

MEMO



Date: April 14, 2015
To: Board of Directors
From: Kim Crossman, Industry + Agriculture Sector Lead
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Subject: Staff Response to the 2015 Production Efficiency Market Research among Smaller Manufacturers

In early 2015, the Industrial sector completed a second qualitative research study that focused on smaller manufacturers. The first qualitative research study, completed in 2012, explored manufacturer decision-making and attitudes of all customers, many of whom were larger, around energy and energy management. The 2015 study was more narrowly designed to provide deeper understanding of the attitudes and behavior of smaller manufacturers toward energy and energy management, to gauge the importance and value of vendors and other market actors to these customers, and to hear what communication channels and methods they prefer.

In summary, the research showed that smaller manufacturers share similar goals and make decisions in similar ways to larger manufacturers, and that they are highly motivated to improve their operations, with leaders often taking a less formal but more hands-on approach than seen in larger industries with more layers of decision-makers. Not surprisingly, the biggest commonality was the requirement for economic calculations to support decision-making for energy efficiency investments.

While smaller manufacturers often started the conversation by saying they didn't have much to say, the 30 completed interviews contained rich content and averaged 35 minutes. Other key findings included:

- Awareness of Energy Trust and the services and incentives available were mixed. Among those who were familiar with Energy Trust (19 of 30), satisfaction was quite high.
- The topic of energy, as expected, was fairly far down the list of respondents' most important business needs, with "finding qualified labor," a topic that is widely acknowledged as the key issue for manufacturers, topping the list.
- Decision-making criteria for energy efficiency investment proved to be quite similar to larger manufacturers, although it is frequently streamlined due to the size of the company and a flatter company structure.
- They see themselves as self-sufficient. They don't have time to read through lots of materials, and are not looking for more information – except when they need it.
- Smaller manufacturers rely on their vendors for both project assistance and current information about Energy Trust incentives.

- They would like a walk-through of their operations by an energy efficiency expert who can help them identify opportunities to save that they are not aware of.

Program staff are analyzing these findings and are integrating them into marketing and program design enhancements over the next 2 – 3 years:

- Starting in 2015, Custom Program Delivery Contractors, PDCs, are serving all sizes of industrial customers in their assigned geographic territory. This will continue and broaden over the next 3-5 years. Program managers are developing tools to enable PDCs to provide cost-effective comprehensive scoping audits at these sites.
- Improving communications regarding the roles of PDCs, ATACs, vendors/trade Allies for customers, especially those new to Energy Trust.
- Developing sales, marketing and/or communications tools and training to vendors to support their customer interactions more effectively.
 - In May, 2015, Energy Trust launched the first integrated marketing campaign, *My Business*, to communicate directly with business customers. In addition to a full media package including TV, print, radio and online advertising, the campaign is providing cooperative marketing materials, training and support to encourage trade allies and vendors to co-brand marketing with Energy Trust. Ready-to-cobrand materials, significantly higher cooperative marketing funds, training materials and on-call marketing support are providing a new and comprehensive menu of marketing support.
- Fine-tuning current, successful communication strategies including web design and content, electronic communication such as *The Champion* newsletter, and use of customer success stories to be appealing to smaller manufacturers.
- Mining customer information and data to provide more targeted, personalized information to customer at key intervals.



**Energy Trust of Oregon
Production Efficiency Market Research
Among Smaller Manufacturers**

February 2015

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Energy Trust of Oregon
Production Efficiency Market Research Report
Among Smaller Manufacturers

February 2015

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**Energy Trust of Oregon
Production Efficiency Market Research
Among Smaller Manufacturers**

I. Purpose & Method

This research report summarizes the results of thirty in-depth interviews conducted for Energy Trust of Oregon among smaller manufacturing businesses in Oregon.

A. Purpose

The purpose of this research was to gain a better understanding of the attitudes and behavior of smaller manufacturers toward energy and energy management. The results will be used by Energy Trust in its development of strategies and programs for this market segment.

Key areas of exploration included:

- Awareness of Energy Trust
- Most important business needs of smaller manufacturers
- How Energy Trust can help meet the needs of smaller manufacturers
- Priority of energy and energy savings
- Decision-making criteria and processes
- Barriers/challenges in taking on energy projects
- Use of external entities vs. in-house staff in completing projects
- Communication needs
- Awareness and interest in Energy Trust's energy advisors (PDCs)

B. Method

In-depth telephone interviews were conducted among smaller manufacturing customers:

1. **Selection of respondents for research:** Energy Trust selected a representative list of 200 potential research respondents from its industrial customer base.
 - Criteria included: Include only those that had power usage estimated to be between 250,000 and 5,000,000 kWh annually. Other screening criteria included: geography, participant vs. non-participant, respondent title, and participation in previous Energy Trust research studies.
 - Note: See page 4 for a breakdown of participating respondents by geography, segment, title and number of employees.
2. **Respondent pre-letters:** Ninety-nine (99) of the customers from Energy Trust's list received a personalized letter from Energy Trust, signed by Susan Jowaiszas. The letter explained that Energy Trust was conducting a research study and asked for the respondent's cooperation in participating in the research. The letters were mailed in six batches during the time period of October 27-November 26, 2014.

- 3. Completion of interviews:** The research resulted in the completion of thirty interviews. The goal was to complete 25-30 interviews.
- The interviews were conducted from November 4-December 11, 2014.
 - Interviews ranged in length from 20 to 60 minutes with most averaging about 35 minutes.
 - All interviews were conducted by Brenda Forrest, Forrest Marketing.

C. Research Materials

The Appendix of this report includes all the materials used in the research project including the discussion guide, pre-letter, and information about non-completed interviews.

Research Caveat: This research study was qualitative and while it provides very valuable insights regarding the needs and attitudes of small manufacturing customers, the results are not projectable to the entire universe of small manufacturing customers that Energy Trust serves in Oregon.

Completed Interviews: Respondent Mix

The table below provides a breakdown of the 30 respondents by geography, segment, title and number of employees.

	Breakdown of 30 Completed Interviews	#
1.	By geography	
	Portland Metro area	17
	Outside Portland Metro area	13
	Total	30
	<p>Cities in Portland Metro area included: Beaverton, Clackamas, Gresham, Hillsboro, Portland, North Plains, Sherwood, Troutdale, and Tualatin</p> <p>Cities outside of Portland Metro area included: Albany, Boring, Cottage Grove, Harrisburg, Klamath Falls, Mill City, Myrtle Point, Oregon City, Roseburg, Scio and Winston.</p>	
2.	By segment	
	“Smaller” manufacturers	27
	Food distributors	2
	Wastewater treatment facility	1
	Total	30
3.	By title	
	Facility or plant manager	10
	Operations manager	8
	President/owner	6
	Maintenance manager	3
	Manufacturing engineer	1
	Electrical supervisor	1
	Purchasing manager	1
	Total	30
4.	By number of employees	
	10-25	7
	26-49	8
	50-100	6
	101-200	4
	201-400	5
	Total	30

II. Executive Summary

The following highlights results from each of the key topics explored in the research. More detailed summaries for each topic are in the Detailed Findings section.

1. Awareness and Usage of Energy Trust

Awareness levels: Overall, levels of awareness of Energy Trust spanned a wide range. Of the 30 respondents, 13 had a fairly high level of awareness of Energy Trust, 6 had a medium level and 11 had relatively low awareness. In many cases, awareness is often project-related. Some say they're aware of Energy Trust from the standpoint of having done a specific project but don't have in-depth or continuing knowledge of Energy Trust programs, in part due to the reliance on vendors to help manage their projects.

Not surprisingly, higher users of Energy Trust services also have higher awareness levels of its services. Among those with medium and low levels of awareness, many said they haven't done a project with Energy Trust in years and/or haven't had contact with Energy Trust in a long time making it difficult for them to recall meaningful details of their experience or of the most current services and programs offered by Energy Trust.

Satisfaction levels: There appears to be a correlation between the level of satisfaction with Energy Trust and frequency of contact with Energy Trust. Specifically, those who have maintained an on-going relationship with Energy Trust and/or have done more projects tend to be the most satisfied. Overall, there were very few criticisms of the service provided by Energy Trust. One respondent reported a bad experience with Energy Trust many years ago but said he has "gotten over it". Another respondent stated that he is very against organizations that offer subsidies, which tends to color his attitudes about Energy Trust.

Usage levels: As part of this questioning area, respondents also provided a recap of the projects they've completed with Energy Trust. This information is included in the Detailed Findings section.

2. Most Important Business Needs

When asked about important needs facing their business, not necessarily energy-related needs, respondents offered a wide-ranging list of issues and challenges. The following highlights respondent's most important needs by category:

Finding qualified labor: Finding qualified labor was the most frequently mentioned issue by respondents making it one of the most important business needs. Many respondents commented on the challenge of finding potential workers from among a younger population that may not be interested in manufacturing careers or have not developed a strong work ethic. Others mentioned the low availability of "competent, skilled labor" and workers with the right blend of experience and training.

Price and industry competition: Several respondents mentioned the impact of global competition on their business, and the need to remain price competitive with overseas

manufacturers. Among respondents doing business locally there was also concern about price and product competition, and finding ways to stay efficient and improve processes to manage their cost of doing business.

Growth-related challenges: Managing the challenges that accompany business growth is another need faced by respondents. Among the issues they face are lack of capacity in existing facilities, staffing-related regulatory costs and requirements, reliable access to feedstock material, and limited capital and cash flow related to expansion plans.

Declining customer base issues: Some respondents have experienced a decline in business from their primary customer base making finding new customers an important need. For one, this means expanding into new markets while another hopes to “ride it out” until their customer’s business recovers.

Energy-related business needs: Several respondents mentioned energy-related needs including: Finding time to evaluate and implement energy-related projects, meeting sustainability goals and becoming landfill free, and finding ways to reduce natural gas and power bills.

Other important business needs: Other mentions of needs included: maintaining customer service, remaining innovative, dealing with the current West Coast port slowdown, and finding a suitable funding structure to pay for projects required by state regulation that doesn’t place an onerous financial burden on ratepayers.

3. Anticipated Growth

Overall, the majority of respondents were optimistic about their company’s future growth. Almost two-thirds are currently experiencing growth and they anticipate growth will continue.

Anticipate business to grow: Among those with growth expectations, many referred to the recession and the toll it took on their business. Some are not back to pre-recession levels but are steadily growing. Some mentioned they feel the economy is looking “rosier” and in a better position than it was five years ago. Another respondent suggested that companies that survived the recession are leaner and more efficient and better capitalized than they were 10 years ago. One went on to say. “We’re still having to work really hard for everything we get. But it’s not doom and gloom, that’s for sure.” Most indicated that growth is coming from their existing business base. Several attribute their growth in part to expansion efforts whether it be new product lines, new markets served or new facilities.

Anticipate business to remain stable: Among those that expect to remain stable, a few say they haven’t recovered from the recession. As one said, “We’re now operating at probably 50% of where we were at our peak in 2006 or 2007.” A couple respondents say their businesses are dependent on customer bases that are not doing well. As one said, “Our success is tied to their success.” Other mentions included limited capacity or lack of space at their current property and pressures from losing market share to competitors.

4. Use of Continuous Improvement Practices

Respondents were evenly split between those that use continuous practices and those that don't.

Those that do use continuous improvement practices: Most cited Lean manufacturing as the principle they follow. Here are key points for these respondents:

- How respondents implemented Lean practices varied from company to company. Some practice it more formally and others tailor practices and principles to meet their specific needs. One respondent said: "Our program is kind of based on Six Sigma and Lean but I wouldn't call it either one. It's just really kind of doing what's right."
- None said that using these practices prohibited them from pursuing activities that would result in better energy management. One said it was because, "We tweak it to make it work for us." And another said, "I mean common sense usually rules."
- Interestingly, one respondent said that Lean manufacturing has "run its course to some extent" at his company.

Those that don't use continuous improvement practices: Reasons included:

- Their companies don't feel the need to practice continuous improvement, because they have cultivated a reputation among their customers for adhering to extremely high and reliable standards for quality and production. As one said: "We have programs and processes we use that are so well established and so proven, that those are the things that give us the advantage."
- They have difficulty applying high volume manufacturing practices because, "We may only do 20 jobs a year and each job is different—we don't do repetitive work."
- Two respondents said no but indicated they would like to be doing more.
- It should be noted that some respondents did not provide a reason or said they weren't familiar with these practices.

ISO certification: Among those mentioning they have ISO certification, most say it's customer-driven. While they acknowledge the value of obtaining certification, most stressed that the process of obtaining certification can be time consuming, costly and sometimes disruptive to on-going business.

5. Keeping Up With New Developments

Many respondents acknowledge that keeping up with industry and energy developments is challenging. Their primary reasons include not having enough time due to the demands of their job and the small size of their company limits available manpower. The fact that things are constantly changing also contributes to the difficulty.

While keeping up is a challenge, some say they do it by making it a priority at their company. Others mentioned that vendors play an important role in keeping them informed and they rely heavily on this resource. Several stressed the need for Energy Trust to help keep businesses informed of new developments. One respondent said: “I feel that’s Energy Trust’s job! How else are we going to know of changes, improvements or newer programs unless Energy Trust informs us?”

6. How Energy Trust Can Help Meet Respondents’ Needs

Overall, respondents offered a broad list of suggested areas in which Energy Trust can help them meet business needs. Responses fell into eight categories:

- Promote and incentivize emerging technologies
- Expand the program to include incentives for improvements that increase production efficiency and not just energy efficiency
- Help businesses take better advantage of public purpose charge monies
- Enhance outreach/education/information
- Increase in-person contact
- Provide help on a specific problem/project
- Provide incentives on natural gas
- Help reduce energy costs

7. Strategic Position and Priority of Energy and Energy Savings

Most respondents said energy and energy savings is a priority. For most, the opportunity to reduce energy costs is the chief motivation for making energy a priority. And the reason for reducing their energy costs is financially driven as opposed to production efficiency, sustainability, or other rationale. Although most respondents aren’t very sophisticated in their approach to energy, they show a willingness and awareness of the need to address it. Some would like to give energy and energy savings more attention but their small company size doesn’t make it practical for them to do so.

Again, although most respondents said energy and energy savings is a priority, there are significant differences in what this means to them in actual practice. In terms of the range of priority levels, respondents fall into four categories as follows:

High priority: Two respondents said energy is a high priority and they have strategic energy management practices in place. These are also the only two respondents that have specific energy goals. Both have a disciplined plan and approach to meet these goals. One is part of the Willamette Valley Strategic Energy Management cohort.

Proactive: Seven respondents indicate that energy is a priority with most saying reducing their energy costs is the primary motivation. Although these companies don’t

have a strategic energy management plan, they are proactive in addressing energy savings and not reacting only when opportunities arise. This group makes a regular effort to evaluate and reduce energy costs.

Opportunistic: Similar to those who are proactive, nine respondents all say energy is a priority, and for most, the primary motivation is to reduce their energy costs. However, they don't appear to be proactive or to have a plan to manage their energy costs. They pay attention to their energy consumption and take advantage of opportunities when possible.

Low or no priority: Of the remaining 10 respondents, half clearly state that energy is not a priority, and the other half indicate it is a priority in name only simply because energy is such a big cost. Some suggested it is not a priority because they have other more important challenges facing their business. One said it's not a priority now but he'd like it to get more attention.

8. Energy Goals

Almost all respondents, 28 out of 30, said their company did not have specific energy goals. Most respondents didn't provide a reason for not setting energy goals. Among those that did give a reason, they said their company is too small and/or they're not sophisticated enough to have goals.

9. Importance of Sustainability

As part of the conversation about the priority of energy management and specifically energy goals, respondents rarely included an unprompted mention of sustainability in their responses. When probed about sustainability, five respondents said it was important to their company and that they are driven to be sustainable because of their own commitment and not by outside forces. One said being sustainable is equally important as reducing energy costs. Some said they pursue sustainability but only because it's necessary to insure their success due to market-driven forces and/or compliance issues. Others said that while they care about the environment, it is not a key decision-making factor and that bottom line and payback factors are much more important.

10. Decision-Making Process and Criteria

Decision-making process: Almost all respondents interviewed were those with primary responsibility for initiating energy efficiency projects at their company. Most respondents develop some sort of proposed scope of work for management approval, although the formality of the prepared information varies by company.

Overall, there are indications that the process of proposing energy-savings projects is somewhat less formal among smaller manufacturers. Some don't do written proposals but instead just discuss verbally. One respondent said, "We don't do formal proposals or anything. We just kind of look at things we're thinking of upgrading or purchasing and make a decision."

In developing their proposals, some rely heavily on Energy Trust and/or vendors to provide the project's ROI and cost savings. Respondents stressed the high value of this assistance. As one said, "A lot of us people out here, we're really busy and we don't have the time or even the knowledge to set up these projects like those Energy Trust people do."

Decision-making criteria: ROI and payback are very important in the decision-making process with almost all respondents mentioning one or both of these factors as being critical. Other important factors cited include having the upfront capital to invest in a project and the value of Energy Trust cash incentives.

Ultimate decision-maker: Most respondents said the ultimate decision-maker is the company owner or upper management.

11. Financing Energy Efficiency Projects

Among respondents who provided a response to this question, the majority said their company would not consider financing for an energy efficiency project. The primary reason was they want to avoid debt and pay with cash they have on hand. Some added that small businesses need to be conservative if they want to survive in business. Those that said they might consider financing said they believed their company was becoming more open-minded about the idea of financing especially if lower interest funding were available for energy projects. Only one respondent reported that his company currently finances projects.

12. Use of Vendors Versus In-house Staff

Overall, vendors are very important to respondents for several reasons including their knowledge of Energy Trust programs and incentives, their value in assessing and designing projects, their ability to handle projects if necessary, and their assistance in making the case for projects to upper management. Several have developed strong relationships with vendors and regard them as extended staff. Vendors also seem to make a difference in respondents taking advantage of Energy Trust incentives.

Use of in-house staff versus vendors: Most respondents use a combination of in-house staff and external entities to complete projects. Many have identified those projects they can do themselves and those where they're better off using an outsider.

Type of vendors used by type of job: Electricians and air compressor contractors were the most frequently mentioned vendors used by respondents. Other jobs that respondents use contractors for included: HVAC, refrigeration, boilers, welding equipment, insulation and motor-related projects.

Reliance on vendors and closeness and satisfaction with relationship: Many respondents rely heavily on vendors and have developed close relationships with them and worked with them for years on multiple projects. Most respondents appear to be satisfied with their vendors with some singling out vendors by name and praising the service they provide and quality of their work.

Specific benefits or value that vendors provide to respondents: Respondents mentioned many benefits of using vendors including: having access to an expert that can bring ideas to them, helping assess their needs and designing systems, saving them time by handling projects from start to finish, and helping them sell projects to management.

Importance of vendor knowledge about Energy Trust: Many respondents stressed the importance of having vendors be knowledgeable about Energy Trust, with the ability to facilitate the process for respondents to receive incentives on energy efficiency projects. For some, this may even be the most important factor in whether they choose to work with a vendor. Although most respondents said they are currently working with vendors that are knowledgeable about Energy Trust, some pointed out that they have encountered vendors that are not savvy about Energy Trust.

13. Barriers and Challenges to Take on Energy Projects

The following highlights barriers and challenges faced by respondents.

Don't have more energy efficiency projects to do: This was the most frequently mentioned barrier by respondents. Some said they believe they've done all the energy projects they can. Most listed the projects they've done to-date and summed up the situation by saying, "I don't think there's anything else we can do." One said that the results of a recent Energy Trust visit showed very little he could do except for things that would "just save me pennies."

Payback and/or ROI not acceptable: Some said payback or ROI was a barrier and went on to mention specific projects they would have done but that were not approved due to unacceptable payback or ROI. One added that it's getting harder to come up with projects with acceptable paybacks.

Funding for project not available: Some said that funding was a barrier and that even when an energy project clearly demonstrates it will save money, if their company doesn't have the cash flow or capital available at the time, the project doesn't get approved.

Need help in identifying projects to implement: Some indicated that they believe it's likely there are projects that would benefit their business but that they need help from Energy Trust in identifying what these are. For some, having the time and/or manpower to determine this on their own is part of the problem.

Other barriers and challenges: Other mentions included: the extent to which the implementation of the project will impede current productivity; the difficulty in determining the cost savings of energy related projects; the challenge of making outdated equipment more energy efficient.

14. Communications

There are indications that smaller manufacturers are less interested in receiving more information from Energy Trust compared to other customer segments served by Energy Trust. Key reasons for this appear to be: they don't have time to read communication materials, they feel the information they currently receive is adequate and/or they prefer to contact Energy Trust when they have a specific project in mind. Even those who reported that they currently aren't receiving much information said they feel more is not needed.

Among those that want more information, many gave general answers saying they wanted more information about Energy Trust programs or new developments. Although few were specific about the type of information, among those that were, a few said the most useful information would be to provide examples, including numbers, of businesses that benefitted from an energy efficiency upgrade. Generally, email was the preferred method of receiving information.

In contrast to their interest in receiving information, respondents expressed a high level of interest in receiving in-person visits from Energy Trust. This was further corroborated when respondents were asked about Energy Trust's energy advisors (see point #15 below). The preference for in-person visits is in part due to their feeling that an in-person contact will be tailored to their needs rather than general information about programs.

15. Awareness and Interest in Energy Advisors

Awareness of energy advisors

One of the most significant findings in this section was that among the one-third of respondents with low awareness of energy advisors, most did not seem to view their low awareness as being a problem. They seem confident that when they have a project, they'll be able to get in touch with Energy Trust or they will rely on their vendor to handle the Energy Trust contact. While many of these respondents don't do projects frequently, and some hadn't done a project in several years, most seem to be satisfied with the Energy Trust contact and service they receive when they do a project. Among respondents with high awareness (also one-third), many expressed satisfaction with the services provided by their energy advisor. Some have long-standing and frequent contact with energy advisors and referred to their current advisor by name.

In-person visit or facility walk-through with technical expert

Another significant finding is how many respondents were interested in scheduling an in-person visit and specifically a walk-through visit at their facility with an Energy Trust technical expert. It was very appealing to respondents to have someone with real technical expertise assess their operations and provide recommendations on energy savings opportunities geared specifically to their facility. While respondents appreciate routine or project-specific visits from their assigned Energy Trust advisor, the walk-through is appealing to provide a bigger picture view of energy cost-savings opportunities that might be available at their facility—including things they may not have considered.

III. Detailed Findings

This section provides detailed findings from the research. It is divided into eight topic areas as listed below. The eight topic areas are:

- 1. Awareness and usage of Energy Trust**
- 2. Most important business needs**
 - Most important business needs
 - Anticipated growth
 - Use of continuous improvements practices
 - Keeping up with new developments
- 3. How Energy Trust can help meet needs**
- 4. Priority of energy and energy savings**
 - Strategic position and importance
 - Energy goals
 - Importance of sustainability
- 5. Decision-making**
 - Process and criteria
 - Financing energy efficiency projects
 - Barriers and challenges
- 6. Use of vendors versus in-house staff**
- 7. Communications and energy advisors**
 - Communications
 - Awareness and interest in energy advisors (PDCs)
- 8. Other findings**
 - Extent automated
 - Perception of company size

Awareness & Usage of Energy Trust

This was the first question respondents were asked and the intention was to get an overview of their level of awareness and usage of Energy Trust. As the interview progressed, respondents revealed more in-depth information about their relationship with Energy Trust and their Energy Trust needs. It's important to keep this in mind when reading the findings in this section.

Awareness

Overall, levels of awareness of Energy Trust spanned a wide range. Of the 30 respondents, 13 had a fairly high level of awareness of Energy Trust, 6 had a medium level and 11 had relatively low awareness. In many cases, awareness is often project-related. Some say they're aware of Energy Trust from the standpoint of having done a specific project but don't have in-depth or continuing knowledge of Energy Trust programs, in part due to the reliance on vendors to help manage their projects.

Higher users of Energy Trust services also have higher awareness levels.

Among those with medium and low levels of awareness, many said they would like more information about Energy Trust and its services. Also many said they haven't done a project with Energy Trust in years and/or haven't had contact with Energy Trust in a long time making it difficult for them to recall meaningful details of their experience.

One respondent said it's to his advantage to be familiar with Energy Trust because he often promotes the use of Energy Trust incentives to his customers making their purchase of his products more likely and affordable. As he said, "It helps them justify the cost of something we can sell to them."

Satisfaction

There appears to be a correlation between the level of satisfaction with Energy Trust and frequency of contact with Energy Trust. Specifically, those who have maintained an on-going relationship with Energy Trust and/or have done more projects tend to be the most satisfied.

One respondent reported a bad experience with Energy Trust many years ago but said he has "gotten over it". Another respondent stated that he is very against organizations that offer subsidies, which tends to color his attitudes about Energy Trust.

Usage

As part of this questioning area, respondents also provided a recap of the projects they've completed with Energy Trust and some also mentioned projects they are planning to do. This information is included in the respondents' quotes for reference.

This section includes four topics:

- A. Most important business needs
- B. Anticipated growth
- C. Use of continuous improvement practices
- D. Keeping up with new developments

A. Most Important Business Needs

When asked about important needs facing their business, not necessarily energy-related needs, respondents offered a wide-ranging list of issues and challenges. Finding qualified labor to fill open positions was cited most often, followed by concerns over price and industry competition. Other issues include managing consequences that accompany business growth, declining customer base, and maintaining customer service. A handful mentioned energy-related issues that affect their business with the remainder covering an array of business matters.

Respondent needs fell into eight categories:

- 1. Finding qualified labor
- 2. Price and industry competition
- 3. Growth-related challenges
- 4. Declining customer base issues
- 5. Customer service issues
- 6. Energy-related business needs
- 7. Other important business needs
- 8. Difficult to address most important business needs

Each of the eight categories above is summarized below. Each includes the number of respondents mentioning it in parentheses.

1. Finding qualified labor (14)

Finding qualified labor was the most frequently mentioned issue by respondents making it one of the most important business needs. Many respondents commented on the challenge of finding potential workers from among a younger population that may not be interested in manufacturing careers or have not developed a strong work ethic. Others mentioned the low availability of “competent, skilled labor” and workers with the right blend of experience and training. Several mentioned they have difficulty getting responses to help wanted postings.

2. Price & industry competition (10)

Several respondents mentioned the impact of global competition on their business, and the need to remain price competitive with overseas manufacturers. Among respondents doing business locally, there was also concerned about price and product competition, and finding ways to stay efficient and improve processes to manage their cost of doing business.

3. Growth-related challenges (5)

Managing the challenges that accompany business growth is another need faced by respondents. Among the issues they face are lack of capacity in existing facilities,

staffing-related regulatory costs and requirements, reliable access to feedstock material, and limited capital and cash flow related to expansion plans.

4. Declining customer base issues (3)

Some respondents have experienced a decline in business from their primary customer base making finding new customers an important need. For one, this means expanding into new markets while another hopes to “ride it out” until their customer’s business recovers.

5. Customer service issues (2)

Two customers mentioned customer service related issues as their most important need. One said meeting customer lead times is critical and can be exacerbated by problems with machines breaking down. The other simply said “maintaining a high quality of service to our customers.”

6. Energy-related business needs (3)

Three respondents mentioned energy-related needs including: Finding time to evaluate and implement energy-related projects, meeting sustainability goals and becoming landfill free, and finding ways to reduce natural gas and power bills.

7. Other important business needs (3)

Three respondents mentioned an array of other business needs including: Remaining innovative and dealing with the current West Coast port slowdown to ensure its products get exported. The biggest challenge faced by a third respondent, a public entity, is finding a suitable funding structure to pay for projects required by state regulation that doesn’t place an onerous financial burden on ratepayers. Without such a solution, their approach has become reactionary and “just putting band-aids on things.”

8. Difficult to address most important business needs (2)

One respondent said that although he was “deep into the operations side of the business”, he was not privy to the fundamental challenges faced by his company and that even if he were, the information would be proprietary. Another respondent reported that his company was acquired very recently by an out-of-state company and due to their current state of transition, it was hard for him to meaningfully address the company’s most important business needs.

B. Anticipated Growth

Overall, the majority of respondents were optimistic about their company’s future growth. Almost two-thirds are currently experiencing growth and they anticipate growth will continue.

Anticipate business to grow

Among those with growth expectations, many referred to the recession and the toll it took on their business. Some are not back to pre-recession levels but are steadily growing. Some mentioned they feel the economy is looking “rosier” and in a better position than it was five years ago. Another respondent suggested that companies that survived the recession are leaner and more efficient and better capitalized than they

were 10 years ago. One went on to say. “We’re still having to work really hard for everything we get. But it’s not doom and gloom, that’s for sure.”

Most indicated that growth is coming from their existing business base. Several attribute their growth in part to expansion efforts whether it be new product lines, new markets served or new facilities.

Anticipate business to remain stable

Among those that expect to remain stable, a few say they haven’t recovered from the recession. As one said, “We’re now operating at probably 50% of where we were at our peak in 2006 or 2007.” A couple respondents say their businesses are dependent on customer bases that are not doing well. As one said, “Our success is tied to their success.” Other mentions included limited capacity or lack of space at their current property and pressures from losing market share to competitors.

C. Use of Continuous Improvement Practices

Respondents were evenly split between those that use continuous practices and those that don’t. Additionally, two respondents said continuous improvement practices do not apply to their business—one is a distributor and the other a wastewater treatment facility.

Among those mentioning they have ISO certification, most say it’s customer-driven. While they acknowledge the value of obtaining certification, most stressed that the process of obtaining certification can be time consuming, costly and sometimes disruptive to on-going business.

1. Those that do use continuous improvement practices

Among respondents who reported use of continuous improvement practices, most cited Lean manufacturing as the principle they follow. Here are key points for these respondents:

- How respondents implemented Lean practices varied from company to company. Some practice it more formally and others tailor practices and principles to meet their specific needs. One respondent said: “Our program is kind of based on Six Sigma and Lean but I wouldn’t call it either one. It’s just really kind of doing what’s right.”
- Among respondents who said they practice continuous improvement such as Lean, none said it prohibited them from pursuing activities that would result in better energy management. One said it was because, “We tweak it to make it work for us.” And another said, “I mean common sense usually rules.”
- Interestingly, one respondent said that Lean manufacturing has “run its course to some extent” at his company.

2. Those that do not use continuous improvement practices

Among those that said they don't use continuous improvement practices, many did not provide any additional comment—they just said no. A few said they weren't familiar with the practices. Here are some key points from respondents:

- Among those that did amplify their position, two respondents indicated their companies don't feel the need to practice continuous improvement, because they have cultivated a reputation among their customers for adhering to extremely high and reliable standards for quality and production. As one said: "We have programs and processes we use that are so well established and so proven, that those are the things that give us the advantage."
- One respondent said it's hard to apply high volume manufacturing practices to his business because they may only do 20 jobs a year and each job is different—they don't do repetitive work.
- Two respondents said no but indicated they would like to be doing more.

D. Keeping Up With New Developments

Many respondents acknowledge that keeping up with industry and energy developments is challenging. Their primary reasons include not having enough time due to the demands of their job and the small size of their company limits available manpower. The fact that things are constantly changing also contributes to the difficulty.

While keeping up is a challenge, some say they do it by making it a priority at their company. Others mentioned that vendors play an important role in keeping them informed and they rely heavily on this resource. One respondent finds value in attending trade shows as a way of keeping up with changes.

Several stressed the need for Energy Trust to help keep businesses informed of new developments. One respondent said: "I feel that's Energy Trust's job! How else are we going to know of changes, improvements or newer programs unless Energy Trust informs us?"

How Energy Trust Can Help Meet Respondents' Needs

Overall, respondents offered a broad list of suggested areas in which Energy Trust can help them meet business needs, ranging from promoting emerging technologies to taking better advantage of public purpose monies to simply helping them save on energy costs. Some respondents had difficulty answering this question from a big picture view of their company's needs, and tended to answer with either general mentions such as "reduce my energy costs" or with specific projects related to their business.

Responses are divided into eight categories:

1. Promote and incentivize emerging technologies

One respondent stressed that one of the most valuable contributions Energy Trust could make in terms of helping businesses is to get into the forefront of emerging technologies such as improved photovoltaics, LED technology, and improved lithium ion battery storage systems. He suggests Energy Trust not only promote these newer technologies but also compensate businesses for using them. He feels that over time it will result in utility cost savings and also provide an opportunity for businesses to leverage their positions from a marketing standpoint. The respondent felt the timing was good for Energy Trust to do this because of the upward trajectory in the economy, which is going to call for new building and new capital investment.

2. Expand the program to include incentives for improvements that increase production efficiency and not just energy efficiency

One respondent said it's become increasingly difficult for his business to implement energy efficiency projects because "the low-hanging fruit has already been gotten". This respondent suggested Energy Trust expand the program to include incentives for improvements that increase production efficiency and not just energy efficiency. This would not only help his company meet its need to produce products as efficiently and competitively as possible but also allow them to take better advantage of the Energy Trust funds. The respondent expressed frustration at not being able to "recoup" the money they've contributed to the public purpose fund and said if Energy Trust can't expand the program then it should consider reducing the public purpose charge percentage from 3% to 2%.

3. Help businesses take better advantage of public purpose charge monies

Related to #2 above, three respondents specifically mentioned that they had heard the public purpose fund was underutilized and suggested that Energy Trust needs to help businesses take better advantage of these monies. One said the current incentives inhibit use due to unacceptable ROI levels and strongly urged that incentives be increased. Others mentioned that Energy Trust needs to educate customers on how best to "tap into the fund", with one asking if audits were the best way for his business to do this.

4. Enhance outreach/education/information: Although the topic of communications was explored later in the interview, four respondents mentioned "informational" issues

early on in the interview as one of the most important ways Energy Trust can help their businesses. Comments included: provide outreach and educational resources, serve as a clearinghouse for information beyond incentives, and provide information on what's available. One respondent stressed the need for Energy Trust to reach out to them on projects they might not be aware of because, "I don't have the time and resources to look at Energy Trust all the time to determine if there's something else I could be utilizing from them or how else they might help us".

5. Increase in-person contact: Although the topic of services provided by Energy Trust was explored later in the interview, three respondents mentioned in-person contact as the most important thing Energy Trust could do to help their business.

6. Provide help on a specific problem/project

Six respondents described in detail specific energy related challenges they are facing and requested help from Energy Trust. These included: how to reduce spike loads, replacing plastic ceiling panels, installing a new wash line, dealing with a complicated HVAC issue, how to implement lighting upgrades without affecting production efficiency, and assistance with a sustainability challenge.

7. Provide incentives on natural gas: Two respondents mentioned that it would help their business if Energy Trust provided incentives on natural gas.

8. Help reduce energy costs: Three respondents simply said the most important thing Energy Trust could do would be to help them reduce their electricity and gas costs.

This section includes three topics:

- A. Strategic position and priority of energy and energy savings
- B. Energy goals
- C. Importance of sustainability

A. Strategic position and priority of energy and energy savings

Most respondents said energy and energy savings is a priority. For most, the opportunity to reduce energy costs is the chief motivation for making energy a priority. And the reason for reducing their energy costs is financially driven as opposed to production efficiency, sustainability, or other rationale. While reducing their energy costs is important, many address this on an ad hoc or opportunistic basis. Although most respondents aren't very sophisticated in their approach to energy, they show a willingness and awareness of the need to address it. Some would like to give energy and energy savings more attention but their small company size doesn't make it practical for them to do so.

Again, although most respondents said energy and energy savings is a priority, there are significant differences in what this means to them in actual practice. In terms of the range of priority levels, respondents fall into four categories as follows:

1. High priority: Two respondents said energy is a high priority and they have strategic energy management practices in place. These are also the only two respondents that have specific energy goals. Both have a disciplined plan and approach to meet these goals.

2. Proactive: Seven respondents indicate that energy is a priority with most saying reducing their energy costs is the primary motivation. Although these companies don't have a strategic energy management plan as those who make it a high priority do, they are proactive in addressing energy savings and not reacting only when opportunities arise. This sets them apart from the remaining respondents. This group makes a regular effort to evaluate energy costs and have a plan to address them. For example:

Two respondents have taken it upon themselves to develop an energy savings plan despite the fact that it isn't required by their company.

One respondent made managing energy a higher priority after realizing a huge savings on a lighting project. Another made it a higher priority after a shift in company direction from knee-jerk reaction to pre-planning.

For one respondent energy is a priority because they see themselves as being in the energy business. In addition, it's a way for them to increase business if their customers can benefit from energy incentives.

3. Opportunistic: Similar to those who are proactive, these nine respondents all say energy is a priority, and for most, the primary motivation is to reduce their energy costs. However, they don't appear to be proactive or to have a plan to manage their energy costs. They pay attention to their energy consumption and take advantage of opportunities when possible. One respondent mentioned that their company was too

small to allow for assigning a staff person the job of evaluating energy needs and planning. Another respondent said that keeping up with all the possibilities was a challenge.

4. Low or no priority: Of the remaining 10 respondents, half clearly state that energy is not a priority, and the other half were reluctant to say so specifically. For some, it appears to be a priority in name only simply because energy is such a big cost. Others suggested it is not a priority because they have other more important challenges facing their business. One said it's not a priority now but he'd like it to get more attention.

B. Energy Goals

Almost all respondents, 28 out of 30, said their company did not have specific energy goals. Most respondents didn't provide a reason for not setting energy goals. Among those that did give a reason, they said their company is too small and/or they're not sophisticated enough to have goals.

Just two respondents have specific, company-driven energy goals. A third respondent, said that although his company doesn't have energy goals, he set one for himself: "My own goal is to complete one energy project a year."

C. Importance of Sustainability

When asked about the priority of energy and energy goals, respondents rarely included an unprompted mention of sustainability in their responses. Instead, comments about sustainability arose only as a prompted factor to questions and discussions on this topic. This is in contrast to responses related to "reducing energy costs", which almost always was part of respondent replies.

Sustainability findings are summarized below in the following three categories:

1. High priority by choice

Five respondents reported that sustainability is very important to their company and it is part of the company philosophy. They are passionate about it and are driven to be sustainable because of their own commitment and not by outside forces. One said being sustainable is equally important as reducing energy costs. Some mentioned that being sustainable was intrinsic to their business. Others stressed they were practicing sustainability long before it became popular to do so.

2. Market-driven or compliance related

Some pursue sustainability because it's necessary to insure their success due to market-driven forces and/or compliance issues. A couple of these respondents made it clear that if it weren't necessary, they wouldn't pursue sustainability. As one said, "But to be honest with you, if we could grow our business and make more money by not being sustainable, we wouldn't be sustainable."

3. Low priority

Some said that while they care about the environment, it is not a key decision-making factor and that bottom line and payback factors are much more important. As one said,

“We need to make money.” These respondents clearly state that their motivation to become more energy efficient is primarily to reduce their costs.

A couple of respondents mentioned that their corporate office doesn’t provide any sustainability directives. One said environmentally-friendly products can be more expensive and not as efficient. Another expressed the opinion that environmental concerns are sometimes taken to the extreme.

This section includes three topics:

- A. Decision-making process and criteria
- B. Financing energy efficiency projects
- C. Barriers and challenges

A. Decision-Making Process and Criteria

Almost all respondents interviewed were those with primary responsibility for initiating energy efficiency projects at their company. Some mentioned that they also rely on others at their company to help them identify potential projects. A few respondents said they were part of a management team that shared the responsibility for initiating and evaluating energy-savings projects.

Decision-making process

Most respondents develop some sort of proposed scope of work for management approval, although the formality of the prepared information varies by company.

Overall, there are indications that the process of proposing energy-savings projects is somewhat less formal among smaller manufacturers. Some don't do written proposals but instead just discuss verbally. One respondent said, "We don't do formal proposals or anything. We just kind of look at things we're thinking of upgrading or purchasing and make a decision."

In developing their proposals, some rely heavily on Energy Trust and/or vendors to provide the project's ROI and cost savings. As one said: "We get a lot of help from Energy Trust and our electrical contractor. They're usually pretty instrumental in showing us the ROI, annual cost savings, and the rebates." Respondents stressed the high value of this assistance. As one said, "A lot of us people out here, we're really busy and we don't have the time or even the knowledge to set up these projects like those Energy Trust people do."

Two respondents said they have to submit their annual budgets in advance, which requires careful planning and can present challenges when unanticipated projects arise during the year.

Decision-making criteria

ROI and payback are very important in the decision-making process with almost all respondents mentioning one or both of these factors as being critical. Other important factors cited include having the upfront capital to invest in a project and the value of Energy Trust cash incentives.

- **Payback period:** Among the eight respondents who mentioned a specific payback period requirement, the range was 1.5-5 years with most being under three years.
- **Upfront capital:** Five respondents stressed that in addition to ROI and payback, having the upfront capital to do a project is also very important. A couple of respondents gave examples of projects that had excellent payback periods and that

made sense to do but weren't implemented due to lack of the upfront capital needed.

- **Other criteria:** In addition to ROI, payback and upfront capital, five respondents mentioned other criteria important in the decision-making process. Two respondents said that before they even evaluate the financial factors, they first ask if there is a value to the business or why they are considering doing it. As one said, "With our company, the first thing we consider is whatever the intended outcome is: Is there a value to the business. And if there's a value to the business, the next question is whether the ROI is within the acceptable time horizon." Other criteria mentions included: sustainability, safety in the plant, and productivity/efficiency.
- **Energy Trust incentives:** Four respondents stressed how important the Energy Trust incentives were in making projects affordable. As one said: "Had we not had Energy Trust, I think there were projects we wouldn't have done. The Energy Trust incentives really make a difference."

Ultimate decision-maker

Most respondents said the ultimate decision-maker was the company owner or upper management. However, six respondents interviewed were actually the final decision-maker. These respondents were the president, CEO or owner of the company.

Seven respondents have corporate offices that are located either out-of-state, out-of-the country or in a different city in Oregon. For most of these respondents, final approval needs to come from the corporate office but interestingly none reported that this made the decision making process more difficult.

B. Financing Energy Efficiency Projects

Seventeen of the thirty respondents provided a response to this question. The remaining thirteen either said they did not have the knowledge to accurately answer the question on their company's behalf or they were not asked the question in the course of the interview.

Among the 17 respondents who provided a response, the majority (12) said their company would not consider financing for an energy efficiency project. Of the remaining five respondents, four said they might consider financing and one said they currently finance.

Responses are summarized below in three categories.

1. Unlikely to consider financing

Among those unlikely to consider financing, many were very firm in asserting that they would never finance an energy efficiency project because they avoid debt and prefer to pay with cash they have on hand. Some added that small businesses tend to be conservative and don't spend money they don't have. As one said "You have to be conservative if you want to stay in business very long."

- Two respondents had investigated financing options in the past and had rejected them because they were skeptical of the arrangement and because, ultimately, they preferred to pay on their own.
- One respondent said they would be unlikely to finance because they already have so much debt on their infrastructure.
- One respondent said that although he's very unlikely to finance, it wouldn't be hard to do conventionally through his bank.
- One respondent said it was hard to give a definitive answer because the decision to finance would involve so many factors. But overall, he thought it was unlikely his company would finance.

2. Might consider financing

Among the four respondents who said they might consider financing, several said it was because they believed their company was becoming more open-minded about the idea of financing. One also said if lower interest funding were available for energy projects, it would be something they would consider.

3. Currently finance

One respondent said they regularly finance and made the comment, "Financing is the only way we get things done."

C. Barriers and Challenges

When asked about barriers and challenges to take on energy projects, some respondents reiterated in more detail ideas touched on in other topic areas while others offered fresh input on the issues or factors that influence new projects.

Findings are summarized into five categories:

1. Don't have more energy efficiency projects to do

Eight respondents said they believe they've done all the energy projects they can. Most listed the projects they've done to-date and summed up the situation by saying, "I don't think there's anything else we can do." One said that the results of a recent Energy Trust visit showed very little he could do except for things that would "just save me pennies."

2. Payback and/or ROI not acceptable

Five respondents said payback or ROI was a barrier. Some actually mentioned specific projects they would have done but that were not approved due to unacceptable payback or ROI. One mentioned that after his company experienced a poor ROI on a lighting project done at one of their out-of-state facilities, management would not approve the lighting project for their Oregon facility. Another said it's getting harder to come up with projects with acceptable paybacks.

3. Funding for project not available

Six respondents mentioned that funding was a barrier. Some said that even when an energy project clearly demonstrates it will save money, if their company doesn't have the cash flow or capital available at the time, the project doesn't get approved. One mentions machines always take precedence over energy efficiency upgrades. Others seem to have a more constant problem with getting funds to support energy efficiency projects.

4. Need help in identifying projects to implement

Four respondents indicate there may be other projects that would benefit their business but that they need help from Energy Trust in identifying what these are. For some, having the time and/or manpower to determine this on their own is part of the problem.

5. Other barriers and challenges mentioned by respondents

Four respondents mentioned other barriers including:

- The extent to which the implementation of the project will impede current productivity.
- The difficulty in determining the cost savings of energy related projects.
- The challenge of making outdated equipment more energy efficient.

An additional respondent provided detailed information on the challenges she's facing with four energy-related projects.

Use of Vendors Versus In-house Staff

Overall, vendors are very important to respondents for several reasons including their knowledge of Energy Trust programs and incentives, their value in assessing and designing projects, their ability to handle projects if necessary, and their assistance in making the case for projects to upper management. Several have developed strong relationships with vendors and regard them as extended staff. Vendors also seem to make a difference in respondents taking advantage of Energy Trust incentives.

Findings are divided into five key areas:

- Use of in-house staff versus vendors
- Type of vendors used by type of job
- Reliance on vendors and closeness and satisfaction with relationship
- Specific benefits or value that vendors provide to respondents
- Importance of vendor knowledge about Energy Trust

1. Use of in-house staff versus vendors

- **Use a combination of in-house staff and vendors:** Most respondents use a combination of in-house staff and external entities to complete projects. Many have identified those projects they can do themselves and those where they're better off using an outsider. For example, some said they always use a contractor for any kind of electrical work. Respondents' choice of using an external entity is often not just because they aren't capable of doing the work themselves but also because they recognize there's a real value to having an outsider complete the work.
- **Mostly use in-house staff:** Five respondents said they mostly use in-house staff to complete projects with most expressing a strong preference to do as much as possible themselves. As one said, "We only use outsiders when we absolutely have to". Reasons appear to be it saves money and they have the capability to do it themselves.
- **Mostly use vendors:** Four respondents said they mostly use external entities to complete projects. One said he's a big believer in using outsiders because it's more cost-efficient and also it puts the responsibility of something going wrong with the project on the vendor. Another mentioned they're only equipped to do minor maintenance and need to rely on vendors.

2. Type of vendors used by type of job

Electricians were the most frequently mentioned vendor used by respondents with over half saying they use an electrical contractor to complete energy efficiency projects. Most primarily use their electrical contractor for lighting projects but some also use these contractors for other electrical-related jobs. Some say that while they can complete many projects with in-house staff, electrical projects really require an expert and/or that electrical projects tend to take too much in-house staff time to complete. Many referred to their electrician by name indicating the closeness of their relationship with their electrical contractor. Air compressor contractors were the second most frequently mentioned contractors used by respondents. Other jobs that respondents use

contractors for included: HVAC, refrigeration, boilers, welding equipment, insulation and motor-related projects.

3. Reliance on vendors and closeness and satisfaction with relationship

Many respondents rely heavily on vendors and have developed close relationships with them and worked with them for years on multiple projects. Most respondents appear to be satisfied with their vendors with some singling out vendors by name and praising the service they provide and quality of their work.

4. Specific benefits or value that vendors provide to respondents. Respondents mentioned many benefits of using vendors including having access to an expert that can bring ideas to them. This ranges from information about new products to specific energy efficiency related opportunities. Other benefits noted:

- Assess needs and design systems. One respondent described a relationship with his refrigeration company engineer who can design to his needs and provide opinions on issues he's facing: "He's a good person to go to and bounce all kinds of ideas off of."
- Handle projects from start to finish, which makes it easy for the respondent when the vendor does most of the work.
- Help them sell projects to management.

5. Importance of vendor knowledge about Energy Trust

Over half (17) of respondents mentioned the importance of having vendors be knowledgeable about Energy Trust, with the ability to facilitate the process for respondents to receive incentives on energy efficiency projects. For some, this may even be the most important factor in whether they choose to work with a vendor. As one respondent said, "If we talk to a contractor that has a blank look on their face when we ask them about Energy Trust, we look elsewhere for a contractor. And that's because the Energy Trust incentives are so important in helping us offset costs and we only want to work with contractors that really understand Energy Trust."

Although most respondents said they are currently working with vendors that are knowledgeable about Energy Trust, some pointed out that they have encountered vendors that are not savvy about Energy Trust. One respondent suggested: "I think it would be a great program for Energy Trust to educate and reach out to more vendors—especially heating and cooling companies."

This section includes two topics

- A. Communications
- B. Awareness and interest in energy advisors (PDCs)

A. Communications

Overall, almost one-third of respondents were not interested in receiving more information. Reasons provided for not wanting to receive information included:

- They're getting enough information now either through Energy Trust, vendors, trade magazines or other sources.
- They'll contact Energy Trust when they have a specific project in mind.
- They simply don't want more information. They don't have time to read it and/or are concerned about being barraged with material.
- Even though they don't receive much information from Energy Trust, they feel more information is not needed.

Respondents identified the following preferred methods and types of information to be received from Energy Trust:

- **In-person visits.** Some respondents prefer in-person visits from Energy Trust or to have communication with Energy Trust that is related to specific projects they're considering doing. They prefer information that is tailored to their needs when they have them rather than receive general information about programs. See the Energy Advisors section, which immediately follows this for more information on respondents' desire for in-person visits.
- **Detailed examples.** Among those that want more information, many gave general answers saying they wanted more information about Energy Trust programs or new developments. Although few were specific about the type of information, among those that were, a few said the most useful information would be to provide examples, including numbers, of businesses that benefitted from an energy efficiency upgrade.
- **Email.** Generally, email was the preferred method of receiving information. A couple respondents said they prefer postal mail delivery. Two respondents also said seminars are helpful.

B. Awareness and Interest in Energy Advisors (PDCs)

Two of the most significant findings in this section are:

- Among respondents with low awareness of energy advisors and specific services provided, their level of awareness is not perceived by them as being a problem. They seem confident that when they have a project, they'll be able to get in touch with Energy Trust or they will rely on their vendor to handle the Energy Trust contact. While many of these respondents don't do projects frequently, and some hadn't done a project in several years, most seem to be satisfied with the Energy Trust contact and service they receive when they do a project.

- The other significant finding is how many respondents were interested in scheduling an in-person visit and specifically a walk-through visit at their facility with an Energy Trust technical expert. More details are provided below.

Awareness of energy advisors

- **Low or no awareness:** Roughly one-third of respondents had very low or no awareness of Energy Trust’s energy advisors. Seven reported a total lack of awareness and an additional three said that due to a lack of recent contact with Energy Trust, they were no longer up-to-date on specific services provided by energy advisors. One said, “As I mentioned earlier, we haven’t received any contact from Energy Trust in several years. So I’m no longer up-to-date on their services and I don’t know about energy advisors.”
- **Somewhat aware:** Respondents who could be described as being somewhat aware were those who knew Energy Trust offered the services of energy advisors and had past experience working with an energy advisor. Some said they have very little direct contact with Energy Trust because they rely on their vendors to manage their Energy Trust projects. As one said, “I’m aware that Energy Trust has people available to help us when we decide to do projects, which is great. But it’s usually our vendors that work more closely with Energy Trust.”
- **High awareness:** Eleven respondents were very aware of Energy Trust services and its energy advisors. Many expressed satisfaction with the services provided by their energy advisor. Some have long-standing and frequent contact with energy advisors and referred to their current advisor by name.

In-person visit or facility walk-through with technical expert

One of the most significant findings is how many respondents were interested in scheduling an in-person visit and specifically a walk-through visit at their facility with an Energy Trust technical expert. It was very appealing to respondents to have someone with real technical expertise assess their operations and provide recommendations on energy savings opportunities geared specifically to their facility. While respondents appreciate routine or project-specific visits from their assigned Energy Trust advisor, the walk-through is appealing to provide a bigger picture view of energy cost-savings opportunities that might be available at their facility—including things they may not have considered. Additional findings include:

- Almost half of respondents requested an in-person visit from an energy advisor. And most specifically said they’d like to do a walk-through of their facility with an Energy Trust technical expert. Some have a specific operational challenge that they want to “show” to an expert for assessment. But most want an overall assessment of their facility regarding how they could reduce energy costs.
- Some were interested in scheduling a walk-through immediately. Others wanted to be contacted sometime in the near future. Most of these respondents were unaware this service was offered prior to the interview. Interestingly, two of these

respondents actually requested a walk-through early on in the interview, before being specifically asked about energy advisor services.

- Other respondents (11) mentioned they had a walk-through visit in the past or currently had a visit scheduled and that these visits were very helpful. One respondent had recently had a walk-through and said that what the Energy Trust person was saying during the visit “went over his head”. But he was expecting to receive a report on the visit soon and hoped that would clarify things for him.

This section includes two topics:

- A. Extent to which automated
- B. Respondents' perception of the size of their company

A. Extent To Which Automated

Of the seventeen respondents that replied to this question, six said they were not automated at all or very little. The other eleven reported a range of automation from very automated to somewhat.

B. Respondents' Perceptions of Their Company's Size

Of the fifteen respondents that provided input on this question, seven described themselves as small, two as small-to-medium and six as medium. No one described their company as being large. Although the results are not conclusive, there were indications that some take pride in describing themselves as a small business.

IV. Appendix

This appendix includes the following materials:

- 1. Non-completes:** A recap of the reasons for non-completed interviews.
- 2. Pre-letter sent to respondents**
- 3. Discussion guide used in research**

Production Efficiency Market Research: Non-Completed Interviews

Energy Trust mailed pre-letters to ninety-nine (99) potential respondents. All 99 respondents were contacted and interviews were completed with 30 of these respondents. The following recaps the results of the remaining 69 non-completed interviews.

- 1. Respondent did not return call:** Forty-seven (47) respondents did not return calls from Forrest Marketing within the timeframe of the study.
- 2. Respondent declined interview:** Ten (10) respondents declined to participate. These ten were about evenly split between those that said they were too busy and those that said they had no need for Energy Trust services at this time. Among those who said they had no need for Energy Trust services, an effort was made to continue the interview and explore why but ultimately it emerged that these respondents did not want to do the interview.
- 3. Inaccurate contact information:** Seven (7) respondents were eliminated because they could not be reached at the contact information provided.
- 4. Respondent willing to do interview but unable to do at this time:** Three (3) respondents were interested in participating but either due to imminent medical leave or extended travel plans were unable to participate within the timeframe of the study.
- 5. Respondent agreed to participate but didn't follow-through:** Two (2) respondents were reached and expressed a sincere willingness to participate but were not available at the scheduled time and despite efforts to reschedule, the respondent never followed through.

Sample Pre-letter Sent to Respondents

All 99 potential respondents received a pre-letter prior to being contacted by Forrest Marketing. Letters were printed on Energy Trust of Oregon letterhead.

Date

Respondent name
Respondent title
Company name
Company address

Dear [Name of Respondent]:

Energy Trust would like your opinion on how we can best meet the needs of manufacturing customers in Oregon. To get your input we have retained an independent researcher, Brenda Forrest. Brenda will be calling you in the next week to ask whether you are willing to participate in a brief telephone interview.

We understand the value of your time and when you receive a call from Brenda, she will schedule a phone interview at your convenience.

Your participation in this research project is of course voluntary but I encourage you to participate. We highly value your input and hope you will take a few minutes to share your thoughts with us.

If you have any questions about this research project, please don't hesitate to contact me at 503-546-3624, or susan.jowaiszas@energytrust.org. Thank you for your cooperation.

Sincerely,

Susan Jowaiszas
Senior Marketing Manager
Commercial & Industrial Sectors

Production Efficiency Market Research Final Discussion Guide

1. **Introduction and warm-up**
2. **Awareness & usage of Energy Trust**
 - a. How aware are you of Energy Trust of Oregon?
 - b. Describe your perceptions of Energy Trust's role in assisting manufacturers, including the services it offers. Probe for respondent's level of confidence or understanding of what Energy Trust offers.
 - c. Have you ever worked with Energy Trust? If yes, how did it go?
3. **Overall business needs & how Energy Trust can help**
 - a. What are your most important business needs in the near term?
 - b. What are the most valuable ways in which Energy Trust could help you in meeting your business needs?
 - Probe for specifics on how energy can "fit-in" to their needs and, specifically, what role, if any, energy plays in their production efficiency goals.
 - c. Thinking of the future, do you anticipate your business will be growing, remain stable or decline? Probe for: Why do you say that? How will it impact your company's need/ability to pursue energy management?
 - d. Describe your company's use, if any, of continuous improvement practices.
 - Probe for usage and awareness of Six Sigma, Lean, TQM, ISO certifications, and smart manufacturing.
 - Do you feel your company's need to be "lean" ever prohibits you from pursuing activities that would result in better energy management?
 - e. How do you keep up with new developments in your industry and in energy specifically?
4. **Priority of energy management and decision-making processes**
 - a. **Describe your company's overall position on energy and energy savings.**
 - How important is energy savings/management at your company--is it a priority? What level of attention does it get?
 - b. **Does your company have specific energy-related goals?** (consumption, sustainability, etc.)
 - **If no:** Why not? **If yes:** Ask respondent to describe their company's goals (do they know what they are) and ask whether they know if their company is meeting its goals.
 - c. **Is there a person at your company who "looks at" energy usage?**
 - **If no:** Why not? **If yes:** Describe the person's title and responsibilities. Probe for how they're looking at energy and how they're tracking it.
 - d. **Decision-making criteria and processes**
 - Describe how energy decisions are made in your company.
 - Specifically, what are the criteria for energy efficiency projects?
 - How do you prioritize what needs to be done?
 - Who's the ultimate decision-maker?

e. Financing energy efficiency projects

- Are you aware of financing options?
- Have you ever financed an energy efficiency project?
- Would you consider financing? Why or why not.

5. Use of vendors and other external entities vs. in-house staff

- a. To what extent do you rely on in-house staff versus external entities to complete energy efficiency related projects?
- b. Describe the type of external resources you have ever used to assist in getting energy efficiency related projects done.
 - Probe for specific types of external resources: vendors, contractors, consultants, etc.
 - Probe for whether external resources ever mention/suggest Energy Trust.
- c. Describe specific energy-related projects for which you have used vendors or other external entities.
 - Probe for whether they received Energy Trust incentives for projects.
- d. How would you describe your relationship with these vendors (or other external entities)? Probe for level of satisfaction, length of relationship, level of reliance on, frequency of use and ability to meet needs.
- e. To what extent do you rely on external entities to provide ideas and solutions? Probe for whether respondent has ever been challenged to review a proposal or idea that they couldn't understand or didn't know how to consider.

6. Barriers, challenges and motivations to take on energy projects

- a. What barriers, if any, does your company face in taking on energy projects?
 - Probe for: capacity, financing, lack of technical expertise, lack of certainty of promised savings, and other factors.
 - How important is keeping your fixed costs down? Is energy a part of this? Are costs fixed, variable or "mixed"?
- b. What challenges is your company facing? Probe for: workforce issues, global competitiveness and other factors.
- c. What motivates your company to pursue energy management? Probe for cost savings, commitment to environmental/sustainability issues, supply chain pressure to demonstrate sustainability and other factors.

7. Communications

- a. What are the most effective ways for Energy Trust to communicate and share information with you?
 - **Probe for:** information content that would most useful to respondent, most effective ways to communicate with respondent, frequency of contact and most credible source of information (ETO, vendors, PDCs).
- b. Have you ever received information on Energy Trust's programs and services? **If yes:** How effective were these materials in meeting your needs? What was the source and content of the information?

8. Awareness of & interest in Energy Trust's energy advisors

Note: In this section, the emphasis will be on the actual services provided by Energy Trust's PDCs and technical advisors as opposed to their titles. For purposes of this discussion guide, the term energy advisor is used.

- Awareness level of Energy Trust's energy advisors
- Usage of Energy Trust's energy advisors
- Interest in: Provide description of services provided by energy advisors and ask respondent if they would be interested in having an energy advisor from Energy Trust contact them.

9. Information about respondent's company

During the course of each interview, the following information will be gathered when most appropriate:

- Number of employees they have
- Extent to which they are automated
- Their perception of their company's size (small, medium, large)
- How well their NAICS code matches what they actually do

10. Wrap-up

- Do you have any other suggestions for how Energy Trust could better meet your needs?
- Are there any issues we haven't covered that you'd like to comment on?
- Thank respondent