	3	33%
Years with Energy Trust	Less than 4 Years	25	76%*
	Between 4 and 9 Years	42	57%
	Between 10 and 15 Years	35	37%*
	More than 15 Years	38	53%

*† The differences between the groups are statistically significant at the 90 percent confidence interval.

Trade allies mostly requested resources from Energy Trust related to business operations compared to any technical or industry-specific skills. Respondents reported being most interested in resources that would keep them informed with industry news and opportunities, administrative trainings, and information about Energy Trust-specific offerings and programs. All responses were categorized as:

- Industry information and potential opportunities (19)
- Administrative / managerial / project management resources (16)
- Energy Trust-specific offerings and programs (12)
- Incentive programs (12)
- Industry best practices (12)
- Technical skills (10)
- Marketing / sales (7)
- Code changes (7)
- Soft skills (5)

[18] 'Extremely interested' includes respondents who indicated an interest level of 9 or 10.

- Funding / financing (4)
- Networking events to meet other trade allies (3)

Responses from trade allies that did not want any additional support from Energy Trust (n=11) were categorized into three groups: their firm does not need any support (n=5), the perception that Energy Trust does not have enough experience or expertise in their area to provide training that would benefit them (n=4), and if Energy Trust paid them for their time at trainings, they would be more interested (n=3).

One respondent illustrated their sentiments regarding the trainings by saying, "[our] employees don't have time to do more training and we already hire experienced staff. If Energy Trust paid us for our time attending their trainings, it would be a 10 [very interested.]"

3.3.4 IRA Funding Implications

The State of Oregon is expecting an influx of federal funding to support residential energy efficiency from the Inflation Reduction Act (IRA). We asked firms that serve the residential sector whether they would be interested in work expected to be in high demand once IRA funding becomes widely available, and if so, if they would need training to become skilled in these types of work. The specific areas we asked about included the following:

1. Energy modeling
2. Weatherization
3. Installing efficient HVAC equipment
4. Assisting customers applying for incentives
5. Educating customers about energy efficiency options

Most respondents (93%) were interested in at least one of these areas of work, and many (63%) responded that they would need additional training to complete the work (Table 29).

Table 29: Interest and Need for Training for New Areas of Work (n=80)

Work Type	Interested	Need Training
Assisting Customers Applying for Incentives	90%	49%
Educating Customers about Energy Efficiency Options	80%	55%
Installing Efficient HVAC Equipment	54%	24%
Energy Modeling	46%	36%
Weatherization	30%	16%
Total	**93%**	**63%**

3.4 Barriers and Opportunities for Trade Allies

This section covers findings related to trade ally firms' capacity to meet demand, their interest in increasing project volume, barriers to business, and solutions to barriers in the form of Energy Trust lead generation and support.

3.4.1 Capacity to Meet Demand

Trade allies were asked about their ability to meet demand for their services over the last year. Twenty-four percent of firms responded that they had unused capacity, 22 percent reported that they were perfectly meeting demand, and 28 percent reported that they were at their limit (unable to support demand). Statistically significant differences between firms based on how many projects they complete annually and whether they serve residential customers or not are visualized in Table 30.[19]

Table 30: Capacity to Meet Demand

Firm Characteristics	Category	N	% with Unused Capacity	% Somewhere in Between	% Perfectly Meeting Demand	% at Their Limit
All Trade Allies		**148**	**24%**	**22%**	**22%**	**28%**
Number of Projects Annually	Less than 40 Projects	38	37%*	26%	8%*†	24%
	Between 41 – 200 Projects	44	30%†	20%	27%*	16%*
	Between 201 – 500 Projects	36	8%*†	25%	36%†	31%
	More than 500 Projects	24	17%	8%	17%	50%*
Sector Served	Serves Residential Customers	68	13%*	25%	26%	31%
	No Residential Customers	77	31%*	19%	18%	26%

*†The differences between the groups are statistically significant at the 90 percent confidence interval.

[19] Non-significant differences between groups, including firms serving/not serving commercial and industrial customers, are not included in the table.

Future Capacity Projections

Half of all interviewed trade allies (50%, n=141) said they anticipate demand next year to increase, about half reported that they anticipate demand will stay the same (44%), and only a few anticipate demand to decrease (6%). There were no statistically significant differences across groups. Of the 64 firms that anticipate demand increasing, about a third (34%) are in the HVAC industry. Other industries for which trade allies anticipate demand increasing include solar (22%), lighting (20%), and electrical (19%). Table 31 shows the percentage of the 64 firms in a given industry; many firms were engaged in multiple industries.

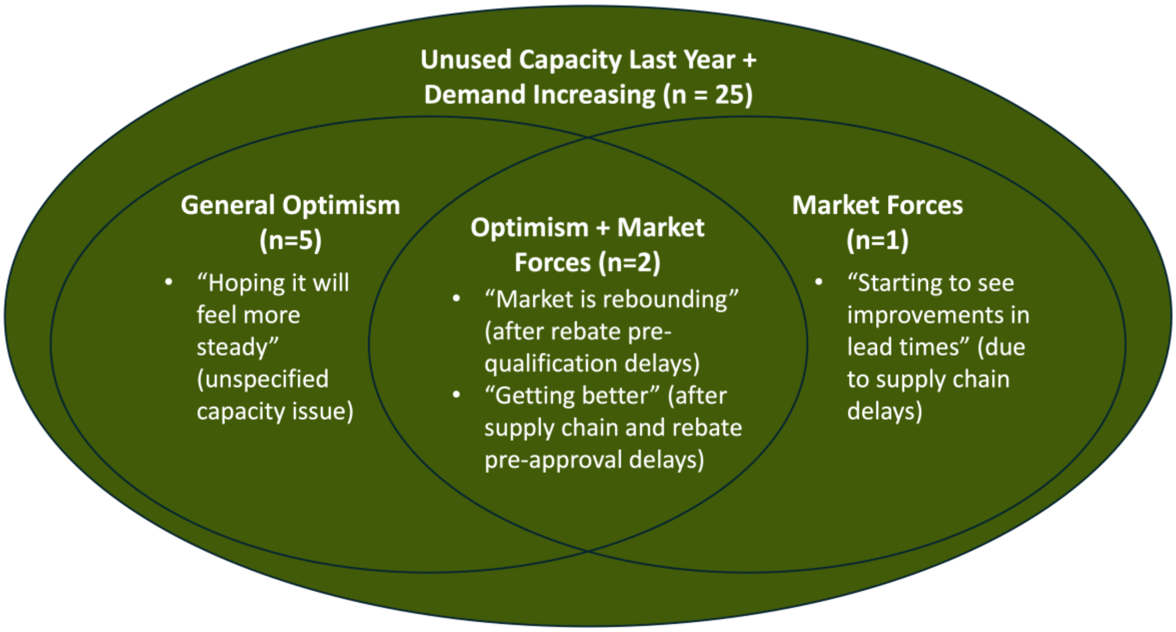
Table 31: Trade Allies that Anticipate Demand Increasing, by Industry

Industry	N	%
HVAC	22	34%
Solar	14	22%
Lighting	13	20%
Electrical	12	19%
Weatherization	10	16%
Other[20]	7	11%
Verification/Incentives Processing	5	8%
Windows and Doors	5	8%
EV Chargers	4	6%
Energy Storage	3	5%

Twenty-five interviewed trade allies reported they had both unused capacity over the last year and anticipate demand to increase in the next year. We categorized those responses as 'general optimism', 'market forces', and 'optimism plus market forces' (Figure 4).

[20] 'Other' includes irrigation, pumps, refrigeration, ventilation, roofing, and plumbing.

Figure 4: Comments on Demand Increasing Among Trade Allies with Unused Capacity



Thirteen interviewed trade allies said they were at their limit last year but anticipate demand increasing over the next year. Of these firms, nine reported that they either plan to hire to alleviate some of the demand pressure, or that they recognize the need to hire. One respondent discussed the tradeoff between needing to hire and not having capacity to train someone new with the demand pressures.

They said, "[We're] at our limit. The biggest issue has been hiring and finding people who are qualified and ready to work. [We] don't have the time to teach someone something new. We need to find someone who already knows how to do it."

3.4.2 Future Opportunities

All interviewed trade allies were asked about how interested they are in increasing their volume of projects over the next year. Only a small percentage (8%) of interviewed trade allies responded that they were "not at all interested."[21]

Smaller firms were more likely to report that they are not interested, while large firms were more likely to report that they are "extremely interested" (Table 32).

[21] Numeric responses were coded as: 1-3 = "not at all interested", 4-6 = "a little interested", 7-8 = "moderately interested", and 9-10 = "extremely interested".

Table 32: Interest in Increasing Volume of Projects

Firm Characteristics	Category	N	% Not at All Interested	% Extremely Interested
All Trade Allies		**148**	**8%**	**73%**
Firm Size	Very Small	31	23%*†	42%*
	Small	41	10%*†	80%
	Medium	40	0%*†	75%
	Large	19	5%	89%*
	Very Large	15	0%*†	87%

*† The differences between the groups are statistically significant at the 90 percent confidence interval.

The high overall rate of respondents that were “extremely interested” (73%) and the low rate of firms “not at all interested” (8%) in increasing the volume of projects seems to potentially contradict the fact that almost a third (28%, n=148) of trade allies were at their capacity limit last year.

Of those 41 firms that reported they were at their limit, 27 (66%) are "extremely interested" in increasing their volume of projects over the next year. Based on a review of responses, this seems to reflect 1) a growth mindset of always looking for more work despite labor or market realities, and 2) an expectation of being able to hire more to support increased volume.

Among these interviewed trade allies who were at their limit but looking to increase project volume (n=27), many spoke to their work ethic, growth mindset, and a core value that businesses should always aim to increase project volume. This occasionally led to statements that seemed to contradict responses related to operating at capacity (Table 33). For example, one trade ally noted that “if there was more demand, [we’d] have a problem” but responded that they were “extremely interested” in increasing project volume over the next year.

Table 33: Responses of Select Trade Allies at Capacity Who Want to Increase Project Volume

Capacity to Meet Demand over Last Year	Interest in Increasing Volume of Projects over Next Year
“If there was more demand they'd have a problem.”	“Extremely interested.”
“At limit.”	“Company always wants more business.”

Capacity to Meet Demand over Last Year	Interest in Increasing Volume of Projects over Next Year
“Always at limit. We can subcontract if we get too busy.”	“I can never turn down a project.”
“At their limit.”	“Always looking for projects.”
“At their limit.”	“Always interested, leads are great, growth is great.”

Even if respondents did not say they *always* want to increase project volume, 15 trade allies expressed some sentiment of a growth mindset. Eight trade allies explicitly said some version of “we *always* want to increase the number of projects.” For example, one respondent said, "Everything benefits from increased productivity, personal gain, do better for family, pay employees better." Another said, "Focus on growing exponentially, our goal is to grow as fast as possible and expand our staff and tech force." The positive responses to increasing project volume despite operating at capacity appear to be tied to values of growth, whether explicit or implicit.

In some cases, a growth mindset seems to have masked the realities and difficulties of labor or market conditions, but 13 of the 27 trade allies recognized that they would have to hire more to support their desire for increased project volume. When asked about increasing project volume, one trade ally said "very interested, with a higher volume of projects can hire additional staff, turn around designs and projects faster and more efficient. As a small business, I am the bottleneck; need a certain amount of volume to have the cash to keep employees." Another trade ally noted that they, "always want more business. [The] challenge is finding experienced and quality employees to work on the team."

These quotes suggest that many of these trade allies have a desire for increasing project volume as long as they can hire more qualified employees, and they recognize the challenges of doing so. Additionally, the ability to hire may be somewhat contingent upon the ability to bring in more projects, as firms suggested reluctance in ramping up from a staffing perspective without sufficient contracts (“putting the cart before the horse”).

3.4.3 Barriers

Trade allies looking to increase project volume were asked about barriers to taking on more projects, and trade allies who were not looking to increase project volume were asked about barriers to meeting demand over the last year. Interestingly, there were similar types of reported barriers for both groups (Table 34). The most common barrier was labor, which was reported by 37 percent of firms that want to increase project volume and 53 percent of firms that do not. There was a large difference in the reported barrier rate for costs; 11 percent of firms that want to increase project volume reported that costs were a barrier, compared to 21 percent of firms that do not want to increase project volume.

Table 34: Reported Barriers by Trade Allies that Do/Do Not Want Increased Project Volume

Reported Barrier	Want to Increase Projects (n=129)	Do Not Want to increase Projects (n=19)
Labor	37%	53%
Supply	20%	26%
Demand	18%	16%
Costs	11%	21%
Marketing	5%	0%
Interest Rates	3%	0%
Other	14%	5%

The similar barriers may reflect that the question posed to trade allies looking to increase project volume asked about barriers more generally, while the question posed to trade allies not looking to increase project volume asked them to speak to their direct experience (and focused on barriers experienced over the past year). For example, one trade ally listed supply as a barrier but commented "There was a lot of supply chain issues - especially during covid, but [it's] far better now."

It is also worth noting that the subset of trade allies who were at their capacity limit last year but who want to increase project volume are included in the group of 129 firms that want to increase projects, and they likely reported similar barriers as the firms that were at their capacity limit last year but that do not want to increase project volume.

Ultimately, the most important barriers are intertwined—if demand ***increases*** and supply chain issues ***decrease***, the risk associated with staffing ("labor") may become less important or impactful. Conversely, if firms experience shortages in skilled labor, they may be unable to meet demand.

Travel Costs

In another question related to barriers, trade allies were asked if travel costs are factored into bid pricing and if that leads to any advantage for local firms. The majority of interviewed trade allies (84%, n=130) said that they factor travel costs into bid pricing. Many trade allies mentioned that their firm charges a travel fee on the project, pays a per diem to their employee, and/or covers lodging for employees. Several firms have a set threshold for when they charge a travel fee, including if a project is further than a certain mileage radius or if their workers have to stay overnight.

A majority of interviewed trade allies (67%, n=121) said that local firms have an advantage in terms of winning bids because they do not have to factor in travel costs (which are ultimately passed on to the client in the form of a higher cost project). The difference between all trade allies and ones that primarily serve coastal Oregon was statistically significant. However, please note that we only had two respondents from coastal Oregon. No other groups had statistically significant differences, including whether firms served different sectors (Table 35).

Table 35: Belief that Local Firms have an Advantage in Winning Bids

Firm Characteristics	Category	N	% Local Firms Have an Advantage
	All Trade Allies	**121**	**67%**
Primary Service Area	Entire State	50	66%*
	Portland	27	78%*
	Willamette Valley	21	67%*
	Southern and Central Oregon	13	69%*
	Eastern Oregon	6	67%*
	Coastal Oregon	2	0%*

* The differences between the groups are statistically significant at the 90 percent confidence interval.

However, many trade allies elaborated on the nuances of local firm versus out-of-town firm advantages. Many trade allies mentioned that in more rural areas, there might be a lack of specialized firms and thus an out-of-town firm is best suited to conduct the project. One trade ally noted, “when we travel it’s because there are not a lot of HVAC companies around the customers.” Another trade ally put it simply and said, “the problem is there are no local firms.” Bid pricing was mentioned as a key factor in winning bids, and several trade allies noted that the project will go to the lowest bidder, which is not necessarily a local firm.

Incentive Changes

One final barrier mentioned in several interviews was changing incentive amounts. In particular, several companies in the windows and doors industry were upset that the Oregon Department of Energy (ODOE) changed the incentive amount for windows. One trade ally mentioned that they had previously worked extensively with Energy Trust incentives but now the incentives do not make sense for any of their customers. The trade ally said, “It isn’t doable based on the new incentives, [customers] don’t get enough back to pay the higher upfront cost.” Another trade ally in the window installation business said that the only current projects involving incentives were lingering 2022 projects.

3.4.4 Potential for Energy Trust Support

Interviewed trade allies were asked several questions about support from Energy Trust. When asked about interest in lead generation support from Energy Trust, an overwhelming majority (92%) responded that they would appreciate Energy Trust's help with lead generation. Some respondents mentioned that they have received leads from Energy Trust in the past, or that they currently do and that they were or are helpful. One mentioned that they used to work with an Energy Trust account manager for multifamily leads and they were extremely helpful; however, those leads seemed to stop coming.

Only a small percentage (8%) of interviewed trade allies responded that they were not interested, with firms that do not serve industrial customers, smaller companies, and firms without a Portland office more likely to report they are not interested (Table 36).

Table 36: Interest in Lead Generation Support

Firm Characteristics	Category	N	% Not Interested
	All Trade Allies	**143**	**8%**
Sector Served	Industrial	44	0%*
	No Industrial Customers	96	11%*
Firm Size	Very Small	31	19%*
	Small	39	10%†
	Medium	40	5%±
	Large	16	0%*†±
	Very Large	15	0%*†±
Office Location	Portland Office	65	2%*
	No Portland Office	75	13%*

*†± The differences between corresponding groups are statistically significant at the 90 percent confidence interval.

Of the 12 firms not interested in lead generation, four mentioned that they already had enough work or were particularly established in their community. Two firms mentioned it was not worth the time investment, one trade ally said that people who come to them directly are more likely to move forward, and the other said that it is too much of an investment to navigate the Energy Trust lead portal. Finally, one trade ally in the residential and commercial windows industry said, "Most of the lead generation has been for big commercial projects which [we] don't really get involved in." There were several concerns among firms that were interested in lead generation and that currently receive leads from Energy Trust. These included:

- Concerns about the quality of leads received from Energy Trust and the time it takes to further qualify leads;
- A concern that the leads are sent to multiple companies and are not personalized for their firm; and
- A disconnect between what Energy Trust thinks the firm does versus what they actually do (e.g., one firm does not do large projects but continues to get leads for large projects).

Interviewed trade allies were asked for other suggestions for partnership opportunities with Energy Trust (outside of lead generation). Table 37 categorizes the most common responses of incentives trainings, other trainings, and co-branding.

Table 37: Suggested Energy Trust Partnership/Support Opportunities with Trade Allies (n=94)

Opportunity	Example	N	Percentage
Incentives	"Training on incentives. Would like an assigned, dedicated representative."	25	27%
Training	"trainings around code changes"	23	24%
Co-Branding	"marketing co-branding"	23	24%
Industry Updates	"White papers and technical conference proceedings"	15	16%
Partnering	"Have a Board of Contractors/partners to help make policy decisions"	14	15%
Open Generally	"We are big fans of ETO and the more engaged we can be, the better."	13	14%
Other	"More direct communication"	11	12%
Certification Help	"LEED certification help"	5	5%

Many trade allies mentioned that incentives and the intricacies of Energy Trust programs change so frequently that it would be helpful to have more incentives-based trainings. Trade allies who mentioned co-branding said that the Energy Trust brand would help them generate more leads. Finally, one trade ally had a creative suggestion of forming a group or board of contractor representatives (trade allies) that have a say when policy decisions are being made, although practical limitations would certainly be a consideration. This respondent felt that certain decisions had previously been made without much input from those in the field.

Appendix A: Research Questions

Table 38 provides Energy Trust's stated research goals and questions, as well as more detail added to the research questions based on discussion during the kick-off call with the team.

Table 38: Research Matrix

Research Topic	Research Question
What demographic and firmographic characteristics do trade ally firms have?	What languages do trade ally firms work in and serve customers with throughout the life of the project (sales, installation, follow up)?
	What are the race and gender of trade ally firm owner(s)?
	What is the level of awareness and enrollment in the Business Oregon Certification for Business Inclusion and Diversity (COBID) program among trade ally firms?
What compensation and benefits are employees of Trade Ally Network firms offered and engaged/enrolled in?	What rate of union enrollment do trade ally firms have? Which unions are they enrolled in, if any?
	What employee classifications or labor tiers do trade ally firms utilize to determine compensation packages for employees?
	What non-wage benefit packages do trade ally firms offer to their employees?
	What experience do trade ally firms have working under contracts with wage and wage reporting requirements (e.g., Davis-Bacon)? Does this differ by residential and non-residential serving firms?
What professional and workforce development practices, tools, and courses do trade ally firms use/offer?	What workforce development entities or organizations do trade allies work with/are members of?
	What training resources do trade ally firms offer to employees? Are there other resources available from third parties, such as training delivery partners or continuing education organizations?

Research Topic	Research Question
What barriers and opportunities do trade ally firms express that exist in helping to fulfill Energy Trust's mission?	What labor, supply chain, or other circumstances are constraining trade ally firms' abilities to complete projects?
	What level of interest do trade ally firms have in Energy Trust developing lead generation relationships with trade ally firms?
	What level of interest and ability do trade ally firms have to handle higher volumes of projects? What barriers exist to completing more?
What barriers and opportunities do trade ally firms express that exist in helping to fulfill Energy Trust's mission?	What level of interest do trade ally firms have in Energy Trust supporting professional development resources for their employees? What types of professional development support would trade ally firms be interested in?
	What partnership opportunities on capacity building initiatives do trade ally firms believe exist?
	What level of interest do trade ally firms have in standardized professional development practices offered throughout the Trade Ally Network?

Appendix B: Data Collection Materials

This section contains in-depth interview guides, recruitment materials, and an FAQ guide.

In-Depth Interview Guide

This section contains the in-depth interview guide.

Caller Introduction

All calls began with an introduction by the interviewer and a brief recap of the research objectives (Energy Trust is investing in workforce development and training. They want to learn about its trade allies in a more personal way, specifically about training resources, barriers and opportunities for trade allies, and more information on the firms themselves to understand where and how to invest), reminders of anonymity (with the option to share feedback if they would like), and the $100 incentive for completing the interview.

Interviewee Background

1. First, I want to learn about you and your firm. Can you tell me a little bit about your role at [firm] and what [firm] does?
    a. How many years have you been with [firm]?
    b. How many employees are with [firm]?
    c. What areas of the state does [firm] serve?
        i. (probe on: how far is the firm typically willing to travel for a job)
    d. How long has [firm] been involved with Energy Trust?
    e. What sectors does [firm] serve? (residential, commercial, industrial, agricultural)
        i. [IF residential] What types of energy efficiency work does [firm] do?
            1. (probe on: electrical, plumbing, HVAC, weatherization)
2. About how many projects a year does [firm] complete in Oregon?
    a. About how many of those involved Energy Trust incentives?
    b. [IF multiple sectors or regions] How does this differ by sector or region?

Workforce Development Tools

Next, we want to learn about training resources and development opportunities you may have at [firm].

3. What training resources does [firm] offer employees?
    a. [IF there are resources] Have you yourself used those resources? Which ones?
        i. [IF they have used them] How helpful are those resources for career advancement?
        ii. [IF they haven't] Why not?

4. Are there any external training or workforce development resources that [firm] uses or provides for employees, such as trainings or workshops provided by another company?
    a. [IF yes] What are they?
    b. [IF yes] Have you yourself engaged with them?
        i. [IF they have used them] How useful are those resources?
        ii. [IF they haven't] Why not?
5. Outside of what [firm] provides internally and externally, are there any other resources for training or workforce development you are aware of?
    a. [IF yes] What are they?
    b. [IF yes] Have you yourself engaged with them?
        i. [IF they have used them] How useful are those resources?
    c. [IF yes] Out of curiosity, what do you think is keeping [firm] from leveraging these additional opportunities?
6. Do you see any gaps in trainings provided at [firm]?
    a. [IF yes] Like what?
7. Do you think there are enough training resources available for career advancement within [firm]?
    a. [IF no] What would you like to see?
8. On a scale of 1 to 10, with 1 being not interested at all and 10 being extremely interested, how interested would you be in Energy Trust offering professional development resources to members of its Trade Ally Network like you?
    a. [IF 5 - 10] What types of developmental support would you and others in the network be interested in?
    b. [IF 1 – 4] What led you to give it that score?

Barriers and Opportunities

Next, we want to talk more about the energy efficiency projects [firm] works on in Oregon.

9. How would you rate [firm]'s capacity to meet demand for your services over the last year? [IF NEEDED] Would you say you have lots of unused capacity, were you at your limit, or were you somewhere in between?
    a. How does [firm] anticipate this changing in the next year? [IF NEEDED] Speeding up, slowing down, or staying the same?
    b. On a scale of 1 to 10, with 1 being not interested at all and 10 being extremely interested, how interested is [firm] in increasing the volume of projects in Oregon over the next year?
        i. What factors lead you to give that score?
        ii. [IF looking to increase] What barriers are there to take on more projects?
            1. [probe on labor, supply chain, demand]
        iii. [IF NOT looking to increase] What barriers have there been over the last year or so to meeting demand for your services?

1. [probe on labor, supply chain, demand]

10. Thinking about traveling out of town for projects, how does [firm] deal with the associated costs? Are the costs factored in to bid pricing?
    a. Do local firms have an advantage in terms of winning bids, since they don't have to factor in travel costs?
11. Are you familiar with the federal home energy rebates passed as a part of the Inflation Reduction Act?
    a. [IF yes] Does [firm] plan to engage with the federal rebates when they are available?
        i. Why or why not?
        ii. [probe on paperwork requirements, alignment with customer needs, electrification barriers such as needing panel upgrades]
    b. Does [firm] have experience connecting homeowners with incentive programs and rebates for projects other than Energy Trust energy efficiency projects?
        i. [If yes] which ones?
12. Oregon is experiencing an influx of federal funding to support residential energy efficiency. Would [firm] be interested in carrying out any of the following types of work? A simple yes or no answer for these are fine.
    a. Energy modeling
    b. Weatherization
    c. Installing efficient HVAC equipment
    d. Assisting customers applying for incentives
    e. Educating customers about energy efficiency options
13. Along the same vein, would [firm] need training to carry out any of the following types of work? A simple yes or no answer for these are fine.
    a. Energy modeling
    b. Weatherization
    c. Installing efficient HVAC equipment
    d. Assisting customers applying for incentives
    e. Educating customers about energy efficiency options
14. Would you be interested in Energy Trust helping with lead generation?
    a. Why or why not?
15. Do you see any other partnership opportunities between Energy Trust and [firm] or other trade allies like yourself?

Compensation and Wages

With these next few questions, we are going to ask specifically about compensation and wages at [firm]. Energy Trust is interested in understanding operational cost differences across Oregon because they can impact overall costs to customers. A reminder that these responses will be kept anonymous, and you're free to skip any that you're not sure about.

16. Are you familiar with how compensation is determined at [firm] and wage reporting requirements?
    a. [IF no – skip to next Q19]
17. Do you encounter internal bottlenecks with your projects and workflows due to challenges hiring for certain positions?
    a. [IF yes] Which positions are most impacted?
18. Does [firm] work with clients that have wage and wage reporting requirements (e.g., Davis-Bacon)?
    a. [IF yes] What are some differences in working with clients with these requirements versus without these requirements?
        i. [probe on] Residential vs. non-residential projects
    b. [IF NO] Are you aware of opportunities with clients that do have wage and wage reporting requirements?
        i. [IF yes] Are there challenges with those types of projects that tend to keep [firm] from pursuing?
            1. [probe on] requirements
19. Is [firm] enrolled in a union?
    a. [IF yes] Which union(s)?
20. What non-wage benefit packages does [firm] offer employees?
    a. [probe on: health care, paid time off, sick days, 401k, company vehicles, trainings, flexible schedules]
21. We're interested in learning about employee retention at [firm]. Between wages and [insert other non-wage benefits mentioned], and anything else you can think of, which do you think are the most important reasons workers stay at [firm]?
    a. (probe on: advancement opportunities, work/life balance, more consistent hours, barriers due to childcare, transportation or other personal matters, career change)

Firmographic and Demographic Questions

Finally, to help us categorize all your responses, we need to ask a few demographic questions about [firm].

22. Are you familiar with the Certification Office for Business Inclusion and Diversity, or "COBID" program?
    a. [IF yes] What do you know about the COBID program?
    b. [IF yes] Do you know if [firm] is enrolled as a COBID firm?
        i. [IF yes] What type of COBID designation does [firm] have?
            1. (options are: women-owned, veteran-owned, minority-owned, emerging small business, disadvantaged business)
23. What languages does [firm] work in?
    a. [for each language] Is [firm] able to serve customers throughout the life cycle of the project from sales to installation to follow up in [mentioned languages]?

   i. [probe on: challenges with handoffs across staff, teams]
  b. [if only English] Has [firm] had issues serving other customers?
  c. Does [firm] have plans to hire or train to support more languages in the future?
   i. Why or why not?
  d. Does [firm] experience barriers or difficulties in hiring and retaining diverse employees?
   i. [IF yes] What barriers or difficulties does [firm] experience?
    1. [probe on: work authorization issues, lack of applicants, employee barriers like transportation, childcare, or other personal matters]

24. [IF Interviewee is not the owner] Do you know who [firm]'s owner is?
    a. [IF yes] Which best describes their race?
        i. Options:
    b. [IF yes] Which best describes their gender?
        i. Options:
25. [IF Interviewee is the owner] For categorization purposes, how would you describe your race? How would you describe your gender?
26. Finally, do you prefer a $100 virtual Amazon gift card or a physical $100 VISA gift card?
    a. [IF virtual] What is a good email address to send that to?
    b. [IF physical] What is a good address to send that to?

Recruitment Materials

This section lists all recruitment materials we used over the course of the recruitment period. A list of all materials, in the order that we deployed them, is below:

- Insider newsletter copy for Energy Trust to use
- Email recruitment from Evergreen
    - One version was for those who signed up at the Trade Ally Forums
    - One version was for those who were sampled
- Mailer copy for Energy Trust
- Email reminder from Evergreen
- Email text for Energy Trust field staff to send
- Phone scripts for Evergreen recruitment

Insider Newsletter Copy – Energy Trust

Below is the copy for the Insider Newsletter that Energy Trust sent out mid-November 2023. The purpose of this text is to inform trade ally firms about the research to help legitimize our recruitment efforts.

To	Trade ally email
Method	Insider Newsletter
From	Energy Trust Listserv
Text	Energy Trust recognizes the need for a strong workforce and is investing in workforce development and training. We've hired Evergreen Economics and Brightline Group (the Evergreen tam) to conduct interviews with trade allies to learn more. Your feedback will help us understand trade ally training and workforce needs and areas to direct our funding. Evergreen or Brightline will soon be reaching out to selected trade ally firms through email, phone calls, and direct mail to schedule 30 to 45 minute interviews in the next few weeks. The Evergreen team understands your time is valuable, and they will pay you $100 for your help with this research. If you have any questions about the research, please contact Cody Kleinsmith at Cody.Kleinsmith@energytrust.org.

First Email Recruitment (Signed up) – Evergreen Team

This email went out to anyone who signed up to be contacted during the in-person Trade Ally Forums.

To	Trade ally email contact who signed up at the Trade Ally Forums
Method	Email
From	Evergreen team, CC regional field staff
Text	Hi <<name>>, It was nice to meet you at the Trade Ally Forum in <CITY> last month. Thank you for taking an interest in this research! As a reminder, we are doing research to learn about the needs and opinions of industry professionals like yourself. We're conducting interviews that will take around 30 minutes of your time and ask you questions about characteristics of your company and your experience in the Trade Ally Network. **As a thank you for your time, we will offer you a $100 gift card when you complete the interview.**

	If you're still interested in taking part in an interview, please click on the link below to reserve your time. *Si prefiere que su entrevista sea en español, una entrevistadora que habla español le llamará para agendar la entrevista.* [link] Thank you! **Please reply to this email for help with any technical issues. If you'd like to confirm the legitimacy of our request, you can contact Cody Kleinsmith at Energy Trust at Cody.Kleinsmith@energytrust.org.**

First Email Recruitment (Sampled) – Evergreen Team

This email went out to any contacts that were sampled to be included in the research but did not sign up during the in-person Trade Ally Forums.

To	Trade ally email contact
Method	Email
From	Evergreen team, CC regional field staff
Text	Dear <<name>>, Energy Trust recognizes the need for a strong workforce and is investing in workforce development. They have hired us to learn more about the trade ally network so they can invest in ways that will help firms like yours! We'd like to hear from you and invite you to participate in a 30 to 45 minute interview. You may have heard about this research from the Insider Newsletter or a Trade Ally Forum. **As a thank you for your time, we will offer you a $100 gift card when you complete the interview.** If you're interested in taking part in an interview, please click on the link below to reserve your time. *Si prefiere que su entrevista sea en español, una entrevistadora que habla español le llamará para agendar la entrevista.*

	[link] Thank you! **Please reply to this email for help with any technical issues. If you'd like to confirm the legitimacy of our request, you can contact Cody Kleinsmith at Energy Trust at Cody.Kleinsmith@energytrust.org.**

Mailer Copy – Energy Trust

This text was for Energy Trust to send mailers to non-responsive, sampled contacts. Energy Trust may have taken liberty with the design and format of the copy.

To	Trade ally addresses
Method	Energy Trust mailers
From	Energy Trust
Text	Dear <<name>>, Energy Trust of Oregon would love to hear from you about your experience with the Trade Ally Network! We recognize the need for a strong workforce and are investing in workforce development and training. We've hired Evergreen Economics to help us learn the best ways to improve the network. We are running a study to understand the needs and opinions of trade allies in the network. We've hired Evergreen Economics and Brightline Group (the Evergreen team) to conduct interviews with trade allies to learn more. **The Evergreen team is offering a $100 gift card to complete an interview with them.** The interview will take around 30 to 45 minutes of your time and ask you questions about characteristics of your firm to learn about how to tailor services offered to trade ally firms. If you're interested in taking part in an interview, please email or call the Evergreen team to schedule a call. If you'd like to schedule a call online, please use the link listed below. Link to schedule: https://bit.ly/Energytrust *Si prefiere que su entrevista sea en español, envíenos un correo electrónico a tradeallyinterview@evergreenecon.com y una entrevistadora que habla español le llamará para agendar la entrevista.*

	If you have any questions, please contact Cody.Kleinsmith@energytrust.org or Evergreen Economics at tradeallyinterview@evergreenecon.com or 971-930-8684. Thank you!

Email Reminder – Evergreen Team

Two weeks after the initial email, the Evergreen team followed up with non-responsive contacts using this script. This script provided a different value statement on why they should participate. Using multiple appeals could have helped with a response.

To	Trade ally emails, non-responsive
Method	Email
From	Evergreen team
Text	Dear <<name>>, We are reaching out again because we have not heard back from you. We really need your help. Energy Trust wants to learn more about their trade allies; specifically, about training resources, barriers, and opportunities for trade allies. These interviews are meant to help Energy Trust with investing in workforce development and training. We're inviting you to participate in a 30-minute phone call about your trade ally firm. **We are offering a $100 gift card for your participation in an interview.** Your help with this research will help improve the program for you and other trade ally firms in Energy Trust's network. If you're interested in taking part in an interview, please click on the link below to reserve your time. You may also reply directly to this email. *Si prefiere que su entrevista sea en español, una entrevistadora que habla español le llamará para agendar la entrevista.* [link] Thank you!

	Please reply to this email for help with any technical issues. If you'd like to confirm the legitimacy of our request, you can contact Cody Kleinsmith at Energy Trust at Cody.Kleinsmith@energytrust.org.

Email Text – Energy Trust Field Staff

One week after the follow up email from Evergreen, Energy Trust field staff sent non-responsive contacts an email to help establish the research as legitimate and make a more personal appeal if they have a relationship with the contact. This script could have been customized to the field staff member and their relationship.

To	Trade ally emails, non-responsive
Method	Email
From	Energy Trust field staff, cc Evergreen team member
Text	Dear <<name>>, I'm following up on an email you received about an opportunity to take part in an interview and share your experiences in the Trade Ally Network. Evergreen Economics and Brightline Group are inviting you to participate in a 30-minute phone call about your trade ally firm. **They will send you a $100 gift card for your participation in an interview.** Your insights can help improve the network and increase professional development opportunities in the future. If you're interested in taking part in an interview, please click on the link below to reserve your time. [link] Thank you!

Phone Scripts – Evergreen Team

After all other recruitment methods are exhausted, we called all other non-responsive contacts to attempt to schedule them for an interview using this script. Staff members were prepared to conduct the interview on the spot if the contact wanted to do it at the time of this call.

To	Trade ally emails, non-responsive
Method	Phone call

From	Evergreen team OR subcontracted Spanish recruitment firm
Text	Hello, this is [caller name] from Evergreen Economics/Brightline Group calling on behalf of Energy Trust of Oregon. Could I speak with [contact name] please? [If not customer] When would be a better time to call back to reach them? I'm calling to follow-up on an email you received from us inviting you to take part in a phone interview as part of an Energy Trust Trade Ally Network study. We're offering a $100 gift card for you to participate in a 30 to 45 minute phone interview. During the interview, we will ask you to tell us about different characteristics of your firm and your experience in the Trade Ally Network. Would you like to participate in our study? [If yes] Schedule interview and confirm phone number. [If no] Thank and terminate

FAQ Guide for Recruitment

This section includes anticipated questions from trade ally contacts so that the Evergreen team and Energy Trust staff assisting with recruitment were well prepared with answers.

1. **When will you be conducting these interviews?**
    a. We will begin contacting and scheduling interviews with selected trade ally firms in November.
2. **Who are you looking to interview?**
    a. We are reaching out to enrolled trade ally firms that have completed at least one Energy Trust-supported project in the last year. We need to speak to someone who has a company-wide (or at least a regional) perspective on things such as staffing, compensation, workforce development, and/or barriers to completing projects. We only need to speak with one person per company, unless there are geographical differences within a franchise, for example.
3. **How will you pay me the $100?**
    a. We can either mail you a physical VISA gift card or email you a virtual Amazon gift card after you complete the interview.
4. **Can I take the interview in Spanish?**
    a. Yes, if you prefer to take the interview in Spanish, we will schedule you with one of our Spanish-speaking interviewers.
5. **What will Energy Trust do with the information from the interviews?**

a. Evergreen will compile all responses from the interviews to provide recommendations for how Energy Trust can better support the Trade Ally Network. All responses will be anonymous and only reported on in the aggregate. If you have specific feedback and would like Energy Trust staff to follow up, we can pass along the message.

6. **How will you interview me?**
   a. We will schedule a 30 to 45 minutes phone call with you and will call you at your preferred phone number.
7. **Who can I contact with more questions?**
   a. Please contact Cody Kleinsmith (Cody.Kleinsmith@energytrust.org) at Energy Trust or Kayla Kirksey (kirksey@evergreenecon.com) at Evergreen Economics with more questions.
8. **Will this research be published?**
   a. Yes, this research will be available on Energy Trust's website in Spring of 2024