# Trade Ally Network Evaluation

## Final Report

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Submitted to:


**Energy Trust of Oregon**

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# EXECUTIVE SUMMARY

TRC Energy Services, Inc. (TRC) was engaged by Energy Trust of Oregon (Energy Trust) to conduct an evaluation of their Trade Ally Network. The overarching objective of this evaluation is to identify changes Energy Trust can make to administer their current Trade Ally Network in a more streamlined manner, while maintaining or increasing energy savings, project volume, and customer and trade ally satisfaction. Providing services to Trade Allies (TA) is a significant expense to Energy Trust and a goal of this project is to separate key services from those that are not providing high value to Energy Trust programs.

The specific objectives of this evaluation are:

- Determine the optimal size of the network;
- Identify changes that need to be made to the network participation requirements, including increasing/decreasing exclusivity and how to implement those changes;
- Determine if Energy Trust should provide incentives to trade ally projects only, directly to trade allies, and/or to homeowners who install measures without using a contractor;
- Determine the value provided by the Trade Ally Star Rating System (only applies to Existing Homes trade allies);
- Review quality control and management practices and identify ways they can be improved;
- Identify factors that influence trade allies' activity level;
- Identify methods to bring in new trade allies and re-engage with existing trade allies (if necessary);
- Determine best practices from Energy Trust programs and other networks for referring customers to trade allies; and
- Understand whether other networks actively seek to increase the number of minority-owned, woman-owned, small business, or rurally located trade allies.

## Methodology

TRC conducted several data collection activities to develop a comprehensive understanding of Energy Trust's Trade Ally Network. Activities contributing to this data collection include a review of program documents and forms; interviews with Energy Trust program, trade ally network, and Program Management Contractor staff; and a review and analysis of the program database. In addition to understanding the functions and relationship of the trade ally network with the programs, TRC also took an extensive look at trade ally networks that serve other energy efficiency incentive programs through interviews with these program managers or trade ally network managers.

## Findings and Recommendations

***Network Size and Exclusivity:*** The following factors drive the optimal size of a network:

- Number of technologies in the program
- Motivation for retrofits
- Size of territory covered

- Program marketing strategy
- Customer interaction
- Quality control
- Program implementation funding and staff resources
- Incentive funding

***Network Requirements:*** Energy Trust staff express that trade ally and network maintenance is a large draw on administrative resources. A notable activity that requires sizable network resources is tracking renewed licenses, certifications and insurance.

TRC believes that the best way for Energy Trust to streamline network administration is to modify the network requirements so that time and resources are focused on trade allies who are active in the program. Some options for accomplishing this are:

- Maintain the current network enrollment requirements, but only renew documents for trade allies who have submitted some minimum number of projects in the past 12 months.
- Reduce the number of documents or certifications that are required and verified annually.
- Require submittals during initial enrollment but do not conduct annual renewal.
- Streamline requirements so that some documents are not necessary.

***Restricting Incentives:*** Energy Trust programs should not limit the payment of incentives only to projects that use a registered trade ally beyond their current limitations (Solar, Small Wind, and some Existing Homes tracks). Non-registered contractors bring in a significant portion of projects, and the energy savings from their projects often exceeds the savings from trade ally projects.

***Self-Installations:*** Energy Trust should determine whether to restrict or regulate self-installations on a case-by-case basis. Most programs do not report that self-installs are a burden on their programs. The exception is the Existing Homes program which reports that significant resources are spent dealing with issues from homeowner self-installs, both in terms of the completeness of the applications and the quality of the installation.

***Network Support:*** Energy Trust should reassess the scale and format of the roundtable relative to the programs who benefit from them. Only the Existing Homes and Existing Multifamily programs report that the roundtables are a valuable format for their trade allies.

If costs to administer cooperative marketing funds are reasonable and limited to responding to funding requests, then Energy Trust should maintain the funding option, as it is a benefit to some trade allies and could be leveraged more fully in the future. Only the Existing Homes and Solar programs report that their contractors make frequent use of the co-op marketing funds.

***Star Rating System:*** Implementation of an Existing Homes trade ally rating system generally receives positive feedback from trade allies, but other network program managers have mixed feelings over the usefulness and impacts of a rating system. Other networks provide more benefits to trade allies who merit a higher tier rating through their program activity. Energy Trust could enhance its star rating system to include contractor profiles that allow contractors to distinguish themselves beyond the star assignment and focus some resource expenditure on the trade allies that will receive the most benefit.

***Referrals:*** Although direct referrals are not a prevalent approach for most other networks, they do have the potential to impact trade ally activity and provide an advantage to trade allies over contractors. The current Energy Trust protocol of referring three randomly selected trade allies with at least one star

avoids favoritism, but may not promote increased participation because the programs do not select trade allies based on participation level or other trade ally aspects.

***Engaging Trade Allies:*** A low percentage of active trade allies is a common issue across other networks, and, although there are some actions that have shown positive results, there are no strategies that prove to dramatically increase activity levels. Some strategies identified are:

- Provide more compelling benefits to registered trade allies.
- Continue to offer sales and marketing training to registered trade allies.
- Adopt closed networks for appropriate program measures or tracks.
- Assign staff to provide a single point of contact and one-on-one support to registered trade allies.
- Continue offering limited-time promotional incentives and focus on recruiting new trade allies.
- Institute annual recognition based on program activity.
- Continue attending or sponsoring industry or community events.

***Quality Control Procedures:*** Energy Trust's customer complaint and escalation procedures are consistent with actions that other networks take to deal with project and program issues. It is clear through the interviews with Energy Trust program staff that quality assurance (QA) procedures are in place for trade ally and contractor performance in the field, but the documentation of these procedures is not clear and consistent for all of the programs. All Energy Trust programs should consistently document their QA procedures, stringency, and guidelines and make these visible to trade allies and non-trade allies on the program web pages or through other channels.

***Diversity:*** Other utilities do not have focused efforts to attract minority-owned, woman-owned, or small businesses to their trade ally networks, but do make concerted efforts to increase trade allies serving rural or underserved areas. Only two Energy Trust programs mention engaging with minority-owned, woman-owned, or small businesses, and several others identify the benefits that can result from working with these types of business.

# MEMO

**Date:** January 20, 2015
**To:** Board of Directors
**From:** Sarah Castor, Evaluation Sr. Project Manager
Tom Beverly, Trade Ally Network Manager
**Subject:** Staff response to the Trade Ally Network Evaluation

In 2014, Energy Trust undertook an evaluation of its Trade Ally Network in an effort to assess potential network improvements and understand where staff should focus resources to more efficiently manage the network.

The evaluation results indicate that Energy Trust is managing the network in a way that aligns with its priorities and program goals. The research did not point to significant changes to the network's management but identified opportunities for improvements. The research also concluded that Energy Trust programs can have differing requirements based on the needs of the customers and program design. Maintaining a network with trade and non-trade allies was viewed as valuable as significant savings comes from both groups. Interviews with other network managers identified Energy Trust practices as similar or beyond what was viewed as best practice in trade ally network management.

The evaluation was designed to identify opportunities for improving the management of the network. Energy Trust staff see the following opportunities for streamlining network management and enhancing benefits for trade allies as a result of this research:

- The Communications and Customer Service group and Legal staff identified changes to the insurance tracking process and opportunities to increase the compliance rate while maintaining insurance requirements. These changes should reduce the amount of time staff spend on this process.
- Staff are working to transition trade ally enrollment from a paper process to an online experience. This will make it easier for contractors to submit network enrollment applications, add additional programs or renew portions of their enrollment. This will also reduce the amount of administrative resources needed to follow up on missing paperwork and enrollment information.
- Staff are planning to host two sets of regional roundtables – meetings of trade ally contractors that provide program updates, networking and training – in 2015, rather than the typical four. While these roundtables will focus on residential and multifamily trade allies, for which they are reported to be most beneficial, they will be open to trade allies working with all programs. The commercial and industrial programs will continue to engage with their trade allies in other forums, including

direct communications and bi-annual training events targeted specifically for commercial and lighting trade allies.

- Staff are exploring the potential to convert the co-op marketing budgets for several programs into Business Development Funds, similar to what has been done for the Existing Homes program. The Solar program adopted this approach as of January 1, 2015. This change allows trade allies to utilize funds for trainings, conference fees, memberships and other uses that benefit trade ally involvement in programs and markets, in addition to advertising.
- Staff have found the star rating system for Existing Homes trade allies to be useful, both in directing customers to quality trade allies and in directing program resources to the most engaged trade allies. In 2015 and 2016, Energy Trust will explore whether it makes sense to adopt a rating system for solar and/or commercial trade allies and how such a system might work. Each program has differing needs and criteria for such a system, and initial steps will include identifying both.

An additional recommendation in the report regarded the value of allowing Existing Homes customers to self-install measures and how self-installation processes might be improved; no changes in these offerings are planned for 2015. This evaluation also highlighted room for improvement in the way trade ally activity is tracked in program databases. Changes in these methods would allow for further data analysis in future evaluations. Modifying data systems in this manner will rely on implementation of planned changes in 2015 and will be a future consideration.

# 1. INTRODUCTION

TRC Energy Services, Inc. (TRC) was engaged by Energy Trust of Oregon (Energy Trust) to conduct an evaluation of their Trade Ally Network. The overarching objective of this evaluation is to identify changes Energy Trust can make to administer their current Trade Ally Network in a more streamlined manner, while maintaining or increasing energy savings, project volume, and customer and trade ally satisfaction. Providing services to trade allies (TA) is a significant expense to Energy Trust and a goal of this project is to separate key services from those that are not providing high value to Energy Trust programs.

Energy Trust's current Trade Ally Network is extensive and complex. It currently includes over 1,700 contractors registered across the following eight programs:

- Existing Buildings
- New Buildings and New Multifamily
- Existing Homes
- New Homes
- Existing Multifamily
- Production Efficiency
- Solar
- Small Wind

Per Energy Trust's direction, TRC focused primarily on the Existing Buildings, Existing Homes, and Existing Multifamily programs for this evaluation.

## 1.1. Project Objectives

The objectives of this evaluation, and specific research questions related to each objective, are:

- Determine the optimal size of the network:
  - What considerations should determine the optimal size of the network?
  - What are the pros and cons of being more exclusive?
  - What changes should Energy Trust make to its network to minimize the administrative burden while maximizing the potential for energy savings and generation?
  - How can Energy Trust make those changes most effectively?
- Identify changes that need to be made to the network participation requirements, including increasing/decreasing exclusivity and how to implement those changes:
  - What requirements should there be for contractors to be a part of the network?
  - Should there be general, organization-wide requirements and/or program-specific requirements?

- Determine if Energy Trust should provide incentives to trade ally projects only, directly to trade allies, and/or to homeowners who install measures without using a contractor:
  - How would providing incentives directly to trade allies impact customer's perceptions of Energy Trust?
  - Would this provide any administrative or operational benefit?
  - Is project and customer data more likely to be provided in a timely and accurate manner?
  - Should Energy Trust provide incentives to homeowners who install measures without using a contractor (self-installs)? If not, why? If so, what requirements should Energy Trust maintain to ensure high quality installations?
  - What are the costs for offering a self-install pathway, in terms of project quality control, paperwork assistance, etc.?
- Determine the value provided by the Trade Ally Star Rating System (only applies to Existing Homes trade allies).
- Review quality control and management practices and identify ways they can be improved:
  - Are Energy Trust's current quality control or quality management practices effective and efficient as compared to internal goals and other networks?
- Identify factors that influence trade allies' activity level:
  - How do other networks ensure their trade allies remain active?
- Identify methods to bring in new trade allies and re-engage with existing trade allies (if necessary)
- Determine best practices from Energy Trust programs and other networks for referring customers to trade allies
- Do other networks actively seek to increase the number of minority-owned, woman-owned, small business, or rurally located trade allies?
  - If so, in what ways do other program administrators maintain a diverse trade ally network?
  - How are other networks structured so that trade allies in rural areas are not at a disadvantage?

# 2. Overview of Methodology

TRC conducted several data collection activities to develop a comprehensive understanding of Energy Trust's Trade Ally Network. Activities contributing to this data collection include a review of program documents and forms; interviews with Energy Trust program, trade ally network, and Program Management Contractor (PMC) staff; and a review and analysis of the program database. In addition to understanding the functions and relationship of the trade ally network with the programs, TRC also took an extensive look at trade ally networks that serve other energy efficiency incentive programs through interviews with these program managers or trade ally network managers.

Below is a brief description of the activities TRC engaged in to perform this evaluation.

## 2.1. Documents and Forms Review

Over 25 documents and forms were reviewed to gain an understanding of Energy Trust's Trade Ally Network and program requirements. The team also utilized the program and trade ally specific websites to supplement the information in the provided documents. Types of documents reviewed include:

- Enrollment applications and addendums for the trade ally network
- Network requirement forms and benefit information
  - Cooperative Marketing and Business Development Funds
- Presentations and training materials for trade allies
- Roundtable meeting presentations and notes
- Trade ally newsletter (Insider)
- Trade ally survey reports
- Previous program evaluation reports
- Program specific trade ally outreach plans
- Trade Ally Network policy documents and quality management procedures

## 2.2. Database Analysis

TRC received two databases from Energy Trust: 1) a database listing their registered trade, program[1] and retailer allies, as of August 19, 2014, and 2) measure[2] tracking databases for the program years 2012 to the first quarter of 2014; however, only program years 2013 and 2014 were included in this analysis[3]. The data were prepared for analysis, as follows:

[1] A program ally is a company that provides services not related to a specific trade. Common examples are engineers, architects or certification verifiers.

[2] Analysis excludes measures installed by program implementers.

[3] Because of the difficulty of comparing a list of trade allies from one point in time to a database of measures over several years, the 2012 program year was removed from analysis. See section 1.1.2, bullet 2, for more information.

- Combination of Network programs – Measures submitted to Network programs are tracked according to the programs listed in the first column of Table 1. For the purposes of this analysis, trade allies, and self-installs are reported according to the groupings in the second column of the below table.

*Table 1. Network Program Groupings for Evaluation*

| Database Program Code Name | Evaluation Program Groupings |
|---|---|
| Existing Buildings | Existing Buildings |
| Existing Buildings Solar WH (water heating) | |
| Existing Buildings Multifamily | Existing Multifamily |
| Existing Single Family | Existing Single Family |
| Existing Single Family Home Performance with ENERGY STAR | |
| Existing Single Family Solar WH (water heating) | |
| New Buildings | New Buildings |
| New Buildings Multifamily | |
| New Homes | New Homes |
| New Homes Solar WH (water heating) | |
| Production Efficiency | Production Efficiency |
| Production Efficiency, Large | |
| Products | Products |
| Small Wind | Small Wind |
| Solar Electric | Solar Electric |

- Cross referencing databases – The type of contractor (registered trade ally or not) is not tracked in the measure database. In order to determine participation levels by registered trade allies and non-registered contractors, the trade ally and measure databases were cross referenced according to the company listed in the "installer" field of the measure database. All measures with an installer not found in the registered trade ally database were categorized as a "Non-Registered Contractor". Measures without an installer listed were categorized as "Unidentified."
- Determining self-installs – Tracking of self-installs is done differently for each program. Existing Homes and Existing Buildings do have self-install tracking metrics and will be reported on in this evaluation. For Existing Homes, the project subtype "WXSI" and unique "ContactID" (>40000000) were used to determine self-installs. Measures meeting either of these criteria were considered self-installs. For Existing Buildings, the unique "ContactID" (>40000000) was used to determine self-install measures.

- Energy savings – Measure energy savings are tracked by reported energy savings (kWh and therms). For the purposes of comparing energy savings of registered trade allies, non-registered contractors, and self-installs in each program, total energy savings (MMBTU) was calculated.

### Limitations of Analysis

This analysis is not an exact reflection of the program and Trade Ally Network activity for several reasons. The reader should keep these limitations in mind when reviewing these findings. These limitations include:

- The program data was provided at the measure level without a field to roll the data up to the project level. Therefore, the data presented may over or under emphasize the activity of contractors or trade allies;
- The installer may have been a trade ally at time of measure install, but not in the current list for a variety of reasons. They may have declined to re-enroll or been terminated. If they changed business names, Energy Trust would have issued a new account number, which would break the tracking;
- Trade allies in the database may have joined after the first quarter of 2014, in which case they may appear to be inactive, when they simply hadn't had the opportunity to submit a project before Q2 2014;
- For some programs, especially New Buildings, measures will often have the customer listed as the "installer" with a trade/program ally as the "general contractor", "consultant", "engineer" or some other role (or not linked at all in Fast Track), which is not reflected in these data; this analysis is based on the "installer" category only and low activity by New Buildings allies is expected; and
- Production Efficiency has very few trade allies and they are only for the streamlined and lighting tracks, not for custom projects, which are usually installed by the customer with the help of a consultant. Therefore, low activity by trade allies in the Production Efficiency program is expected.

## 2.3. Interviews

### Energy Trust Staff Interviews

TRC conducted interviews with Energy Trust Program staff, Energy Trust Customer Service and Trade Ally staff and Program Management Contractor (PMC) staff to understand their roles and needs from the network. The purpose of these interviews was to: 1) document current administrator practices, 2) understand which practices are most complex and time consuming, 3) understand each program's needs from their trade allies, 4) understand how the various trade ally activities support the program (e.g., driving new projects versus promoting quality installation versus reducing application turnaround time and rework), and 5) document which activities they believe provide the most value to the program and to the trade allies.

*Table 2. Number of Energy Trust and PMC Program Staff Interviewed*

| | Energy Trust Staff | PMC Staff |
|---|---|---|
| Director of Operations | 1 | N/A |
| Customer Service and Trade Ally Team | 4 | N/A |
| Existing Buildings | 0[a] | 2 |
| Existing Homes | 2 | 2 |
| Existing Multifamily | 1 | 2 |
| Production Efficiency | 1 | 2 |
| Lighting (Commercial, Multifamily and Industrial) | 0 | 1[b] |
| New Buildings | 1 | 2 |
| New Homes[1] | 1 | 2 |
| Solar | 2 | 0 |
| **TOTAL** | **9** | **15** |

[a] Energy Trust Program Manager was out of the office for an extended period of time

[b] Program and network managed by Evergreen Consulting, not Energy Trust

## Other Network Interviews

Interviews with the managers of other networks provided information on general trends and best practices, and identified how Energy Trust's Trade Ally Network management and relationship compares to other program networks. The hour-long interviews were conducted over the phone and sometimes included more than one staff member. The interviews focused on trade ally networks serving Existing Residential (Single-family), Existing Multifamily, and Existing Buildings (Commercial & Industrial) Programs. The following table provides a breakdown of interviews conducted. Some networks cover more than one program type, and are identified by row location.

[1] Staff that implements the New Homes program also implements the Products program, but our interview and findings are focused on New Homes.

*Table 3. Number of Interview Completes by Market Sector*

| | Single-family Programs | Multifamily Programs | Commercial & Industrial Programs | **TOTAL** |
|---|---|---|---|---|
| Single Sector Coverage | 8 | 3 | 8 | 19 |
| Multi-Sector Coverage | 1 | | 1 | 2 |
| All Sector Coverage | 3 | | | 3 |
| **TOTAL** | 12 | 8 | 12 | 24 |

# 3. FINDINGS

This section presents the findings from the review of program documents and forms, the analysis of program data, the interviews with Energy Trust and PMC staff, and the interviews with program managers from other trade ally networks.

## 3.1. Documents and Forms Review

TRC reviewed a number of documents, forms, and other publicly available material pertaining to Energy Trust's Trade Ally Network. The information in these documents provides an overview of the requirements for trade allies to enroll and participate in programs, the resources available to trade allies, trade ally participation and satisfaction, and program specific outreach plans and activities. There are several general requirements and resources available to all trade allies, but each program then also has its own requirements and relationship with the trade ally network.

### General Trade Ally Network Requirements

Regardless of the program, contractors must all go through a series of steps to enroll in the Trade Ally Network; they then have access to network-wide resources and web listing status. All potential trade allies must submit a general enrollment form plus a program-specific addendum, a General Liability Certificate, a Worker's Compensation Certificate (if applicable), as well as attend any required trainings and/or submit references. Once approved, a trade ally must maintain their licenses, certifications, and insurance to retain their status as an Energy Trust trade ally. In addition, five out of the 11 programs require that at least one project be submitted, completed or proposed per year, and four programs require that the trade ally attend a program-hosted event annually.

Very few of the Energy Trust programs or offerings require the use of a registered trade ally in order to participate and receive incentives. Although, Energy Trust encourages customers to use trade allies because they are frequently more up-to-date with program requirements, incentive levels, and better aware of the quality of work required to receive approval from Energy Trust. Most incentives are sent directly to customers once a paid-in-full contractor invoice is submitted. There are a few exceptions to this process which are discussed below in the program specific requirements.

### Program Specific Requirements

In addition to the general requirements applicable to all trade allies, each program has addendums and participation requirements that help ensure trade allies meet individual market sector needs. There are a number of different activities required to maintain trade ally status, including participating in incentivized projects annually and attending trainings or industry events.

For the most part, programs do not require a customer to participate through a trade ally. The exceptions to this are portions of the Existing Homes and Manufactured Homes programs, Solar Electric and Solar Water Heater installations, Small Wind installations, and New Homes in SW Washington; these programs require installation by a registered trade ally in order to receive Energy Trust incentives. Programs such as Existing Buildings, Existing Multifamily and Existing Homes offer a limited number of self-installation measures that do not require a contractor for installation and incentives. However, we observe in the monthly report for the Existing Homes program that trade allies have a higher Quality Assurance pass rate for installations than non-trade allies and self-installations.

*Table 4. Incentive Payment Options by Program*

| Program | Instant or Contractor-paid Incentives? |
|---|---|
| Existing Homes | Yes, Contractor-paid on customer assignment and new Instant Incentives for specific installations; however, majority are still customer-paid |
| Products | Yes, new Instant Incentives for appliances at specific retailer; other incentives paid to customer |
| Existing Buildings | No |
| Existing Multifamily | No |
| New Homes | Yes, builder/contractor-paid |
| Solar Electric and Water Heating | Yes, Contractor-paid |
| Small Wind | Yes, Contractor-paid |
| Lighting (C&I) | No |
| New Buildings | No |
| Production Efficiency | No |

Incentives themselves are, for the most part, directed towards the customer rather than the contractor or trade ally. However, in the case of Solar and Small Wind projects where customers must use trade allies, the incentive is paid directly to the contractor who uses it as a discount on the invoice. Customers in the Existing Homes program can agree to pass the incentive along directly to their contractor.

Beginning in July 2014, the Existing Homes program is launching "Instant Incentives", which will allow incentives to be paid directly to trade allies for specific measures without requiring customer assignment. [1] To qualify, contractors must be a 3-star trade ally, have a positive track record with the Existing Homes program and customers, and bear the responsibility for determining project eligibility and compliance.[2] The trade allies submit the application and are paid the incentive directly, which is reflected through a reduced upfront cost to the customer. This way, the incentive is realized much sooner and can alleviate some of the upfront costs for these installations instead of reimbursing customers at a later time.

[1] The option for the customer to assign the incentive to the contractor has been available for some time, but customers have to sign an agreement in each case and the option has not been widely promoted or used.

[2] Contractors must also be a Portland General Electric-approved contractor, but this requirement may change in the near future.

The PMC for Energy Trust's Existing Homes program will be doing benchmarking and evaluation of project costs to monitor the effectiveness of Instant Incentives. This benchmarking will serve as a reference point to compare and track installation costs and incentive payments for contractors in order to intervene if it seems that a contractor is reporting abnormally high installation costs.

### *Maintaining Trade Ally Status*

It is not clear what most programs do to enforce participation requirements, because the methods for tracking trade ally participation and projects are not well established. However, a few examples have been provided, such as the Existing Homes Program's established method for tracking trade ally participation and Energy Trust Trade Ally staff's monitoring of insurance and license compliance. According to information provided in the outreach plan for Existing Buildings, it is noted that the requirement to submit two projects per year has not been enforced recently. The PMC suggests altering the incentive applications to facilitate tracking of trade allies and projects.

## Resources for Registered Trade Allies

Once a trade ally is enrolled within the network, they have access to several resources, including:

- Trainings conducted via webinar or in-person;
- Company listing in the trade ally directory on the Energy Trust website;
- Receiving updates on program changes;
- Newsletters;
- Quarterly roundtables and opportunities to provide program feedback;
- Cooperative marketing and business development funds
- Assistance with project submission;
- On-demand training on Energy Trust's website;
- Ability to participate in pilots and special program tracks;
- Ability to offer bonuses;
- Brand association with Energy Trust;
- Use of the trade ally logo;
- Training and/or event discounts; and
- Continuing education credits for professional licenses (for some programs)

Energy Trust offers a large number of resources to trade allies, some of which are only available to trade allies who participate in specific programs. There are several trainings and webinars available for trade allies. These include scheduled webinars, such as the monthly Existing Homes Trade Ally training as well as access to previously conducted webinars on-demand. Trainings can be program specific or technology-specific, such as the heat pump and ductless system trainings that are occurring across the state in 2014. Finally, there are business-specific trainings, including in-person sessions on leveraging tax incentives to generate business. The amount of trainings vary according to program, with the Existing Homes Program providing the greatest number of trainings to its trade allies. In addition to these trainings, trade allies are also invited to give feedback through surveys and roundtables, which is then used to adjust Energy Trust programs and procedures.

Trade allies can also utilize cooperative marketing and business development funds. These funds can be used for: print or digital media (newspaper, magazine, radio, television, phone book and billboards), website design and development, brochures, business cards, and other approved marketing pieces and opportunities. Although it is listed under the general "Benefits" page, only eight of the program addendums (Existing Homes, Existing Buildings, New Buildings, Small Wind, Solar, New Homes, and Production Efficiency) mention trade ally eligibility for cooperative marketing and business development funds, and actual forms can only be found for six of the programs (New Buildings, Existing Homes, Existing Buildings, Small Wind, Solar, and Production Efficiency).

Each program has listings in the online trade ally directory to help customers locate trade allies in their area that specialize in the installation or service needed. After a customer selects criteria, the resulting list is prioritized to show trade allies in proximity to the selected location. In addition to showing services offered and location, the Existing Homes program shows the trade allies' "star rating", which is based on the number of completed Energy Trust projects, quality control score, commitment to customer service, and attending Energy Trust's monthly webinars for trade allies; however, the number of projects completed is the main driver for moving up the ranks in the three star rating system[1]. Energy Trust is currently engaging in a project to better gauge customer referrals and determine other ways to identify top performing trade allies beyond their star rating. Similarly, the Solar program highlights trade allies that participate in the program and displays a list of trade allies who have installed a system within the last year (there is also an option to view all).

## Program Specific Outreach Plans

Typical program outreach for Energy Trust includes a monthly newsletter ("Insider"), quarterly trade ally roundtables, emails and individual contact with trade allies. The quarterly roundtables provide opportunities for trade allies to receive updates on program changes and progress towards Energy Trust's goals as well as provide feedback on the programs, including opportunities and challenges in their field and/or region of the state. The open forum also provides an opportunity to network with program staff and other trade allies in their industry.

Two programs (Existing Homes and Existing Buildings) have developed additional contractor outreach plans for 2014. They plan to continue to engage participating trade allies and to encourage those with lower participation while removing trade allies that are not responsive or participative. The two plans focus on increasing communication, outreach to national and regional associations, and increasing trade

[1] Energy Trust has lower project volume requirements for assigning a star rating to their rural trade allies.

ally business opportunities. Existing Buildings also has an explicit goal of expanding the network through recruitment in targeted regions and specialties.

### *Existing Buildings*

For current trade allies, the Existing Buildings Program is focused on increasing personal contact with trade allies through emails, phone calls and in-person meetings, improving tracking of projects and compliance, and improving the trainings offered. The program has a large trade ally network, which can be difficult to track and to establish personal relations. The outreach plan indicates a focus on more targeted outreach activities and encouraging attendance at quarterly roundtables, as well as increasing outreach to national and regional trade associations to promote awareness of the Energy Trust program, especially for trades operating in the Southwest Washington area. The program will also use these national and regional trade associations to encourage the participations of new trade allies, especially in the Washington territory.

The Existing Buildings Program also is focusing on better engagement and support of new trade allies and recruitment of contractors. The PMC for this program is aiming to tailor initial program training to account for different trades and equipment types amongst its potential trade allies. Recruitment will focus on adjusting the program requirements and processes to allow for greater enrollment of small and medium-sized businesses and to correctly connect them with potential projects and customers. The program also understands limitations that are present in geographic areas with lower numbers of contractors and will tailor plans to meet this constraint.

### *Existing Homes*

The Existing Homes program has outreach plans to contact contractors who are eligible for the upcoming Instant Incentives program. The Instant Incentives implementation plan mentions that the program has previously utilized a tracking spreadsheet to target particular trade allies for incentives; the program plans to continue to use this spreadsheet and expand the capabilities of tracking for the Instant Incentives. Methods of engagement include person-to-person contact, solicitation at roundtable meetings and other trade ally events, fact sheets or flyers, and website updates. The program plans to document the outreach performed and opportunities in the customer relationship management (CRM) database. The trade ally team will continue to engage the participating trade allies and provide ongoing support to help them maintain their eligibility for Instant Incentives, such as providing resources for the trade allies' administrative process. The program will continually monitor customer and trade ally satisfaction through surveys, but the program does not foresee any negative reactions from customers. The program implementer has also identified potential risks of the Instant Incentives and methods to mitigate and avoid these risks.

In additional to contacting contractors, the Existing Homes program also plans to develop talking points for Customer Service Representatives so that they can inform customers of the upcoming Instant Incentives opportunities. The Instant Incentives will address the results from the 2013 Fast Feedback surveys, which found that 44 percent of homeowners cited high upfront costs as the greatest barrier to moving forward on energy upgrades.

## Trade Ally Survey Findings

Third party contractors conducted surveys of trade allies among Energy Trust's Residential, Commercial, Industrial, and Renewable programs in 2012 and 2013. The surveys, conducted for trade allies participating in 2011 and 2012, were reviewed to document the level of trade ally satisfaction and perception of Energy Trust and its offerings. These surveys were voluntary and trade allies were

encouraged through emails and notifications on Energy Trust's website to provide feedback in the survey. It should also be noted that the Existing Homes and Existing Buildings programs underwent a PMC transition between the 2012 and 2013 program years.

The surveys for both years successfully drew response from a variety of trade allies. The breakdown of survey respondents and the main program sector in which they participated is as follows:

- 2012 Survey (2011 participation): 194 total respondents, 165 of which participated that year
  - 140 Energy Efficiency: 103 Residential, 42 Commercial, 25 Industrial
  - 45 Renewable (Solar PV, Thermal, Wind)
  - Most were small to medium size firms
  - Most had been with the program for five or more years
  - Very few had been with the program less than one year
- 2013 Survey (2012 participation): 107 total respondents
  - 49 of the top 20% of most active trade allies were represented in this survey
  - 99 Energy Efficiency: 66 Residential (represent 34% of incentives), 24 Commercial (represent 29% of incentives), 9 Industrial (represent 52% incentives)
  - 8 Renewable (represent 26% of incentives)

The 2012 survey included both trade allies who were likely high participants, as well as those who did not submit a project in the previous year. This provides a good sample that will provide perspective from different levels of program involvement. The 2013 survey may have been more biased because it appears that almost half of the respondents were among the most active trade allies.

## *Processes*

The majority of respondents reported that program processes could benefit from improvement. This area received the most complaints and highest levels of dissatisfaction. When asked about processes, such as paperwork, application processing time and incentive payments, the majority of respondents replied that these could be simplified and they would like to see quicker application approval and incentive payments. The majority of these respondents complete all of their customers' paperwork at least 75 percent of the time. In the 2012 survey, they reported that they would benefit from simplified paperwork and online applications/forms. In the 2013 survey, respondents maintained the desire for simpler paperwork, but 40 percent responded that they now use the online forms that were introduced and found that they made the application and incentive process easier.

In terms of enrolling and maintaining status in the network, trade allies use EBIX[1] to update their insurance documents. In both surveys, some complained that they were unclear on how to use EBIX and that it was burdensome to submit documents multiple times. However, the majority did not have problems or did not have direct interaction with EBIX – it is possible that someone else at their firm works with EBIX.

[1] Energy Trust staff will accept trade ally insurance documents directly if they are not willing or able to use EBIX.

## *Relationship with Program*

The survey instruments directly asked respondents about their satisfaction with Energy Trust through their interactions with program staff and program participation. The 2012 survey separated respondents into those who participated in the past year (2011) and those who did not. The responses here identify the separate responses from each group. In both years of the survey, the majority of respondents who participated in the programs were mostly or very satisfied with their interactions with Energy Trust, including responsiveness and quality of responses to requests and questions. About half of those who did not participate in the past year were satisfied overall with Energy Trust, but had less satisfaction than those who did participate in the past year with program processes, such as payment processing time and turnaround time for applications and approvals. They also had less satisfaction with their interactions with staff, the quality of responses to questions, and the QA/QC processes.

In both survey years, almost half of respondents reported that their *overall* relationship with Energy Trust had stayed the same or improved as compared to previous years, with about 30 percent reporting that their relationship had improved. In the 2013 survey, over 80 percent of respondents reported that their *working* relationship had improved in comparison to previous years. Reasons for an improved relationship included the ability to establish a good relationship with specific Energy Trust program staff, gaining more familiarity with the programs, experiencing improvement in response quality and time from staff, simplification in applications and paperwork, and faster processing of incentive applications and approvals. In the 2013 survey, over half of the respondents indicated that they would be very likely to refer Energy Trust to non-competing contractors because of the benefits the network offers, the ease of the participation process, and the strong customer service. Although 75 percent of respondents in the 2012 survey reported that less than half their work comes from Energy Trust projects, half of the respondents from both survey years, including those who did not participate in the past year for the 2012 survey, forecasted that they expected to do more work within the programs in the next year.

Although many respondents reported that their overall and working relationship with Energy Trust had remained the same or improved in comparison to the past year, there was a small percentage who reported that their relationship had deteriorated because, in their experience, Energy Trust staff seemed unresponsive, they were unfamiliar with the programs because they had changed over time, or the applications and additional paperwork were onerous. The survey does not go into further detail about why trade allies felt this way.

Program outreach, such as emails and newsletters, was the main mode of communication between the program and trade allies. The majority of respondents noted that emails from program staff were the most effective form of communication. A wide majority also found the newsletter to be useful or very useful, while the general website and the trade ally specific website were used to a lesser degree. Respondents indicated that they visited the website on a monthly basis to find program incentive information and forms, but very few visited the website on a weekly basis. Respondents also provided ideas to improve the newsletter, such as including program specific content and links to additional information and publications. In addition to these regular forms of communication, two-thirds of respondents from each program sector reported having attended at least one roundtable in the past year. The lowest attendance, according to the survey, was at non-residential roundtables. A slight majority found these roundtables to be useful, but they would have liked to see more information on marketing, program updates and expected updates, and information pertinent to their fields, such as technology trainings and discussions. Existing Buildings and Production Efficiency program trade allies found that pre-recorded video/webinars were much more helpful than roundtables, and providing trainings at roundtables was the lowest ranked training format preference for all trade allies, regardless of the program sector. The key drivers for attending roundtables were the Energy Trust topics presented and the location. Very few trade allies provided feedback on how to make roundtables more valuable,

with especially low response from the commercial, industrial, and renewable programs. Suggestions included topics more relevant to their particular industry and a convenient location.

### *PMC Transition*

Between the 2012 and 2013 program years, Existing Homes and Existing Buildings programs underwent a transition in PMC. The survey respondents from these program sectors were asked about their feedback on the transition. The majority had no feedback, and there was an equal split of responses that mentioned they experienced poor service and those that mentioned they experienced a smooth transition.

### *Benefits of Program*

For both survey years, the large majority (90 percent) of respondents reported that participation in the programs had a positive economic impact on their business, especially for the renewables trade allies. More than half of the respondents reported that the incentives helped move their projects forward, especially on the commercial side.

### *Energy Trust Star Rating*

Currently, Energy Trust provides a star rating system for trade allies participating in the Existing Homes program. The surveys asked respondents who participated in this program to provide feedback on the star rating system. Most residential trade ally respondents were aware of the rating system and the majority found it fair, while 38 percent in 2012 found it not fair to some degree and several in 2013 were simply unsure about it. Only 20 percent of the residential trade allies that were familiar with the rating system report that they had received feedback from customers. Those that had received feedback reported positive reactions to their "three-star rating"; this also indicates that these trade allies had three stars and, therefore, were probably more active in the program and liked the rating system. These trade allies also reported that the star rating system had an impact on their business. Several suggestions were made to improve the quality and fairness of the Star rating system; these included (in descending order of popularity):

- Rate on quality not quantity (not fair to compare smaller trade allies and large trade allies)
- Provide more information on Star rating for customers
- Display customer comments along with rating
- Include territory/location considerations (not fair to rate trade allies in remote areas with those in urban areas)[1]

## 3.2. Database Analysis

A summary of findings based on the data analysis are presented in this section. The term trade ally is reserved specifically for contractors or vendors who are registered with the Energy Trust Trade Ally Network. Contractors or other vendors participating in the programs but who are not registered in the

[1] Energy Trust has lower project volume requirements for assigning a star rating to their rural trade allies.

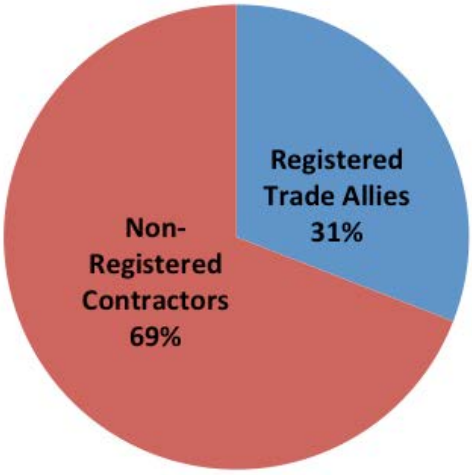
Network are referred to as “contractors”. It should be noted that data presented as “counts”, as opposed to kWh or therms, is in units of individual measures installed, and not projects installed.

Note that New Buildings measures and trade allies have been removed from the analysis due to the data limitations discussed in section 1.1.2.

## Trade Ally Network Overview

Program participation is dominated by non-registered contractors in terms of number of participating firms. Figure 1 shows the number of trade allies and contractors who have submitted at least one measure from 2013 through March of 2014. Across all programs, contractors represent 69 percent of the portfolio’s installers, while trade allies represent 31 percent of the installers. Programs also have self-installations and unidentified projects (projects with no installer tracked) which will be discussed in later sections.

*Figure 1. Participation of Trade Allies and Non-Registered Contractors (N=3,943)*




At the program level, contractors also dominate participation in the Network (Table 5), with a few exceptions. The Small Wind and Solar Electric programs require participating contractors be registered in order to offer incentives, therefore, trade allies make up 100 percent of the participation. The Products program requires Trade Ally status in order for retailers to offer compact fluorescent incentives, so this likely explains the high level of registered trade allies. Existing Buildings and Existing Single Family have the largest total number of registered trade allies and non-registered contractors participating in the program; however, these programs see participation in greater proportion from contractors. The remainder of programs see less of a disproportion in participation between trade allies and contractors.

*Table 5. Program Participation of Registered Trade Ally and Non-Registered Contractors*

| Program | Total Participating Trade Allies and Contractors (count) | Registered Trade Ally (%) | Non-Registered Contractors (%) |
|---|---|---|---|
| Existing Buildings | 1,018 | 19% | 81% |
| Existing Multifamily | 289 | 45% | 55% |
| Existing Single Family | 1,742 | 26% | 74% |
| New Homes | 252 | 48% | 52% |
| Production Efficiency | 352 | 25% | 75% |
| Products | 234 | 90% | 10% |
| Small Wind | 2 | 100% | 0% |
| Solar Electric | 54 | 100%[1] | 0% |
| **Total** | 3,943 | 31% | 69% |

On average, 47 percent of trade allies registered with a program submit projects through that same program (Table 6), with some programs experiencing more participation by trade allies than others. Eighty-three trade allies are registered in more than one program. Only the Existing Single Family program has over half of their registered trade allies actively participating. Twenty-three registered trade allies participated in programs that they are not registered for.

[1] Note that, because of limitations discussed in section 1.1.2, the database showed that only 87% of solar measures were installed by a registered trade ally, even though registration is required to receive an incentive.

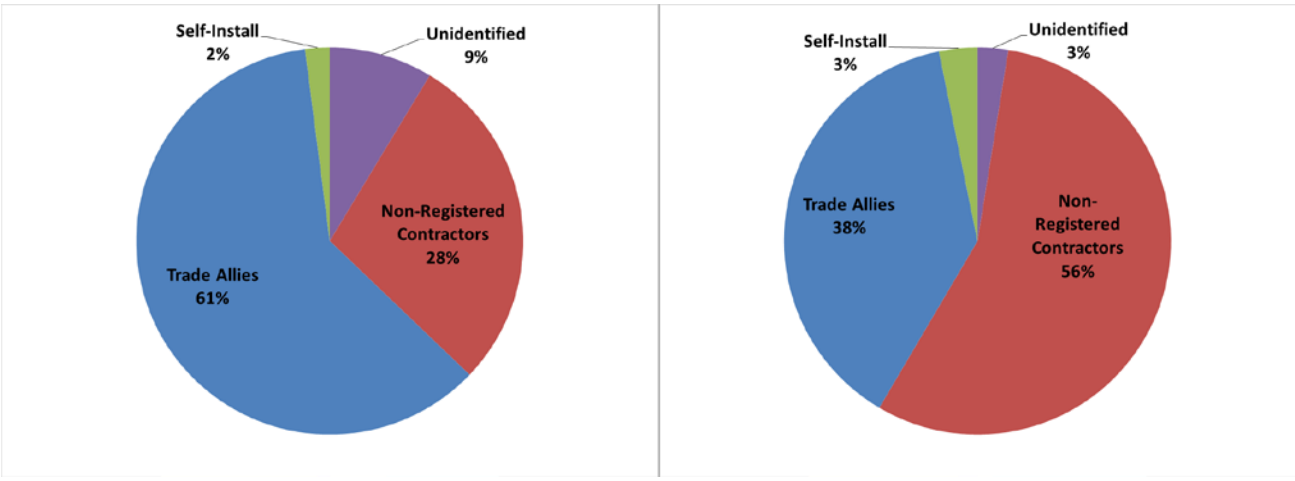
*Table 6. Program Participation of Registered Trade Allies and Active Trade Allies*

| Program | Registered Trade Allies (Count) | Participating Registered Trade Allies (Percent) |
|---|---|---|
| Existing Buildings | 472 | 34% |
| Existing Multifamily | 85 | 33% |
| Existing Single Family | 482 | 78% |
| New Homes | 496 | 24% |
| Production Efficiency | 177 | 29% |
| Products | 801 | 26% |
| Small Wind | 10 | 20% |
| Solar Electric | 127 | 37% |
| **Total** | **2,650** | **47%** |

## Network Distribution of Measures

Since 2013, trade allies have submitted more measures than contractors (Figure 2). Trade allies bring in 61 percent of measures equaling 38 percent of energy savings, while contractors bring in 28 percent of measures equaling 56 percent of energy savings. Self-installs, reported for Existing Homes and Existing Buildings only, make up 2 percent of the total measures receiving incentives and 3 percent of the total reported energy savings. The remainder of measures are considered 'unidentified' because there is no installer listed in the participation data. These represent 8 percent of measures and 3 percent of energy savings.

*Figure 2. Distribution of Installations by Number of Measures (left), Reported Energy Savings (MMBTU) (right)*



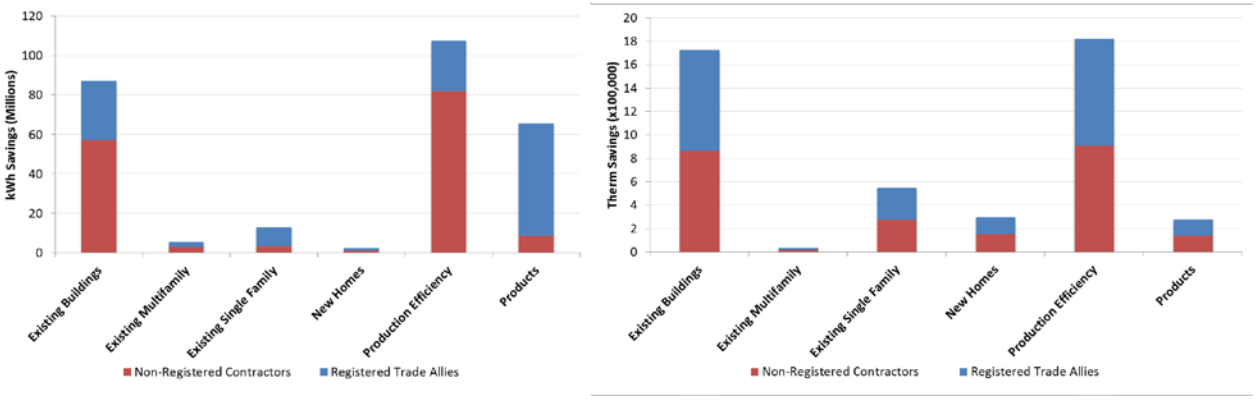

## *Total Savings by Program*

In this section, total measure savings (kWh and therms)[1] is broken out by program (Figure *3*). Total measure savings by trade allies includes all trade allies serving a program, regardless of the program they registered with. The Products and Existing Single Family programs have a higher proportion of energy savings from trade allies than contractors. The Existing Buildings and Production Efficiency programs have the highest energy savings within the portfolio. Existing Multifamily and New Homes have nearly equal electric savings from trade allies and contractors.

Gas savings delivered by trade allies and contractors is also provided in Figure *3*. The Existing Single Family and New Homes programs report more savings from trade allies, while savings for the Products and Existing Multifamily programs show an equal split between trade allies and contractors.

[1] Total measure savings excludes program installed measures, and measures installed before 2013.

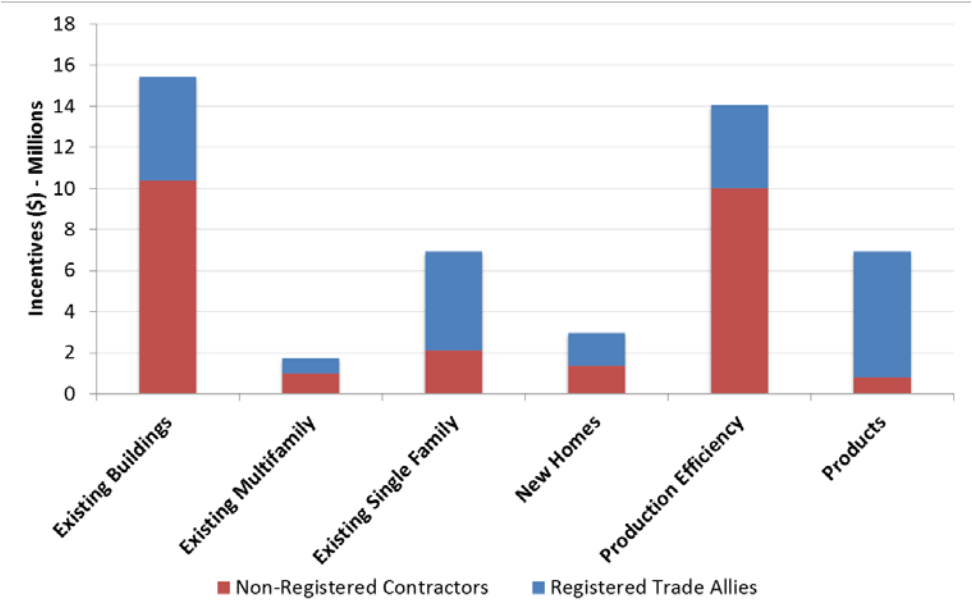
*Figure 3. Program[1] Savings by Participating Trade Allies and Contractors: Electric (left), Gas (right)*




## *Total Incentives by Program*

Figure 4 shows the split of incentives paid to trade ally and contractor projects by program. More incentives are paid to trade ally projects for the Existing Single Family and Products programs. For the Products program, the majority of participation in the program is associated with trade allies, or retailer allies, which are commonly encouraged (not required) to register with the program upon offering program incentives. Overall, Existing Buildings and Production Efficiency issue the highest amount of incentives in the portfolio, for measures subject to this analysis.

*Figure 4. Incentive Amounts by Program[2]*




[1,2] Solar Electric, Wind, and New Buildings programs were excluded from this analysis

## Volume of Measures

This section explores differences in project volume and delivered energy savings between contractors and trade allies for four key programs: Existing Buildings, Existing Multifamily, Existing Single Family, and Production Efficiency. The New Buildings program is not included because of limitations in the tracking data that make the analysis unrepresentative of true trade ally activity. Self-installs will only be discussed for the Existing Homes and Existing Buildings programs. The intent of this section is to determine the average measure size for trade ally and contractor installations, and whether the majority of work is conducted by a disproportionately small number of trade allies (80/20 theory).

### *Existing Buildings*

The total volume of measures in terms of savings (MMBTU) and number of measures is driven by contractors. Contractors bring in 61 percent of total savings in the Existing Buildings from 49 percent of the program's measures (Table 7). The top 20 percent of participating trade allies and contractors bring in 80 percent of the program energy savings.

For the Existing Buildings program, contractors have a larger average measure size than trade allies (Table 8), and bring in on average 3 times the number of measures than trade allies.

*Table 7. Existing Buildings Volume – Energy Savings, Number of Measures*

| | Savings (MMBTU) | # of Measures |
|---|---|---|
| **Total** | 463,075 | 7,203 |
| **Registered Trade Allies** | 31% | 38% |
| **Non-Registered Contractors** | 61% | 49% |
| **Top Installers (n=214)** | 80% | 61% |
| **Balance of Installers (n=804)** | 12% | 27% |
| **Self-Installs** | 8% | 12% |

*Table 8. Existing Buildings Contractor & Trade Ally Averages – Energy Savings, Number of Measures*

| | Average Measure Savings (MMBTU) | Average # of Measures |
|---|---|---|
| **Registered Trade Allies** | 52 | 4 |
| **Non-Registered Contractors** | 1,202 | 15 |

Of the top installers (n=214), contractors bring in the majority of energy savings, as seen in Figure 5. Contractors also dominate energy savings brought in by the balance of program participants, with trade allies bringing in only a small portion of energy savings.

*Figure 5. Existing Buildings Program Participation (80/20 Theory)*


## *Existing Multifamily*

Contractors and trade allies bring in almost the same amount of energy savings (within 8 percent). However, contractors deliver 79 percent of the program's measures and trade allies deliver 17 percent of measures, meaning that the energy savings per measure is larger for trade allies than for contractors. Eighty percent of the Existing Multifamily savings is delivered by 25 percent of contractors and trade allies.

On average, contractors bring in three times more measures than trade allies; however, the average measures size brought in by trade allies is 20 MMBTU versus 6 MMBTU from contractors (Table 10).

*Table 9. Existing Multifamily Volume – Energy Savings, Number of Measures*

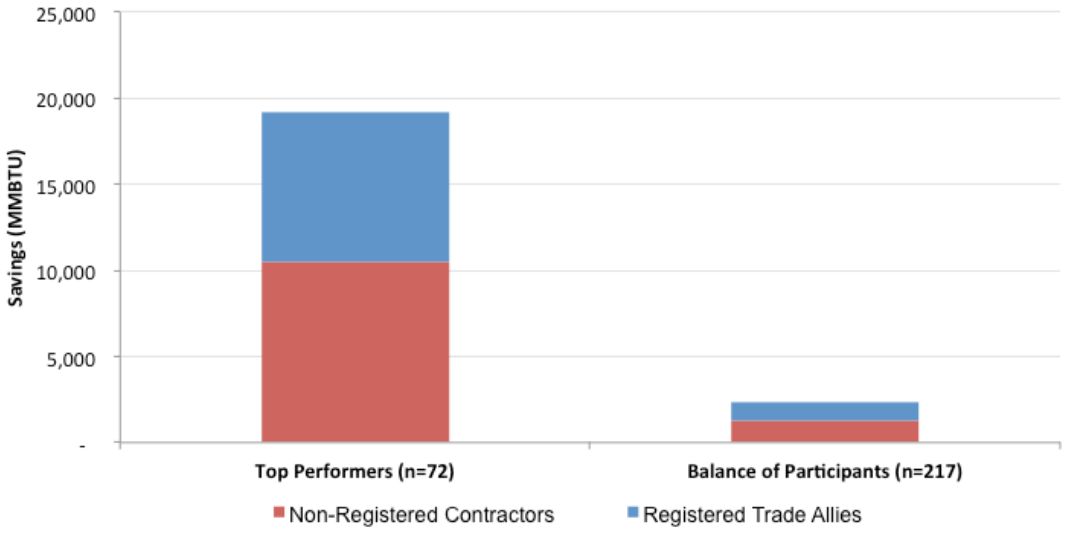
| | Savings (MMBTU) | # of Measures |
|---|---|---|
| **Total** | 24,020 | 2,706 |
| **Registered Trade Allies** | 41% | 17% |
| **Non-Registered Contractors** | 49% | 79% |
| **Top Installers (n=72)** | 80% | 81% |
| **Balance of Installers (n=217)** | 10% | 16% |
| **Not Assigned** | 10% | 3% |

*Table 10. Existing Multifamily Contractor and Trade Ally Averages – Energy Savings, Number of Measures*

| | Average Measure Savings (MMBTU) | Average # of Measures |
|---|---|---|
| **Registered Trade Allies** | 20 | 4 |
| **Non-Registered Contractors** | 6 | 14 |

Of the top performers (n=72), energy savings is brought in equally by contractors and trade allies, as is also the case with the balance of participants (n=217).

*Figure 6. Existing Multifamily Program Participation (80/20 Theory)*



## *Existing Single Family*

For the Existing Single Family program, trade allies bring in 63 percent of total savings from 61 percent of the program's measures (Table 11). The top 14 percent of participating trade allies and contractors bring in 80 percent of the program energy savings, while the remaining 20 percent of the energy savings is from the balance of participants and self-installs.

While trade allies and contractors have nearly equal average measure size, on average, trade allies bring in five times more measures than contractors (Table 12).

*Table 11. Existing Single Family Volume – Energy Savings, Number of Measures*

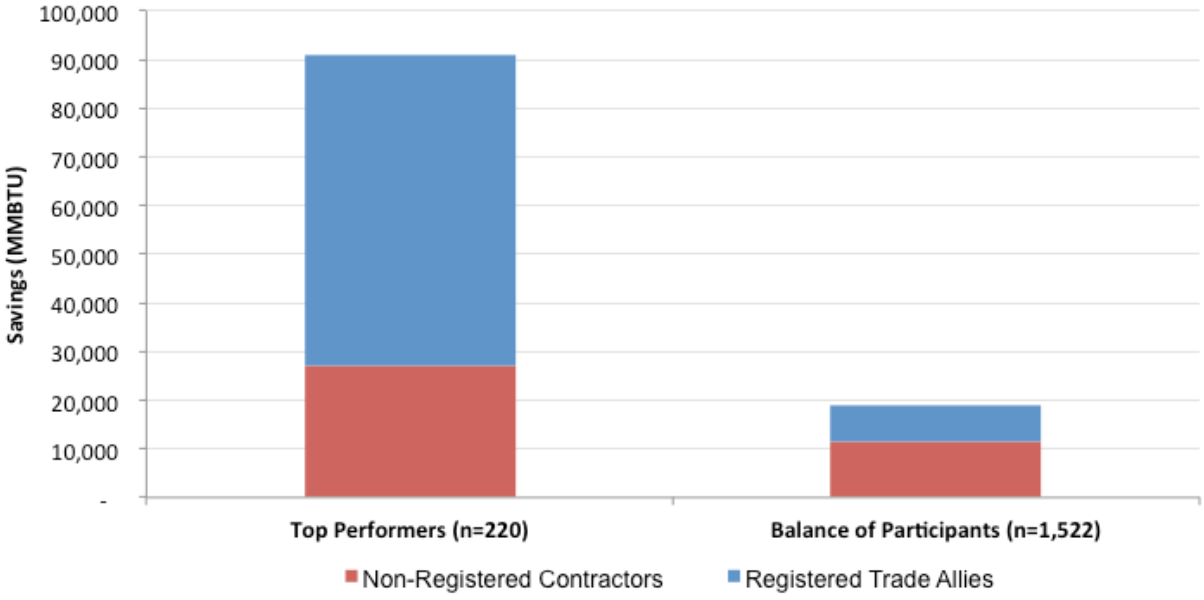
| | Savings (MMBTU) | # of Measures |
|---|---|---|
| **Total** | 113,738 | 27,144 |
| **Registered Trade Allies** | 63% | 61% |
| **Non-Registered Contractors** | 34% | 35% |
| **Top Installers (n=220)** | 80% | 78% |
| **Balance of Installers (n=1,522)** | 17% | 18% |
| **Self-installs** | 3% | 4% |

*Table 12. Existing Single Family Contractor and Trade Ally Averages – Energy Savings, Number of Measures*

| | Average Measure Savings (MMBTU) | Average # of Measures |
|---|---|---|
| **Registered Trade Allies** | 4 | 41 |
| **Non-Registered Contractors** | 4 | 7 |

Of the top installers (n=220), trade allies bring in the majority of energy savings, as seen in Figure 7. Trade allies also dominate energy savings brought in by the balance of program participants with contractors bringing in only a small portion of energy savings.

*Figure 7. Existing Single Family Program Participation (80/20 Theory)*



## *Production Efficiency*

The top 18 percent of participating trade allies and contractors bring in 78 percent of the program energy savings. Contractors, on average, bring in larger measures than trade allies through a smaller number of measures (Table 14). Again, this is due to the fact that the Custom track does not have trade allies, but the Streamlined and Lighting tracks do, and those measures have much lower savings than Custom measures.

*Table 13. Production Efficiency Volume – Energy Savings, Number of Measures*

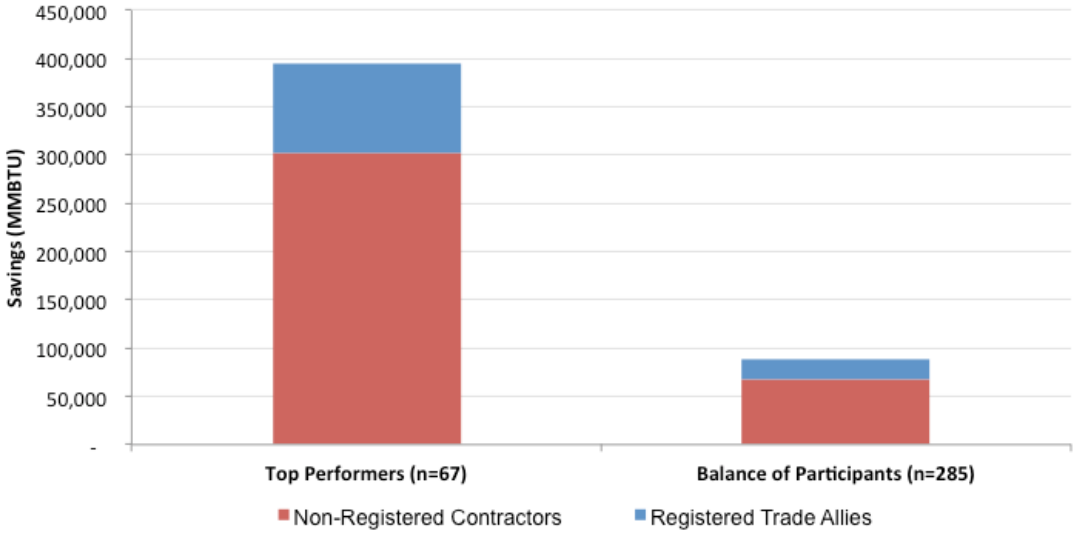
| | Savings (MMBTU) | # of Measures |
|---|---|---|
| **Total** | 493,692 | 2,610 |
| **Registered Trade Allies** | 23% | 54% |
| **Non-Registered Contractors** | 75% | 42% |
| **Top Installers (n=67)** | 78% | 44% |
| **Balance of Installers (n=285)** | 18% | 52% |
| **Not Assigned** | 2% | 4% |

*Table 14. Production Efficiency Contractor and Trade Ally Averages – Energy Savings, Number of Measures*

| | Average Measure Savings (MMBTU) | Average # of Measures |
|---|---|---|
| **Registered Trade Allies** | 79 | 17 |
| **Non-Registered Contractors** | 340 | 4 |

Of the top installers (n=67), contractors bring in the majority of energy savings, as seen in Figure 8. Contractors also dominate energy savings brought in by the balance of program participants (n=285) with trade allies bringing in only a small portion of energy savings.

*Figure 8. Production Efficiency Program Volume by Non-Registered Contractors and Trade Allies*




## 3.3. Energy Trust Staff Interviews

This section summarizes the findings from the interviews with Energy Trust staff. Staff members interviewed included the Customer Service and Trade Ally team staff, Energy Trust Program Managers, and third-party implementer staff.

### Optimal Network Size

Each program team indicated a different preferred size, with some aiming to have as many trade allies enrolled as possible, others satisfied with the current number of trade allies, and some striving to streamline the list. Programs with measures that are installed through mass market channels, such as Existing Buildings, have a desire to impact as much of the market as possible through their trade ally network. When rebated equipment reaches the end of its useful life and needs to be replaced, the program wants to ensure that the contractor contacted by the customer is aware of the program and promotes Energy Trust to the customer. The New Homes program made a similar point that construction of these homes would be occurring with or without program involvement, so it was in the program's interest to ensure all builders are aware of the program. However, this situation does not apply to verifiers registered through the New Homes program, as the program staff and PMC believe there are likely more verifiers registered with the network than there is activity to support them.

The Existing Homes program has many measures that are distributed through mass market channels and would benefit from a broad network of trade allies. However, with the large number of residential weatherization and HVAC firms in the territory, they have a conflicting need to keep their network streamlined so that customers using the trade ally list are only referred to allies who are active with the program and provide quality service.

Focused programs that target fewer buildings and have more specialized trade allies, such as New Buildings do not have a desire for more trade allies. These programs tend to promote discretionary retrofits or efficiency improvements that arguably would not be installed without the trade ally intervention. Therefore, there is not a strong need for market coverage.

Across programs, there was close to uniform agreement that the number of active trade allies is more important than the number of total trade allies. Active trade allies are those engaged in submitting

projects, attending roundtables, staying current on trainings, etc. Trade allies that participate more frequently in the program are responsible for the majority of program savings and require the most resources from Energy Trust in terms of time and management. Inactive trade allies were reported to have little to no impact on program staff resources, with the exception of the Multifamily program that recently removed inactive trade allies from their network. Inactive trade allies do consume the time of Energy Trust's trade ally network staff, who are responsible for annually verifying licenses and insurance levels, regardless of number of projects submitted. The trade ally network staff indicated that making changes to eliminate inactive trade allies may be perceived as a "preferred" contractor list. Additionally, tracking the number of jobs created is one method used by regulators to quantify Energy Trust's economic impact so reducing the number of trade allies could potentially negatively impact performance in this area.

Table 15 below shows the number of trade allies and active trade allies as reported by each program.

*Table 15: Program-Reported Network Size, Activity, Optimal Size Summary*

| Program | Size of Network[a] | Active Trade Allies[b] | Optimal Size Feedback |
|---|---|---|---|
| **Existing Homes** | 556 (79 Home Performance with ENERGY STAR®) | 470 | Requires a robust network to meet the market needs. 80 contractors were recently removed due to lack of activity. |
| **Existing Buildings** | 475 | Not specified | Requires a robust network to meet the market needs. Most vendors submitting restaurant projects are not registered (nor do they need to be), 90% of HVAC contractors submitting projects are registered. |
| **Existing Multifamily** | 86 | 30 | 30 active contractors is reported to be a manageable size for the PMC staff. |
| **New Homes** | Contractors/Builders: 600 | 300 | Requires a robust network of contractors to meet the market needs. |
| | Verifiers: 23 | 15 | 15 active verifiers serve the needs of the market well. |
| **Solar** | Electric: 120 | 36 | 35-40 Trade allies who perform good quality work. |
| | Water Heating: 49 | Not reported | 15-20 Trade allies who perform good quality work. |
| **Small Wind** | 10 | Not reported | Not reported |
| **Lighting** | 229 | 100 | No preference, seeking more trade allies in rural areas. |
| **New Buildings** | 150 | Not specified | 150 adequately serve the needs of the market |
| **Production Efficiency** | 180 | 25 | 30 |

[a] Network size as documented in the program database

[b] Active Trade Allies as reported by program staff

## Trade Ally Benefits

Program staff and PMCs considered the main benefits to trade allies of program participation to be orientation and familiarity with the programs, training, hands-on assistance with project submittals, co-op marketing funds (not available for all programs), and the competitive benefits of differentiating themselves in the market place and associating their company with Energy Trust. For programs that

provide services to non-trade allies as well as trade allies, the main benefits were considered to be assistance on projects and the competitive differentiation.

## Program Delivery

The Energy Trust trade ally network staff was well regarded by all programs. Program staff and PMCs believe that trade ally network staff fill a vital program role and are managing the network effectively. Program staff and PMCs are aware of the potential future addition of a web portal, and are very enthusiastic about the possibilities.

There has been a recent request of the Energy Trust trade ally network staff to increase their staff members. Additional staff were requested to better meet the needs of the programs, most specifically the Existing Homes program, which requires more of the trade ally network staff time than any other program.

Trade ally network staff anticipate the needs of the programs decreasing in future years. Currently, the main activities conducted by the trade ally network staff are insurance and licensing verification and documentation maintenance, cross-program coordination, enrollment management, network improvements, customer complaints, and communications with program staff. It is anticipated by trade ally network staff that future programs maintain their current size or become smaller and require fewer network resources. This is because the amount of energy savings potential achieved is believed to have peaked.

## Trade Ally Recruitment and Engagement

Programs were generally pleased with the number of active trade allies in their program and so did not feel a need to aggressively recruit. Recruitment most frequently occurs when non-trade allies submit applications and are subsequently recruited by the PMC. Trade allies also learn about the programs through customers or at roundtables when they attend through a different program. The only groups that reported active recruitment efforts were the Lighting network and the Existing Buildings program.

There were mixed responses from the programs regarding the value of trade ally roundtables. The Existing Multifamily, Existing Homes, and New Homes programs consider the roundtables to be valuable channels for communicating important program information and receiving trade ally feedback. All other programs preferred to provide information to their trade allies through individual outreach or, in the case of the Existing Buildings program, a separate program-specific roundtable. The New Buildings program feels its trade allies are too specialized to receive much benefit from the Insider newsletter or the roundtables; therefore, the program hosts a variety of engagement activities such as lunch and learns, industry speakers, and educational design events. The Production Efficiency program simply did not think there were frequent enough program announcements to be able to make use of either the roundtables or newsletter. The Lighting program puts out its own newsletter to trade allies. Trade ally network staff felt that these program-specific newsletters or roundtables are redundant, though there was acknowledgement that a tailored newsletter for each program is more effective in reaching trade allies. In all activities though, there was a preference to focus on those that provide value to the highest performing trade allies.

One-on-one support is reported to be the most effective trade ally engagement mechanism. However, it is also the most time consuming. The Existing Homes program has set a goal of a minimum of four direct contacts with a trade ally per year. The New Homes program takes a unique approach to outreach where the vast majority of their program communication occurs with the verifiers, who are more knowledgeable of, and engaged with, the program than the builders. This method, primarily

relying on quarterly calls with its verifiers, results in very positive reactions from both verifiers and builders.

Trainings are another method through which programs engage and support their trade allies. Training on program requirements and processes has been successful at streamlining program participation and improving project documentation. Technical training and sales training were also mentioned, but the favorability of those trainings varied depending on the program. The Production Efficiency program did not believe there was a need for trade ally trainings as their Program Delivery Contractors are actively engaged with trade allies throughout every project.

## Contractor Requirements

Program staff and PMCs reported that contractor requirements were generally well understood by trade allies and were not found to be overly burdensome. One program indicated that the insurance requirements are difficult for small firms to meet, and therefore skew network participation to larger firms. Not all programs consider this a problem though, as strong insurance requirements ensure that trade allies are able to meet their obligations to their customers.

## Trade Ally Referrals and Rating System

### *Referrals*

When a customer seeks a referral from either the PMC or Energy Trust, the programs report that they either refer them to the Energy Trust website or pull a list of three trade allies randomly generated based on the customer's needs. In one instance, the Solar program ran a customer outreach campaign centrally, and then provided these warm leads to trade allies on a rotating basis. This got a great response from both trade allies and customers and a repeat occurrence has since been requested.

### *Trade Ally Star Rating System*

The Existing Homes star rating system is considered a success by program staff and is generally met with approval from the trade allies. The star rating system was developed to provide customers with more information on trade allies. It also rewards trade allies who are active and engaged with the program. The most common critique is that project quality is not factored in sufficiently. Additionally, trade allies perceive that the rating does not account for regional differences that affect a trade ally's volume of work[1]. For instance, a trade ally in Portland is likely to have more projects and a higher star rating than a trade ally in eastern Oregon, even though there are fewer projects to be had in eastern Oregon.

## Incentives

All programs allow non-trade ally projects to receive incentives, except for the New Homes and Solar programs, and do not believe it would be advantageous to limit incentives to registered trade allies. For example, the Existing Buildings program indicated that almost all activity in commercial kitchens is a result of commercial kitchen equipment suppliers and distributors. These entities do not have much to gain from becoming a registered trade ally, since they have expertise in the subject matter and a pre-

[1] Energy Trust has lower project volume requirements for assigning a star rating to their rural trade allies.

existing customer base. The Lighting program indicated it would likely lose a large number of firms if required to only use trade allies as the largest lighting firms do not generally enroll as trade allies.

A number of programs allow customers to sign the incentive over directly to trade allies, presumably to reduce the customer's out-of-pocket cost by the incentive amount. The trade ally network staff do not see any issues with this practice; however, there is a concern that customers will not realize they are receiving an incentive, and/or be unaware that incentive is coming from Energy Trust. Furthermore, customers may not receive their entire incentive, as the trade ally may not reduce their project cost by the full amount of the incentive.

## Quality Control and Management Practices

In order to ensure project quality, all programs implement a number of quality control practices. The most frequently cited measure is to review all project submittals from trade allies and return the project documentation if clarifications or additions are needed. In addition to this initial review, PMCs conduct verification inspections on completed projects. Projects are randomly selected for inspections, except in the case of contractors or trade allies that are new to the network or have failed inspections. Most indicated that providing quality management on both the front and back end of the project works well. The only program that mentioned any imminent changes to their process is the Existing Homes program, which is attempting to identify installation and application errors earlier in the process rather than having to correct mistakes later on.

More customer issues and complaints are believed to come from the residential programs. This is likely a result of the high volume of projects and rapid turnover of projects in these programs. Additionally, most of the quality control issues come from self-installations in the Existing Homes program.

## Network Diversity

All of the program teams interviewed expressed a desire to increase the number of active trade allies serving rural areas. In contrast, none of the programs indicated they lacked coverage in urban areas and were generally pleased with their overall number of trade allies. The reason for the lack of trade allies in rural areas is likely that there are fewer projects and contractors in the rural areas. Most programs reported this did not affect their ability to meet their overall statewide goals. Energy Trust has recently employed additional staff members in eastern and southern Oregon to do outreach in an attempt to increase the number of projects located in rural portions of their service territory. Energy Trust places great value around serving all areas of the territory well, even if there is less potential for savings in rural areas.

The Solar program reported issues recruiting trade allies in rural areas, specifically eastern Oregon because the incentives for solar are lower in that utility territory than in the Portland metro area. As a result, there is a longer project payback resulting in less customer demand and fewer contractors serving that market. Additionally, it is difficult in some rural areas to get a contractor out to bid on a job because of the geographic restrictions, and the majority of work and focus on Solar is in the Portland metro area.

Energy Trust trade ally network staff believe that there is a need for special provisions to be created for rural contractors in order to increase the amount of activity in those areas. Currently there is an imbalance in the number of rural versus urban trade allies resulting in rural areas receiving a disproportionately small amount of services and incentives. The Energy Trust star rating system makes allowances for lower activity levels in rural areas so those trade allies are not penalized with a lower rating.

Increasing representation by woman-owned, minority-owned, and small businesses is a priority for Energy Trust management and is part of the 2015-2019 strategic plan. Supplier diversity status is a field on the enrollment application. Currently, only the Existing Buildings and New Buildings program report having made specific efforts to recruit trade allies from those groups. Program staff attend several events a year targeting these business groups. All other programs report that their programs are open to all participants, but they've made no specific outreach attempts. Most indicate they have participation from all groups at varying levels. The Lighting program recognizes that increasing the number of minority-owned businesses will serve to increase the number of projects coming from those minority communities.

### Customer Self-Installations

Currently all programs allow customer self-installations (self-installs) with the exception of the Solar, New Buildings, and New Homes programs. The Multifamily program has had some instances in the past where property managers were unable to properly install equipment. They now attempt to proactively work with new self-installers on proper installation technique and provide them with installation specifications for all equipment. Larger, more sophisticated customers, in programs such as the Production Efficiency program, have facilities engineers that often do the installations. The Production Efficiency and Lighting programs did not report any issues or concerns with self-installs.

The Existing Homes program has the highest number of self-installs and related issues around quality assurance[1]. The program staff reported several reasons for issues with self-installs; the top two issues were missing or incomplete information on the application and measures installed incorrectly or not meeting program specifications. The majority of self-installs are already installed before the application is submitted (applicants have 90 days after installation to submit paperwork); quality issues arise when the homeowner was not aware of project specifications before conducting the work. Both the Energy Trust program staff and PMC staff spend a lot of time on self-install issues (application and quality control). The PMC staff reported that self-installs bring in a good amount of energy savings, and therefore does not want to see them be excluded from the program. PMC staff have made a concerted effort to engage with the customer as soon as the application is submitted to educate them on the program requirements and specifications, in an effort to reduce installation quality issues.

## 3.4. Other Network Interviews

Other networks vary on their management strategies and trade ally network requirements based on the types of programs they serve and the resources and circumstances they are working within.

### Basic Trade Ally Network Information

Table 16 provides a breakdown of the general network criteria and enrollment procedures for the 24 networks that TRC interviewed.

[1] Within the Existing Homes program, only ceiling and floor insulation and electric water heater installations are eligible for self-installations.

*Table 16: Basic Network Characteristics*

| Network Characteristic | Number of Networks[a] (out of 24 total) |
|---|---|
| Registration required to receive incentives | 11 |
| ***Application process*** | |
| Single application | 20[b] |
| Apply through program | 3 |
| Require licenses, certifications, and insurance | 18 |

[a] One program did not have a network, and therefore is not represented in this table

[b] Three of these networks only serve one program, so cannot have the option to apply by program

## Program Coverage by Network

Networks that serve only single-family or multifamily sectors typically cover one to two programs (a custom and/or a prescriptive program), while the networks serving commercial and industrial sectors have greater variance in the number and types of programs covered, but tend to be new construction, prescriptive, direct installs, and custom programs. The number of programs that the network serves depends on how each implementer structures the rebate programs. Some house all rebate offerings under prescriptive programs and custom whole building performance programs, while others instead have separate programs for each technology or energy efficiency measure. The only network that distinctly stands out from this trend is one that covers multiple states and has over 12 programs in total. Overall, networks cover similar types of energy efficiency measures as one another, but may appear to cover more programs due to the distinction in where and how rebate offerings appear. For example, programs may list rebates as distinct offerings or program tracks for each installation, such as weatherization, HVAC, and lighting incentives, while other utilities or incentive implementers consider all of these rebates under a single prescriptive program track.

Additionally, trade allies in the network typically operate among the different programs based on services offered or technologies covered. The only instance where this is not observed is when a "closed network" exists, which is when a program has specific enrollment procedures and criteria, such as an open bidding process, for contractors to operate in the program. These closed network programs are typically for one specific offering, such as small business or direct installation programs, and do not allow for other registered trade allies or non-registered trade allies to participate.

## Enrollment Criteria

The majority of networks have a single application where potential trade allies identify services offered or desired programs to serve, and they must also provide proof of licenses, certifications, and insurance. In addition, a few networks also require references, credit reports, and good standing with the Better Business Bureau. Program administrators report that centralizing the application process allows for ease and streamlining of registration, which then equates to less administrative work and less confusion for trade allies. Most networks then have subsets of requirements to participate in specific programs, such as certifications and trainings that demonstrate their ability to perform work in the selected area. One

network used to have trade allies register by program, but has since moved to one application with additional program-specific requirements. The single application streamlines the enrollment process and establishes one outlet for trade allies to join the network and participate in various programs.

Only three networks require that trade allies sign up for individual programs or market sectors, and none indicate that it is an administrative burden. One of these networks has just recently launched and plans to reevaluate this process after gaining more experience. The other two networks have distinctly different programs and require different licenses and certifications to perform work in their programs.

Another enrollment route that a few program managers have implemented is a closed network. As described above, closed networks have more stringent enrollment criteria, such as BPI certification, and, sometimes, trade allies may only gain entrance through an open bid process. This is more prevalent for programs where the program implementer wants to ensure that only a select group of highly qualified trade allies are performing the work. These programs have a competitive bid process for contractors or implementers to enter the network through proven experience and qualification to perform the work. Once inside the network, only the trade allies within the network can perform work for the given program or installation. No utilities strictly use closed networks, but instead, have them for direct installation or small business programs. This allows for more lenient enrollment for the majority of programs, but selective enrollment for closed network programs.

Eight of the networks do not require licenses or certifications but instead inform customers that they should perform due diligence when selecting a contractor. These networks have disclaimers on their web listings that the program does not endorse or directly support the trade allies listed. Two of these networks do require references or proof of work experience because they find this to be more telling of a quality trade ally than certifications. This cuts down on administrative work to enroll and maintain trade allies. Although trade allies do not need to show proof of licenses and certifications to enter these networks, many networks will still deal with quality issues in the field and may eliminate trade allies for consistently poor work.

## *Incentive Eligibility*

There is no clear trend among all programs to require a registered trade ally in order to receive incentives, but it is more prevalent among existing homes programs and less prevalent for commercial and industrial programs. Eleven out of 24 program administrators require a registered trade ally for all of their programs; six of these are existing homes programs. The main reasons for requiring the use of registered trade allies is to ensure that the contractors in the field have updated program information and are trained on program requirements as well as software tools, which can be complicated and frequently evolving depending on the program. There are a few instances where program administrators select specific programs that require registered trade allies, but leave all the other programs open to any contractor. One program administrator requires the use of a registered trade ally for all programs except for ductless heat pump installations. They allow for this exception because they are trying to promote uptake of the technology; however, they offer lower incentives to non-registered trade allies and require 100 percent quality assurance inspection.

Ten program administrators do not require the use of a registered trade ally for any programs and report that they do not want to deter any customers or projects that wish to use their own contractors. This can be common for commercial buildings which tend to have dedicated maintenance staff or engineers. Additionally, programs do not want customers to place blame on the program for poor quality work from a listed trade ally. Although programs do not want to miss out on any projects because they require registered trade allies, four did acknowledge that registered trade allies offer benefits in terms of quality of work, lower draw on staff resources, and the opportunity of recurring

project participation. One program administrator which serves the commercial sector is transitioning to requiring registered trade allies for all programs because, in their experience, registered trade allies produce better quality applications and projects. (This particular program also uses a software tool for applications and trains registered trade allies on the tool.) There are tradeoffs for both requiring and not requiring the use of registered trade allies, and program administrators do not agree that one has more benefit than the other.

## *Network Size*

Several factors drive network sizes and influence what an "optimal" size would be; these factors include both program characteristics and program management strategies. The program characteristics that influence network size include the number of programs or technologies covered, the size and diversity of the territory served, the maturity of the network, motivation for retrofit, trade ally participation, and program funding. The following table identifies how network and program factors can affect the desirable size of a trade ally network.

*Table 17. Factors Influencing Preferable Trade Ally Network Size*

| Factors | Smaller Network Size | Larger Network Size |
|---|---|---|
| Number of technologies covered | One to a few | Several |
| Number of market sectors covered (residential, multifamily, commercial) | One | Several (more than one) |
| Program territory (main area of activity) | Central hub (e.g. multifamily in dense urban areas) | Dispersed throughout utility/program territory |
| Maturity of program/network | Newer | Mature |
| Customer target | Optional/niche installations | Replace on burnout |
| Proportion of active trade allies | Large | Small |
| Program Funding | Limited (small) | Ample (large) |

The following points are criteria and tradeoffs that programs encounter when determining an optimal size:

- Ensuring the network is diverse and large enough to provide service to all of the customer types and geographic locations;
- Determining the number of truly active trade allies that will bring in project volume:
  - Smaller numbers of active trade allies might result in needing more total trade allies;
- Determining target demographics, such as customers who replace on burnout (want large network that will promote efficient appliances) versus those who seek optional energy efficiency measures (can have smaller network to cover this market); and

- Level of program funding which influences the number of rebates and the level of incentives that can be provided; more funding can lead to more projects, which might result in more trade allies in the network:
    - Having adequate staff to manage the project pipeline if project activity were to increase.

For this reason, residential and multifamily networks or networks only serving a few technologies tend to be smaller, while commercial and industrial networks or those that cover a large territory tend to be bigger.

Additionally, there are program management strategies that drive network size and determine an "optimal" size. These include outreach strategies, customer interaction preferences, participation requirements and enforcement, and desired level of quality control. Some networks are comfortable having the trade allies be the voices and representatives of the program in the market, while others want more quality assurance and knowledge of the trade allies performing work in the field, as well as direct interaction with customers. The following are the two main tradeoffs identified between a large and small network:

- Smaller networks allow for better connection with trade allies and customers, as well as more assurance of maintaining high quality and knowledgeable trade allies that are aware of program updates; and
- Larger networks have the opportunity to capture more projects and have more leverage on the market.

The majority of residential (existing homes and multifamily) networks are satisfied with their current size or would not mind decreasing, while those serving commercial and industrial programs or cover all types of programs are interested in increasing their size. The networks that are satisfied with their current size meet the above criteria and have decided which size (large or small) benefits their programs and fits in with their program strategy. They are able to provide service to all of their territory, meet the forecast goals with the current network, and manage the project pipeline with the currently available staff. Some also voice that they would like to focus more on increasing activity of their current trade allies rather than bring in new ones. Several networks mention that onboarding and initial training of new trade allies requires a lot of staff resources, while maintaining the network is less of a burden. The program managers who report that maintaining the network is not a large draw on administrative resources note that many of their processes are automated by their tracking software or that they do not perform routine checkups on trade allies. The resources provided, such as newsletters, training and application assistance would still be conducted even if the network size was reduced. The networks that would like to decrease their size mention that the smaller size would condense the network to only those who are truly active without jeopardizing the ability of the program to meet savings goals and provide coverage to all customers. Although, as explained above, it is reported that reducing network size would not substantially reduce pressure on staff resources. One manager in particular notes that trade ally lists are only as good as the trade allies on them. This reduction in network size would be seen as more of a customer service to provide a more trimmed list of trade allies for customer selection rather than a process that would relieve administrative burden. However, one program did find that removing the trade ally network provided significant relief on program administrators. This specific example is described in detail in the Special Case section below.

The networks that would like to increase their size typically cover more programs and technology offerings and, therefore, may require a diverse set of trade allies. One of these networks reports still being in development and has a target size, in terms of number of registered trade allies, they are striving to reach in order to comfortably serve the programs. These networks want greater promotion of their programs in the market and find that the benefits of a larger network serve to meet their program

goals. They also may have identified gaps in service coverage, both in geography or technology. A few also mention that trade allies sometimes leave the program or reduce activity, and they are hoping to enroll a few very active trade allies as some of their current trade allies reduce participation. An "optimal" size is different for each program, but can be assessed based on meeting certain criteria and deciding which of the above tradeoffs will provide the most benefit to their program.

In addition to these general factors that can influence network size, one program periodically offers special promotional incentives for specific types of technologies, which has the effect of drawing in trade allies that work with these technologies and can serve the program. The promotional incentives are run when the utility anticipates that it will not meet program savings goals. This has the effect of increasing the network size and targeting a specific set of trade allies.

### *Participation Requirements to Maintain Network Status*

Other networks implement participation requirements to ensure that trade allies are active and knowledgeable about the programs in order to maintain their web listing; however, these requirements are not always strictly enforced and the penalties are rarely harsh. Fourteen of the 24 networks confirm that they have participation requirements to maintain status in the network (four did not provide a response). Participation requirements are not typically very rigorous or burdensome, but instead serve the purpose of keeping a trade ally in practice and up to date with program requirements and processes, which can frequently change. Most programs that do have participation requirements only require one to four projects per year. One existing homes network previously had a requirement for 12 projects per year, but found that this was sometimes difficult for all trade allies to meet, so they reduced the required number of projects. A few have requirements that vary by program, while most have uniform requirements across all programs.

However, only half of the networks that have participation requirements report that they consistently remove trade allies on an annual basis for underperforming. The remaining networks will either work with the trade ally to help boost project activity and address barriers or will put the trade ally on suspension. Suspension typically consists of temporary removal from the web listing or an identifier next to their web listing. The suspension encourages trade allies to submit projects in order to get their name back on the web listing. One network even notes that they do not have the program resources to actively enforce the participation requirements. Other networks mention that re-instating, training, and on-boarding trade allies can require substantial program resources, but maintaining the network does not. It is likely that this is the reason networks are not strict on eliminating trade allies for underperforming. On average, the networks with participation requirements are often smaller, even though they are not always strictly enforced nor do they typically result in removal of trade allies.

The benefits of having participation requirements are to ensure that contractors are knowledgeable of program requirements and will be good representatives of the program. These networks do not report having significantly higher percentages of active trade allies than the networks without participation requirements, and no program administrator mentioned that participation requirements are meant to stimulate program activity. They do note that having trade allies participate annually facilitates more frequent communication and fosters a stronger connection between trade allies, customers, and the program. Half of these networks also limit program participation to registered trade allies, which further ensures that the contractors in the field are well equipped to work within the program.

Two of the networks that have participation requirements put their trade allies into different membership categories, or levels, based on the amount of jobs submitted. There is an established threshold number of projects per year to maintain status in each level. The higher level trade allies receive additional resources and network support, such as referrals, co-branding opportunities, and

opportunity for contractor-paid incentives. One of these networks even has an adjusted (lower) number of required projects for trade allies operating in rural areas. This way, these trade allies are not excluded from the higher level resources and support because of less access to projects than trade allies in large urban areas.

Two networks that do not currently have participation requirements expressed interest in implementing these or similar requirements to encourage trade ally activity. One is a new network and is waiting to assess the success of the trade ally network before implementing changes. The second network identifies the dilemma that they spend program budget to train trade allies, and it would not be cost-effective to remove trade allies after training them, but they are also not receiving any benefit from inactive trade allies. This highlights the important point that program resources are used to on-board and train trade allies, but, as stated by one program administrator, only one out of ten new trade allies may turn out to be highly active.

The seven networks surveyed that do not have participation requirements either require the use of registered trade allies to receive incentives or actively engage and attempt to enroll the contractor performing the work. These networks do not feel the need to require participation because they have consistent activity from a set of trade allies. One network that does not have participation requirements will remove trade allies who have not participated within a year or engaged in any form of communication to indicate their continued interest and awareness of the program. This strategy can preserve staff resource time on tracking participation.

### *Policies on Expired Documents*

The programs that conduct ongoing 'checks' of their registered trade allies' licenses and certifications and send notifications for upcoming expirations typically require a third party implementer or a larger staff managing the network compared to the staff for networks that do not. Networks that have larger staffing or a third party implementer have the resources to perform checks on trade allies' licenses and certification expirations; whereas, networks with limited staff put this as a lower priority than other tasks such as monitoring program participation and processing applications. One program administrator notes that, although their third party implementer checks for expirations, the process is not as diligent as the initial registration process or the process when a new program is introduced. Similar to networks that do not require certifications or licenses during the initial enrollment process, most networks partially rely on the integrity of the trade allies to maintain certifications and licenses, and they encourage customers to perform due diligence before agreeing to work with a trade ally. Several program administrators report that the ongoing maintenance of certifications is not burdensome because their program database generates automatic reports or reminders of expiring certifications, or they have dedicated staff or third party implementers managing the network. However, one program administrator has found this particular task to be the most burdensome and time consuming, and has recently eliminated the trade ally network for one of their programs. The circumstances surrounding this network and program will be further discussed in a separate section below.

The networks that do not check on trade ally certifications or licenses do not have the staff resources for this task and may not have database software that generates automatic notifications. One of these networks is in the process of launching a modified trade ally network and will have trade allies self-report annually on their participation, which the network publicly displays, and requalify for network membership with their updated licenses and certifications. Overall, tracking qualifications and documents does not seem to not be a heavy burden for networks that have sophisticated database tracking software or third party implementers.

## *Network Support*

Most networks offer typical support and resources for trade allies, such as newsletters, emails, and meetings to provide program updates, but some networks offer extensive support for their trade allies, which may be linked to program resources and their perspective of trade allies' role with the program. For the most part, registered trade allies are supplied with support and resources including assistance with applications, email updates, newsletters, program advertising, one-on-one or group program trainings, and monthly or annual meetings. One of the networks that places registered trade allies into separate levels based on participation and those that have closed network programs have some resources that are only accessible to the higher level trade allies or those included in the closed networks. These include referrals, cooperative marketing and business development funds, and co-branding. In addition to these standard resources, Table 18 provides examples of additional support and resources that some networks offer for registered trade allies.

*Table 18: Additional Network Support*

| Type of network support | Number of networks that provide this support |
|---|---|
| Personal site visits | 5 |
| Personal site visits to potential customer | 1 |
| Badges to validate program relationship | 1 |
| Modeling software funding (only for Home Performance specialists) | 1 |
| Cooperative marketing and business development funds[a] | 3 |
| Sub- or co-branding[a] | 3 |
| A facilitated financial agreement with financial institutions | 1 |
| Trade ally specific website[b] | 1 |
| Individual program/network contact for all TAs and non-TAs | 2 |
| Participation in a trade ally advisory board | 1 |
| Sales and marketing trainings | 12 |
| Contractor annual awards or bonuses | 2 |

[a] One network limits this to higher level trade allies based on participation, and one network limits this to only trade allies within the closed network.

[b] Only accessible to registered trade allies

The networks that provide these resources have established close working relationships with trade allies and view them as assets for the program. Non-registered trade allies usually receive newsletters, but are not commonly invited to trade ally meetings or trainings.

One network on the commercial side reports being very active in their outreach efforts to its registered trade allies. This network, as touched upon above in the Recruitment section, designates individual outreach contacts from the third party implementer to registered and non-registered trade allies within a geographic region. These outreach contacts provide several additional resources that are listed above. They are available for site visits with a potential customer to provide credibility to the trade ally, will make presentations at a trade shows or open houses, and will provide assistance on applications. In addition, the network posts recorded trainings on their Trade Ally Portal website, where trade allies can also access up-to-date information and find answers to frequently asked questions. The program administrator has found this portal to be a huge asset to trade allies and reports that it has taken pressure off of the program staff. This network also provides a personal contact to whom non-registered trade allies can reach out for assistance in addition to the typical newsletters and application assistance that most programs offer. Other networks also do personal visits for residential and commercial trade allies. This typically consists of meeting the trade ally at their place of business to keep tabs on contractors and promote participation rather than meeting at a project site to promote the trade ally to a customer.

An interesting resource that only one network mentions is the facilitation of financial agreements with financial institutions, such as banks. This network has agreements with financial institutions so that a registered trade ally can offer customers lower interest rates on loans for energy efficiency projects through the programs. This is a unique resource and the program manager did not elaborate on how often trade allies take advantage of these financial agreements.

Overall, trade allies receive varying levels of support and resources, which may be linked to the type of relationship a program has with its trade allies. The networks offering more support tend to have third party implementers, larger staff, or a smaller network, although this is not always the case. They also build their program around the knowledge that trade allies are bringing in the projects and more engaged trade allies tend to be more active. As one program administrator notes, a program will gain the most benefit from its trade ally network when it has an open and productive relationship with the trade allies and views them as partners who can leverage the market.

## *Network Diversity*

The large majority of networks do not track the diversity or presence of disadvantaged business enterprises in their networks nor do they implement specific outreach plans to bring in diverse trade allies, except for specific technologies. Only two networks mention that they collect information on their applications about disadvantaged business enterprises, such as woman-owned, small businesses or minority-owned, and only two networks report that they collect the number of employees or sales representatives and service vehicles to estimate the size of firms. A few networks voice that they want to make sure that the programs are inclusive of all firm sizes, although, they do not provide any details on how this is achieved. Additionally, a commercial program administrator[1] acknowledges that its program structure does not cater well to small business trade allies, and is beginning a pilot program that identifies disadvantaged customers for energy efficiency measures and will work to connect minority or small business trade allies with these projects.

In terms of trade allies serving rural versus urban areas, several networks report that coverage of rural areas is limited and they perform focused recruitment in these areas, as described above in the

[1] Efficiency Maine

recruitment section. Additionally, a few programs are more likely to let a trade ally into the network if they serve a unique technology or service niche, or networks run periodic campaigns or have special incentives to attract more trade allies for a specific technology. Other trade ally networks report that they do not have any service gaps and sufficiently cover their territory with the current network. For networks serving commercial, industrial and multifamily buildings, most program activity occurs in specific hubs within the territory, so they tend to have a large concentration of trade allies in these areas with more project opportunities rather than dispersed into rural or remote regions where there are fewer project opportunities.

## Referrals

Referral systems are very rare among trade ally networks. Only one network does direct referrals for residential and commercial programs, while the rest maintain a web listing with various features. The program that does provide referrals has two levels of trade allies, based on participation, and only provides referrals for trade allies who are in the higher level. An interested customer inputs their information online at the program website or speaks to a program staff, then the customer is provided two trade allies to choose from and can receive an additional two referrals if they wish. There is no network web listing, so unless a customer is aware of a contractor within the network, they must go through the referral service to find a registered trade ally. The referral program creates a positive feedback loop because it provides more referrals to trade allies who are active in the higher level, which promotes more activity. The program administrators believe that this drives trade allies to complete more projects in order to receive more project leads. Another network has a mechanism in place to provide customers with a randomized list of five to ten suggested trade allies after the program's third party implementer performs an optional home survey and assessment. However, the customer does not have to select a trade ally from the suggested list. The remaining networks do not allow for referrals because they either want the customers to choose their own contractor with whom they are comfortable, or are publicly regulated utilities and do not want to risk showing preference for certain trade allies.

The majority of networks maintain a web listing that features some trade ally information, but none have a designated rating system in place. The majority of networks have trade allies listed randomly based on geographic location or services offered, and one will only display 10 trade allies at a time. Some networks believe that a rating system can be unfair or a double-edged sword. Public utility programs mention that they avoid rating systems because, if not done strategically and comprehensively, they could entangle them in issues regarding favoritism. However, seven networks display the number of projects completed or incentives paid for a trade ally within a given period (quarterly or annually), one network shows a "badge" to identify active trade allies, and one has the top 10 "rebate-producing" trade allies listed on the top. NJ Clean Energy's Pay for Performance program for small business and multifamily lists the number of rebates paid and the areas of specialty, including both building types as well as technologies. These web listing features are available in a downloadable spreadsheet from NJ Clean Energy's website. Those that do show the number of jobs completed or incentives paid have found that it serves as motivation to trade allies who want to compare themselves to other contractors, while trade allies who do not have high participation numbers have not provided feedback and may not be relying on the web listing for project leads. One network worries that there will be a "gap" issue where a set of trade allies are capturing all of the projects because customers will select trade allies with program experience. So far, this has not proven to be a problem because most project leads come in through trade allies, so it is not likely that a large portion of customers are utilizing the web listings.

A few programs have plans to launch, or are currently launching, features for their web listing that distinguish trade allies based on more qualities than job completion. One is launching a "contractor portfolio" where trade allies input their own qualifications and highlight their strengths, rather than trying to compare them based on one criterion. The others have recently implemented new software that tracks various trade ally activities, but it is unclear how much information the network will make public. Two networks are planning to implement rating systems, and one network that has no current plans to implement a rating system does mention that there could be benefits to displaying customer satisfaction and giving demerits when a trade ally has needed additional inspection visits. Overall, very few networks plan to implement a rating system, and several do not see the benefit that it would provide the programs.

All of the programs report that the majority of their projects come in through trade allies, and one actually focuses all of its marketing efforts on contractors and trade allies rather than attempting to draw in customers. This network takes this strategy because trade allies have a higher likelihood of bringing in recurring projects in comparison to customers. The program administrators note that it is very rare for a customer to call with interest in the program.

## Recruitment

Several networks are actively recruiting to either increase their network size or gain specific trade allies in underserved areas, while the networks that are satisfied with their current size rely on organic growth or are not enrolling new trade allies. Active recruiting methods include advertisements on television, radio, Hulu, Pandora, Google, and other media outlets; registration drives; and tabling or presenting at community events (e.g. industry association meetings, Chamber of Commerce, county fairs, and home shows). Some networks are only recruiting trade allies in remote or underserved areas or to fill a certain technology niche. They do this through focused marketing and outreach efforts in underserved areas or by having promotional incentives for specific trade allies for a technology gap. One program does make concerted efforts to annually map trade ally coverage within their network based on projects submitted. If there are areas that are underserved, the program's third party implementer conducts focused outreach in these areas. The networks that are actively recruiting are either newer networks, those that have just undergone a major network modification, or those that use a strategy of widespread awareness to promote program participation and gain additional projects.

One network has a unique strategy for trade ally management and recruiting. This commercial network assigns an "outreach contact" through the third party implementer to manage all trade allies in a designated region within the program territory, as well as make contact with all non-registered trade allies working on program projects. This outreach coordinator offers some support to non-registered trade allies and explains the additional benefits that the network provides to registered trade allies. This network also provides above-average support and resources for trade allies such as site visits and customer visits. This network sets weekly enrollment goals for new trade allies because they recognize that three-fourths of projects come from trade allies and the participation of their registered trade allies can fluctuate. This strategy has succeeded at converting about one-third of contractors into registered trade allies, but the program administrator notes that it is difficult to conduct outreach in more remote areas of their territory because of the travel time required. This network, as well as the others conducting active recruitment, express that they lay out the benefits for contractors, but ultimately want the contractor to make their own decision to join the network because if a trade ally is interested and engaged, they are more likely to participate.

Although a few networks suggest that they would not mind reducing their size, not many are actively eliminating trade allies from the network. Less than a quarter of the networks indicate that they have eliminated trade allies based on conduct, quality of work, or failure to meet participation requirements,

and these eliminations have been on a small scale. All of these networks mention that it is very rare to remove a trade ally from the network. Sometimes, networks suspend trade allies from the web listing for not meeting participation requirements or not updating certifications, but they are not removed from the network. Instead, they are put on probation or suspension and can reapply for the following year or once the probation period has ended. As multiple program administrators noted, it does not require a lot of staff resources to keep trade allies in the network, so they do not focus time on eliminating trade allies.

## Trade Ally Activity

Program administrators report that between 10 and 30 percent of registered trade allies are truly "active" (according to their definition) and produce the majority of program work. The exception to this is "closed network" programs because the trade allies in these networks are the only ones who can participate and they are usually assigned projects. Besides these "closed networks", the networks that report a higher percentage of "active" trade allies tend to be smaller networks. Additionally, these "active" trade allies tend to have a few common characteristics, such as integrating energy efficiency measures into their business model, self-advertising, and being comfortable with all the program offerings and requirements; trade allies may be able to learn or enhance some of these characteristics with additional network support.

Trade allies that have a strong sales team and are proficient at selling the value of energy efficiency tend to be more active in the programs. These trade allies integrate program offerings and energy efficiency into their business models, and they are both familiar with and in support of energy efficiency. Trade allies that exhibit this characteristic tend to have active and focused owners who use the program to leverage customers' interest in energy efficiency projects. Additionally, these trade allies might have a strong sales team and are able to do self-advertising. Some program administrators attribute this ability to economies of scale, and observe that the larger firms have more resources to advertise as well as handle the project load. Although the main driver of this is a trade ally's attitude and buy-in of energy efficiency, providing training on how to sell the value of energy efficiency, providing co-branding or cooperative marketing and business development funds, or providing a program contact to visit home shows or potential customers can help trade allies promote energy efficiency projects.

Lastly, trade allies that have been involved in the network and participating in the programs for a longer period are more familiar with program offerings and can take full advantage of resources, such as instant incentives and achieving additional incentive levels for meeting specific criteria. There is not too much that a program can do to enhance familiarity with a program and network offerings besides continuing to provide information and outreach to trade allies. It does appear that smaller networks are able to achieve more interaction with trade allies and one-on-one communication, which can enhance trade allies' engagement and knowledge of the program.

Although the qualities and interest of the trade allies plays a large part in activity, two program administrators also mention that the state of the current business market and the incentive payments are also large drivers of activity. For one particular commercial and multi-family network, the state is experiencing a unique program year where government agencies can participate in energy efficient upgrades using a funding strategy that minimizes spending out of their currently available resources and draws on the monetary value of the savings that will result from these improvements. This produces an increase in certain types of projects and provides contractors who work on these types of buildings more opportunities for projects.

## Incentives

Incentive payment procedures and policies vary by program; programs that have contractor-paid incentives or allow customers to assign incentives to contractors are highly pleased with the benefits and results that this strategy provides to the program. Thirteen networks have contractor-paid incentives (also called instant incentives) as the default for at least one of their program offerings. These programs typically require the use of a registered trade ally and are direct install programs, market transformation programs, or are for specific technologies, such as HVAC or weatherization programs. Eight other programs allow for customers to assign incentives to contractors, commonly through an incentive redirection form. Only one network requires that the contractor be a registered trade ally. This network has two membership levels and requires that trade allies in the higher level offer instant incentives, while it is optional for trade allies in the lower level. The benefits of offering instant incentives are that trade allies can use this as a selling point for energy efficiency measures because they can offer reduced first costs to customers. Additionally, trade allies can receive quicker payment than when they work through a payment plan with customers. This also benefits program administration and can speed up the delivery process because contractors will typically assist customers on the incentive application and ensure that it is complete and accurate. One program which recently implemented these instant incentives thinks that it is the single best change for the program thus far because of the overwhelming positive response from the trade allies who are able to sell customers on program offerings with the reduced upfront costs.

Although popular with some programs and networks, most rarely use this option for projects that involve large incentive payments such as custom whole building projects because contractors do not want to wait to receive these large incentive payments to cover the cost of their work. Program administrators note that it is more common for prescriptive single measure rebates. Additionally, a couple programs do not allow for any contractor-paid or assigned incentives because they are worried about contractors who may overcharge customers, and then also gain the incentive payment. However, none of the programs that do allow for these types of incentive payments raised this concern. Based on the responses from program administrators that do allow customers to assign incentives or have contractor-paid incentives, it might be the most beneficial to allow it for registered trade allies so that documentation and payments can be more closely monitored.

## Self-Installations

Most programs allow self-installations and do not report an increased burden on program staff due to the rarity in residential programs and the level of building and technology knowledge present amongst commercial maintenance or engineering staff. Self-installations account for up to a quarter of project activity per year in some commercial and multifamily programs. Even programs in the commercial and multifamily sector that require registered trade allies for participation will also allow self-installations because several commercial and multifamily buildings have a dedicated maintenance staff that can perform many of the installations. This is also a reason that many commercial and multifamily programs do not require the use of a registered trade ally for program participation. Program administrators note that it is more common for self-installations to occur for prescriptive measures rather than custom projects due to the complexity that can be involved in custom whole building projects. Some programs on the commercial side require the use of a licensed engineer to perform self-installations, some offer lower incentives, and some require 100 percent quality assurance inspection. Most program administrators report that self-installation applications do not result in greater burden to program staff, and one even notes that the applications may be better in quality because the maintenance staff or person performing the installation pays better attention to the application instructions. For the programs that do not allow self-installations, they want to ensure the quality of the projects and that

installations are done according to their specifications, and these programs anticipate an additional burden to the program in terms of quality of application submittals and meeting program specific requirements.

## Quality Assurance

### *Trade Ally Application Quality*

Although there are benefits to requiring registered trade allies for measure installations, there is no general consensus that trade allies submit better quality applications than non-registered trade allies. Some program administrators do not notice any difference in quality of work or applications between the two groups, while others report higher quality applications and less staff support for registered trade allies in their experience. One program administrator reports that they only see higher quality applications from registered trade allies who are fairly active in the program, but do not experience this same level of quality from other registered trade allies. On average, the networks that cite that they receive better quality applications from registered trade allies tend to be smaller networks. The smaller networks typically see a higher percentage of active trade allies within the network that are experienced with program and application requirements. Two networks, one smaller in size and one larger, introduced trainings and gave incentives or bonuses to registered trade allies who submitted quality applications. The smaller commercial and industrial network saw impressive changes in application quality, while the large network which covers several programs and building types did not notice any impact. The smaller network was likely able to reach more trade allies and inform them of the trainings and incentives.

In terms of quality of work in the field, one program administrator reports that customer complaints are typically due to non-registered trade allies, and several state that registered trade allies are more responsive to dealing with customer complaints because they do not want to jeopardize their standing in the network. Common consequences for quality issues are removal from the web listing or being placed on probation. A program should examine whether requiring the use of registered trade allies could potentially exclude some customers, if program staff receive higher quality submittals from registered trade allies, and finally, if additional program and application training could potentially increase registered trade ally proficiency.

### *Quality Inspection Procedures*

The rate and selection of project inspections is dependent on the market sector and program type; large custom projects typically receive 100 percent inspection, while smaller prescriptive projects receive random inspection at a rate of 10 to 15 percent. Most commercial custom projects will perform pre- and post-inspection on projects over a certain incentive or energy savings level, while prescriptive projects, single-family and multifamily programs typically have a 10 to 15 percent inspection rate. Most of these inspections are selected at random; however, there are a few programs that set up stratified sampling for inspection. A few programs will inspect the projects from all new trade allies and/or offer assistance during these initial projects, and two programs make special efforts to inspect trade allies that have had past quality issues. One targets 50 percent of their inspections on these trade allies, while the other performs 100 percent inspection on all of these trade allies' projects. Additionally, several programs perform 100 percent inspection on self-installations. The level of inspection is correlated with both the level of incentive and the risk of quality issues for a project.

### *Customer Complaint Procedures*

All program administrators report that customer complaints are rare and that they have never or rarely had to remove a trade ally from the network due to an unresolved issue. About half of the networks interviewed had a formal or semi-formal procedure for dealing with customer complaints, which could result in trade ally suspension after two or three serious complaints. The other networks typically act as the mediator between the customer and contractor to ensure that the issue is resolved. A few program administrators actually listed that a benefit of working with registered trade allies is that they feel a higher obligation to resolve issues, especially if an incentive is put on hold. Only one network tries to stay out of the conflict resolution process and lets the customer and contractor deal with the issue. However, they will step in and eliminate a contractor from the program if there is an unresolved, on-going issue. This network is also one that places a disclaimer on the web listing to encourage customers to perform due diligence during contractor selection. Networks seem to deal with all complaints, whether they are for registered trade ally projects or projects from an outside contractor.

## Special Case: Elimination or Lack of Trade Ally Network

One of the program administrators has recently eliminated the trade ally network for one of their programs and may potentially eliminate the network for another. The two programs are a custom Home Performance program and a residential prescriptive program; the prescriptive program recently eliminated its network, while the Home Performance program network remains. Previously, customers were required to use one of these listed trade allies to receive program incentives. The list contained 400 trade allies and the program found that the list was not helpful for customers because it was so large. Additionally, only about 20 of these trade allies were active and less than that were producing the majority of the work. The network had one designated staff member to ensure contractors had submitted updated certifications and licenses. The maintenance of the list and retrieving updated documents became cumbersome for both the program and the trade allies. Additionally, the program would come across incidents where customers expected the program to take responsibility to fix any quality issues from the contractor's work because they believed that the program directly endorsed these listed contractors. The program decided it would be less burdensome and require less program resources to eliminate the network. As a substitute, the website lists contractors who have participated in the program in the last three months. The program provides a few in-person contractor meetings throughout the year that are open to all contractors and any contractor can contact the program with assistance on questions and program materials.

Currently, the Home Performance program's trade ally network is still in existence because this program is less popular among customers and the program administrator believes making a list of contractors available to customers may assist in the decision to participate. This list is much smaller than the prescriptive network and requires more stringent criteria to register, so it actually helps separate out the qualified contractors from all of those that exist in the market. However, this program administrator mentions that this formal network may also disappear soon and be replaced by something similar to the listing currently available for the prescriptive program.

# 4. CONCLUSIONS AND RECOMMENDATIONS

The primary objective of this evaluation is to identify opportunities for Energy Trust to reduce administrative burden and resources required to administer the Trade Ally Network. One thing that became apparent during the interviews with other networks is that there is not an optimal solution or strategy for managing networks or prioritizing resources. Trade ally networks take a variety of forms and have a wide range of requirements. Network administrators determine the type of effort to put into their networks based on the resources available to them, and most acknowledge that they do not have the resources available to undertake all of the activities they recognize as beneficial. Networks consider their options and choose the types of support and management strategies they have the capacity to provide. Because of this, TRC does not believe there is clear or compelling evidence for any radical or wholesale change to the Energy Trust Trade Ally network.

The ability to understand the impacts of potential changes on Energy Trust staff resources is limited by the lack of specific or quantitative data on the amount of time spent on various activities. Program staff provided insight into activities that are time consuming for them, but there is no actual data that can be used for analysis. In many cases, it is unclear if alternative administrative approaches described by other networks would result in time savings over Energy Trust's approach. These uncertainties limited the depth of the analysis and the specificity of the recommendations.

There are also elements of the program and trade ally data tracking that created challenges for the data analysis portion of this project, and limited the ability to compare activity between trade allies and non-trade allies. Energy Trust is in the process of developing a new data model and replacing the current data tracking system, which should resolve most of these issues.

In this section, we summarize the key points from the research and lay out options for consideration and discussion by Energy Trust, along with supporting information that will inform the ultimate decision.

## 4.1. Network Size and Exclusivity

The following factors drive the optimal size of a network. These factors were identified through feedback provided by program managers of Energy Trust programs and of other trade ally networks:

- ***Number of technologies in the program.*** For programs that have relatively few incentives, such as Solar, there are few vendors available and therefore a limited number of trade allies. In programs with greater numbers of technologies, such as Existing Buildings and Existing Homes, there are a larger number of contractors and a need for more trade allies to make sure all potential markets are targeted.
- ***Motivation for retrofits.*** Programs that target replacements at the end of useful life (e.g., a homeowner seeking to replace a water heater upon failure) require outreach to a larger number of potential trade allies, in the hopes that the contractor a customer selects will recommend the program. For programs targeting discretionary retrofits (e.g., the decision to install a VFD on a motor), there is less need for a large number of trade allies, as the contractors drive the activity in the market.
- ***Size of territory covered.*** If a program covers a large or diverse territory, more trade allies are needed to ensure that all areas of the territory have sufficient access to ratepayer-funded programs. Some programs, such as Production Efficiency or Multifamily might have more focused

areas of activity and lesser need to have several trade allies in parts of the territory with low project potential.

- ***Program marketing strategy.*** If a program administrator relies on trade allies to bring in projects, a greater number of engaged trade allies will bring in more projects. If the program administrator conducts outreach directly to customers, they will seek out a contractor and participate in the program directly.
- ***Customer interaction.*** As stated above, some programs are designed to leverage contractors for recruitment and interaction with customers. Other program administrators or utilities prefer to interface directly with their customers. This can be motivated by distrust of the vendor community to represent the program to the customer or from a desire to capitalize on the good will generated from the program and incentive.
- ***Quality control.*** Programs that place a higher emphasis on quality control benefit from smaller networks because they can closely monitor project quality. This is often the case with residential programs where the customer lacks the sophistication to monitor or assess their contractor's work. Also, programs with more complex installations, such as those in Production Efficiency, may desire to inspect more of the trade ally projects, and would want smaller networks in order to reach most trade allies.
- ***Program implementation funding and staff resources.*** If cost-constrained, programs cannot recruit large a network or support enrollment or screening activities.
- ***Incentive funding.*** If programs are likely to meet or exceed their program targets or exhaust their incentive budgets, they do not need to grow their contractor network. Additional trade allies would likely further strain available funds. Programs with larger incentive budgets may not need to track their project pipeline closely.

Interviews with program managers of other trade ally networks elaborate on the advantages and disadvantages of maintaining a more exclusive network. The advantages and disadvantages of exclusivity are identified as:

- Advantages of limiting network size or incentive payments:
  - Programs can achieve a higher level of control over projects and trade ally quality because there is a better handle on who is performing work.
  - Programs are able to reach more trade allies during random inspections and can, therefore, have more assurance of the quality of work in the field.
  - Programs have more control and better projection of project pipeline.
  - When there are fewer trade allies who are the only ones able to perform program work, there is a higher chance of having a greater number of active and engaged trade allies who require less hand holding on project submittals.
  - When programs use specific software or tools, trade allies in a more exclusive network are reported to be more familiar with software and modeling.
  - Trade allies are more responsive to correct quality issues because they do not want to be de-listed.
- Disadvantages of limiting network size or incentive payments:
  - The program can lose future repeat activity from less engaged contractors.

- The program can lose activity from customers (especially commercial and multifamily) who wish to use their own contractors who may not want to become a registered trade ally.
- There could be less coverage of rural or other hard-to-reach markets because a smaller network might draw more trade allies from the more populated areas to produce greater project volume.

Table 19 summarizes feedback from Energy Trust program staff and data relating to the Network size for each program. The summary illustrates several important points. First, the program managers are generally satisfied with the size of the Network supporting their programs. It also illustrates that, for most programs, unregistered contractors are responsible for a significant portion of measures installed through the programs. It also indicates that a large number of registered trade allies are not actively participating in the programs. Lastly, program staff indicate that they will provide some level of support to vendors submitting applications to their programs, regardless of Network registration status. These points convey that, though program staff see the advantages of a carefully screened trade ally pool, in practice unregistered contractors are important participants.

*Table 19. Energy Trust Program Staff Feedback and Program Characteristics*

| | Satisfaction/Desire On Size of Network | Percent of TAs out of TOTAL Participation Count (TAs + contractors) | Percent of Active TAs | TA and Contractor Percent of Total Measures and Percent of Total Savings | Percent of TAs and Contractors Accounting for Majority of Savings | Support Provided to TAs versus Contractors | Program "Use" of Resources:<br>- Roundtable<br>- Newsletter<br>- BD funds |
|---|---|---|---|---|---|---|---|
| **Existing Buildings** | Maintain or increase | 19% | 38% | **TA:** 38% projects -> 31% savings<br>**Contractor**: 49% projects -> 61% savings | 20% of TAs and contractors account for 80% of savings | Project support for TAs and contractors, but TAs are provided with hands-on assistance through a dedicated program individual, trainings, co-op marketing funds, and faster program updates | Not using roundtables - do not see value |
| **Existing Homes** | Maintain (recently removed 80 due to lack of activity) | 24% | 83% | **TA**: 61% projects -> 62% savings<br>**Contractor:** 35% projects -> 34% savings | 14% of TAs and contractors account for 80% of savings | Same level of project support for TAs and contractors; Allow and encourage contractors to attend trainings | Actively using roundtables, newsletters, and BD funds |
| **Existing Multifamily** | Maintain (size of active TAs is manageable) | 43% | 100% | TA: 17% projects -> 41% savings<br>Contractor: 79% projects -> 49% savings | 26% of TAs and contractors account for 80% of savings | Same level of project support for both TAs and contractors | Not using BD funds, but make good use of roundtables and newsletters |
| **Industrial Production Efficiency** | Increase outside of the I-5 corridor | 25% | 46% | **TA:** 54% projects -> 23% savings<br>**Contractor:** 42% projects -> 75% savings | 18% of TAs and contractors account for 78% of savings | Training available for both TAs and contractors, but TAs can receive co-op marketing funds, use Energy Trust logos, and use of an Energy Trust tool | Not using any of the listed resources |
| **Lighting** | Maintain (Increase in rural areas) | | | | | TAs receive program updates first and can participate in annual awards event | NA (receive support from Evergreen) |
| **New Buildings** | Maintain | --* | --* | Not available | Not available | Same level of project support for TAs and contractors, but TAs have an assigned program staff for project assistance, and also receive training, web listing, and marketing | Not using any of the listed resources |
| **New Homes** | Increase (except Verifiers) | 51% | 25% | Not available | Not available | Same level of project support for TAs and contractors | Somehwat using the roundtables, but believe they could be improved |
| **Solar** | Maintain | 100% | 35% | Not available | Not available | Not applicable, must use TA | Not using the roundtables, but using the newsletters and a few contractors use the BD funds |

* Trade Ally activity for New Buildings is not accurately represented in the database

## 4.2. Network Requirements

Energy Trust staff express that trade ally and network maintenance is a large draw on administrative resources. A notable activity that requires sizable network resources is tracking renewed licenses, certifications and insurance. Other networks with similar requirements to Energy Trust report that on-boarding new trade allies consumes substantial administrative resources, but that maintaining the network requires minimal effort. Some networks do not follow up to ensure that licenses and insurance are current. Others use software to track and notify trade allies that updated documents are needed. This area consumes program and network resources, and there may be opportunities for Energy Trust to reduce network maintenance costs. Implementing an efficient management software can cut down on time spent tracking trade ally activity and documents (i.e. licenses and certifications); however, the transition and training process for a new software may be expensive and require substantial staff time.

Given the diversity of Energy Trust programs and the degree to which different programs rely on registered trade allies, TRC believes that it is reasonable to determine trade ally requirements on a program-by-program basis, maintaining the current requirements where it provides the most value and eliminating them where it does not.

It seems the most dysfunctional burden on the network staff's time is the trade allies who stay in the network year after year but are not active. These trade allies take up staff resources each year as their documentation is renewed, but they do not contribute saving to the programs. TRC did not have data to understand the attrition of inactive trade allies, but the large numbers of inactive trade allies would indicate that many keep their listings current regardless of program participation. TRC believes that the best way for Energy Trust to streamline network administration is to modify the network requirements so that time and resources are focused on trade allies who are active in the program. This could be accomplished in a variety of different ways; some options are described below:

- Maintain the current network enrollment requirements, but only renew documents for trade allies who have submitted some minimum number of projects in the past 12 months. The database suggests that a large portion of registered trade allies are not participating annually. Trade allies who are not actively participating in the programs would lose their network status, so this requirement would encourage trade allies to stay active. Energy Trust should be clear on polices or requirements for trade allies to reengage with the program. For instance, if a dropped trade ally submits a program application, are they eligible to renew immediately or is there a probationary period?
- Reduce the number of documents or certifications that are required and verified annually. Energy Trust could streamline the verification process by confirming that contractor licenses are renewed annually, but not their proof of insurance. Because proof of insurance is part of the contractor licensing process, some guarantee of insurance is provided through a current contractor's license, though not necessarily to the same levels that Energy Trust currently requires.
- Require submittals during initial enrollment but do not conduct annual renewal. Several other networks report that they require documentation initially but that they do not renew it periodically. Some programs include disclaimers on their listings encouraging customers to verify that their contractors have proper licenses and insurance. This approach may not be well-suited for Energy Trust, but we include it here for consideration as it is an approach that several other networks have used.
- Streamline requirements so that some documents are not necessary. Energy Trust can scale back their Network requirements so that licenses or proof of insurance are not necessary. A variation

on this approach is to evaluate which programs benefit from a more rigorous trade ally screening approach and limit proof of licenses and insurance to those programs. This second option may be a feasible approach given that not all programs have the same reliance on the Network trade allies, but it has the potential to cause confusion in the contractor community and would need to be executed carefully.

## 4.3. Restricting Incentives

In general, Energy Trust programs should not limit the payment of incentives only to projects that use a registered trade ally beyond their current limitations (Solar, Small Wind, and some Existing Homes tracks). Non-registered contractors bring in a significant portion of projects, and the energy savings from their projects often exceeds the savings from trade ally projects. If Energy Trust were to restrict all incentives to registered trade allies, some contractors may be motivated to join the network in order to qualify for the incentives, while others may abandon the programs. It is difficult to say what this split would be, but those that choose to register would require additional effort for network staff to register them.

While restricting all incentives to registered trade allies is not recommended, there may be individual areas where requiring a trade ally or using a closed network may be beneficial for Energy Trust; see the section on Engaging Trade Allies, below.

## 4.4. Self-Installations

Energy Trust should determine whether to restrict or regulate self-installations on a case-by-case basis. Most programs do not report that self-installs are a burden on their programs. The exception is the Existing Homes program which reports that significant resources are spent dealing with issues from homeowner self-installs, both in terms of the completeness of the applications and the quality of the installation. The pass rate for self-installs was just 56 percent in 2013, meaning that 44 percent required additional follow-up from the program staff and work on the part of the customer. Eliminating or finding an effective method for managing self-installs in the Existing Homes program will provide notable relief to the program staff. Because only four percent of energy savings come from self-installs, eliminating them all together would likely not significantly affect the program's ability to meet its energy savings targets. Another option is to further restrict self-installs to those measures with the highest inspection pass rates, if there are differences by measure.

Other networks report that self-installs require more program assistance, but they are not burdensome because there are so few. Only one network reported a novel approach to dealing with self-installs, though it is unclear whether it is effective in practice or would be a workable situation for the customer. This program requires that customers engage a contractor to oversee measure installation to ensure that it is installed properly. The program reports that the incentive is typically used to pay for the contractor's time, so the value to the customer of participating in the program is unclear. With this approach, self-installs are less time consuming in terms of installation quality, but may still require program support from incomplete or incorrect applications.

Before making any changes, Energy Trust needs to consider whether restricting self-installs will cause customer dissatisfaction and whether the staff time savings necessary to deal with the issues caused is worth the loss of program savings.

## 4.5. Network Support

Several Energy Trust programs report that their trade allies do not see substantial benefit from the roundtables and newsletter. Only the Existing Homes and Existing Multifamily programs report that the roundtables are a valuable format for their trade allies. Other programs do not rely on the roundtables and find more value in providing program updates and communication through other channels. The Existing Homes program has recently taken responsibility for organizing a program-specific roundtable with content tailored to the trade allies who support their program. Energy Trust should reassess the scale and format of the roundtable relative to the programs who benefit from them. Similarly, Energy Trust should assess the costs of producing the newsletter against the benefits the programs and their trade allies receive from it.

Only the Existing Homes and Solar programs report that their contractors make frequent use of the co-op marketing funds. If administering these funds requires a significant time investment, then Energy Trust should consider eliminating the option. However, if costs to administer are reasonable and limited to responding to funding requests, then Energy Trust should maintain the funding option, as it is a benefit to some trade allies and could be leveraged more fully in the future.

## 4.6. Star Rating System

Implementation of a trade ally rating system generally receives positive feedback from trade allies, but other network program managers have mixed feelings over the usefulness and impacts of a rating system. Single family programs are more willing to provide distinction and highlight active trade allies than other market sectors. The main criticism against rating systems is that they do not always provide equal evaluation for all trade allies if the quantity of projects is the main ranking criteria, which is common for other networks' current rating systems. Program managers from other networks, both those who have rating systems and those who do not, think that incorporation of quality of work or adjustments for trade ally location are good practices to level the ratings. Although not overwhelmingly popular with other residential or commercial trade ally networks, the Energy Trust Existing Homes program manager has seen interest in the rating system from the initial release from current trade allies. Implementing a rating system, such as Energy Trust's, that includes factors beyond project output provides benefit to both trade allies and customers because trade allies have diverse strengths that a simple project output-based rating system cannot always capture.

Other networks provide more benefits to trade allies who merit a higher tier rating through their program activity. This mechanism is in place for all trade allies, not just those operating single-family programs. Again, this strategy does not always provide equal opportunity for trade allies in rural areas or those who provide high quality work but cannot produce the same volume as large firms.

Energy Trust's Existing Homes program can enhance its star rating system to include contractor profiles that allow contractors to distinguish themselves beyond the star assignment. Although the current star rating system accounts for quality of work, comparing contractors and determining their strengths is not always easy for a customer. Allowing contractors to add firm profiles to their posting would allow them to distinguish themselves based on their own selected criteria and provide a qualitative supplement to the quantitative star rating. These profiles could include personalized statements from contractors as well as customer testimonials. The trade allies would be responsible for providing information for their profiles, such as descriptions of areas of specialization, years in business, and technology or market sector experience, but network staff would need to review and approve the profile content before posting. This responsibility could be substantial, depending on the quality and appropriateness of the

profiles provided and the amount of revision required. In addition, adding profile functionality to the website will require resources for the initial setup.

Additionally, Energy Trust can focus some resource expenditure on the trade allies that will receive the most benefit. Electing to provide benefits that require a lot of program or network staff time to active trade allies can reduce overall time spent on these activities. This focuses support on trade allies that are more likely to result in program benefits. However, Energy Trust must be selective of which benefits are restricted to active trade allies as to not lead to unintended consequences. For example, limiting all cooperative marketing and business development funds to high participating trade allies may take away an essential resource for some smaller trade allies who could benefit from the assistance, especially those serving rural areas or populations of particular interest for Energy Trust. Benefits that Energy Trust can provide exclusively to active trade allies could include referrals, web listing, higher levels of cooperative marketing and business development funds[1], and assistance developing marketing materials or plans.

## 4.7. Referrals

Although direct referrals are not a prevalent approach for most other networks, they do have the potential to impact trade ally activity and provide an advantage to trade allies over contractors. The benefit of referring customers to trade allies is the potential to directly and indirectly increase trade ally activity; however, the majority of other networks avoid referrals because they are either a publicly regulated utility that believes it can lead to favoritism or they do not want the liability of telling a customer what contractor to use. One network that has a referral program only provides referrals to the most active trade allies in the highest tier. This network finds that trade allies participate more in order to receive referrals; over 70 percent of trade allies are in the higher membership tier, meaning they are actively participating and submitting several projects annually.

The current Energy Trust protocol of referring three randomly selected trade allies avoids favoritism, but does not promote increased participation because the programs do not select trade allies based on participation level or other trade ally aspects[2]. The recent Solar program promotion may be the best strategy. They ran a customer promotion and referred interested customers to trade allies who volunteered to participant and attended a meeting on the campaign. This approach avoids favoring high volume trade allies and opens up the field for other trade allies that can perform quality work but at lower volumes. Although this specific occurrence offered referrals for a limited time in conjunction with a particular campaign, the strategy is promising for further implementation.

## 4.8. Engaging Trade Allies

A low percentage of active trade allies is a common issue across other networks, and, although there are some actions that have shown positive results, there are no strategies that prove to dramatically increase activity levels. In this section, we provide suggestions on activities for Energy Trust to continue offering or to implement, if resources permit, based on interviews with other program networks.

[1] Energy Trust currently does this for their residential programs.

[2] In order to receive a referral in the Existing Homes program, a trade ally must have at least 1 star in the star rating system.

***Provide more compelling benefits to registered trade allies.*** This is especially important if the registration process or requirements are significant or burdensome. Restricting access to all incentives to registered trade allies would be a very compelling benefit, but this change would be risky to Energy Trust given the large number of projects installed by non-registered contractors. Energy Trust sometimes pilots incentives or initiatives using only trade allies; this exclusive benefit should be communicated to prospective trade allies. Providing direct customer referrals to trade allies is a compelling benefit and Energy Trust can continue to run promotions that refer customers to trade allies, similar to the recent Solar program promotion. A variation on this theme is to provide referrals to the most active trade allies. Tiered levels based on activity can promote trade ally participation if the higher levels have access to a different or wider set of resources.

***Continue to offer sales and marketing training to registered trade allies.*** Other networks report that the most common characteristic for active trade allies is the ability to integrate the program offerings into their business plans and sell energy efficiency. Energy Trust can increase the frequency of their sales and marketing training and provide co-operative marketing funding, but programs may see better results from more hands on activities. Program managers from other networks generally agree that the most active trade allies are those that are sold on energy efficiency and can transfer that sentiment and enthusiasm to customers.

Although the program managers from other programs we spoke to did not mention training that qualifies for continuing education credits for professional certifications, Energy Trust has found this to be a successful strategy for their New Buildings program. This strategy provides a high value benefit to the trade ally while keeping them engaged with the program.

***Adopt closed networks for appropriate program measures or tracks.*** Closed networks have high percentages of active trade allies because, given that they are the only contractors who can perform the work, the program typically directs projects to trade allies. This type of network is in place for a few of Energy Trust's current programs and may be worth exploring for other program measures or tracks. Note that we do not recommend restricting access to incentives to registered trade allies as a broader practice, but rather to consider it in specific, limited situations where it would be beneficial.

***Assign staff to provide a single point of contact and one-on-one support to registered trade allies.*** The most aggressive and resource intensive approach is to assign program staff to all trade allies and non-trade allies working on a project. One of the other networks that uses this strategy provides a higher level of support to registered trade allies, but provides non-trade allies with a glimpse of network benefits and support to encourage their registration. This network reports that it is successful at converting one-third of non-trade allies through this approach. This strategy requires extensive staff time and may even necessitate more staff to support programs with substantial project activity. For this reason, it may be more ideal to only provide this level of support to smaller networks.

***Continue offering limited-time promotional incentives and focus on recruiting new trade allies.*** Promotional incentives encourage participation of specific trade allies and non-trade allies for a service niche or technology sector. Energy Trust can use these to promote uptake of a specific technology, but more importantly, the promotional incentives provide an opportunity to recruit new trade allies serving specific technologies, market sectors, or geographical areas. Energy Trust can adjust the focus of the promotional incentives to highlight the benefits and project opportunities of being in the network for potential trade allies.

***Institute annual recognition based on program activity.*** Currently, the Lighting program gives awards based on performance and territory served. Other programs could follow suit, or the strategy could be expanded network-wide. Although we were not able to reach them for an interview, TRC is aware of a trade ally network that holds an annual awards event that provides program updates and highlights the

accomplishments of trade allies. The other program managers who host some type of trade ally event respond that trade allies enjoy the recognition for their work and that the events maintain positive working relationships between the program and the trade allies. Recognition can include, but is not limited to, project activity, quality inspection pass rate, serving rural territories, and customer satisfaction. Holding events that revolve around trade ally accomplishments may result in further promoting active trade allies that already have strong relationships with the program, but they can also provide an opportunity for one-on-one and in-person communication with trade allies that may not be as involved in the program.

Although annual events are ideal for interaction with trade allies, simpler strategies to highlight specific trade ally accomplishments would be to post an article on the website or in the newsletter; however, it does not appear that all trade allies receive or find value in the newsletter. Alternatively, Energy Trust could offer special assistance to trade allies who have achieved above average performance, such as help on a marketing campaign.

***Continue attending or sponsoring industry or community events.*** Energy Trust should continue to have a presence at trade shows and community events that Energy Trust knows trade allies and contractors will attend. These events can serve the purpose of both on-boarding new trade allies as well as re-engaging current trade allies.

Program managers from other networks identified several other driving factors for trade ally activity; however, these factors are difficult for programs or networks to reach or influence. These factors include customer demand; incentive levels; and whether a trade ally or contractor is splitting time between program projects, non-program activities, and other Energy Trust programs in different market sectors. The last factor listed means that trade allies may not be dedicating their time strictly to program related projects, and they often have to weigh their time between participating in the program and performing other types of work for their customers. Energy Trust cannot easily address these factors. Additionally, other networks did not list lack of interest as a barrier for trade ally participation. This suggests that the biggest barrier for participation is the trade allies' ability to integrate the program into their business models and influence customer interest.

## 4.9. Quality Control Procedures

Energy Trust's customer complaint and escalation procedures are consistent with actions that other networks take to deal with project and program issues. Only one network puts minimal program resources into the dispute resolution process and places the burden on the customer and the contractor to resolve issues. However, it is unclear whether this approach adequately addresses contractor quality issues.

It is clear through the interviews with Energy Trust program staff that quality assurance (QA) procedures are in place for trade ally and contractor performance in the field, but the documentation of these procedures is not clear and consistent for all of the programs. All Energy Trust programs should consistently document their QA procedures, stringency, and guidelines and make these visible to trade allies and non-trade allies on the program web pages or through other channels.

Based on the information gathered during staff interviews, it appears that Energy Trust's procedures for project inspection and QA follow similar trends as other networks, but there is opportunity for adjustment for some programs. Currently, only the Multifamily program reports that staff work with and inspect the first few projects for new trade allies; this procedure could be investigated for other programs if it proves to improve quality inspection pass rates for future trade ally projects. Additionally, some program managers report that the program will inspect and provide assistance for trade allies and

contractors that had prior QA issues. Energy Trust could expand this procedure to other programs to increase QA pass rates.

Another modification is to strategically select inspections, which is common among commercial and industrial programs for other networks. According to information from Energy Trust staff, the Production Efficiency program conducts post-inspections on 100 percent of their custom projects, most through on-site visits, but a few through picture verification.

## 4.10. Diversity

Other utilities do not have focused efforts to attract minority-owned, woman-owned, or small businesses to their trade ally networks, but do make concerted efforts to increase trade allies serving rural or underserved areas. To target trade allies in rural or underserved areas, other networks attend county fairs, perform direct outreach to contractors working on projects in these areas, and encourage existing trade allies to include these territories in their service area. Only one network adjusts participation requirements to maintain status in a higher trade ally tier for trade allies located in rural areas. In addition to bringing in trade allies in rural areas, other networks have focused on bringing in trade allies that serve a specific market or technology niche through promotional incentives.

Only two Energy Trust programs mention engaging with minority-owned, woman-owned, or small businesses, and several others identify the benefits that can result from working with these types of business. The Existing Buildings team has conducted outreach to certain ethnic communities to facilitate program penetration in those populations. The New Buildings program staff regularly engages with minority groups through participation in various industry events targeting minority businesses. The purpose of these activities is to ensure equal access to the program by firms of all sizes and ownership. Similar to the program managers of other programs we spoke with, most Energy Trust staff focus on capturing broad trade ally participation and do not tailor their recruiting efforts for certain groups. However, the Multifamily and the Lighting program staff noted the benefits of engaging with minority-owned trade allies for reaching diverse customers.