

## MEMO

**Date:** November 30, 2012  
**To:** Phil Degens, Manager, Evaluation  
**From:** Kim Crossman, Industry + Agriculture Sector Lead  
Susan Jowaiszas, Sr. Marketing Manager, Commercial + Industry|Ag  
**Subject:** Staff Response to the 2012 Industrial Market Research Study

In late 2011, the Industrial Sector conducted the sector's first market research study, for Energy Trust. The purpose of the research was to aid Energy Trust in increasing participation by obtaining an in-depth understanding of key dynamics including: decision-making criteria and processes, strategic position and priority of energy and energy savings, barriers to implementing energy efficiency projects, employee and customer engagement and the importance/appeal of various marketing messages. This in-depth information, collected and reported in the customers' own words, is highly complementary to the ongoing Evaluations research, including process evaluations and Fast Feedback surveys. Staff feels that in-depth market research of this nature could be valuable to conduct every 3-4 years to inform program design decisions.

In summary, the research documented that the vast majority of respondents is highly satisfied with Energy Trust and appreciates the value and benefits of the program offers to their businesses. In addition to pointing out where current program offerings and strategies are working well, the market research report was rich with feedback and recommendations that will inform program improvement and program marketing over the next several years. .

Positive customer responses emphasized the value and efficacy of the following program strategies, which will be maintained and expanded upon to drive ongoing, significant savings from repeat customers:

- Cash incentives are important, appropriate and appreciated. Bonuses are effective to get customer attention
- High quality technical studies and other technical services provided by Energy Trust are overcoming barriers to investment, such as lack of capacity or expertise at the site or uncertainty about savings outcomes. High-touch program design is working. PDC assistance is widely valued although roles between PDCs and Energy Trust could be better understood
- Making participation in the program can be made easier for customers

Other feedback indicated areas where program participation is less clear or difficult to navigate. Program staff have analyzed these findings and developed a detailed plan to implement changes over the next 2 – 3 years to address these opportunities and make it easier to participate and improve outcomes:

- Clarifying customer understanding of roles and responsibilities
- Providing more proactive communication from Energy Trust, including the creation of a quarterly customer newsletter, *The Champion*, which includes program and technical updates, training event calendar and customer success stories.
- Increasing customer awareness of savings/ progress over time
- Helping customers know what their next EE opportunities are
- Provide more technical assistance to smaller customers



# **Energy Trust of Oregon**

# **Industrial Market Research Results**

**March 2012**

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**Industrial Market Research Results**  
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## **Energy Trust of Oregon Industrial Market Research Results**

### **I. Purpose & Method**

**This research report summarizes the results of thirty-seven telephone interviews that were conducted for Energy Trust of Oregon among industrial customers.**

#### **A. Purpose**

The purpose of the research was to aid Energy Trust in increasing participation in energy efficiency programs among industrial customers by obtaining an in-depth understanding of key dynamics including:

- Decision-making criteria and processes
- Strategic position and priority of energy and energy savings
- Barriers to implementing energy efficiency projects
- Employee and customer engagement
- Importance/appeal of various messages

#### **B. Method**

**In-depth telephone interviews were conducted among industrial customers:**

1. **Selection of respondents for research:** Energy Trust selected a representative list of 97 potential research respondents based on factors including type of industry and geography.
2. **Respondent pre-letters:** Each of the 97 customers selected for the research received a personalized letter from Energy Trust, signed by Kim Crossman. 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 on December 2, 2011.
3. **Completion of interviews:** The research resulted in the completion of 37 interviews, exceeding the goal of completing 35 interviews.
  - The interviews were conducted from December 6, 2011-January 26, 2012.
  - Interviews ranged in length from 35 minutes to over an hour.
  - All interviews were conducted by Brenda Forrest, Forrest Marketing.
4. **Confidentiality:** Respondents were not promised confidentiality and this was not an issue with any of the respondents. They understood that their comments would be reported back to Energy Trust along with their company name.

### **C. Respondent Information by city and industry type**

The 37 respondents who participated in the research represented companies located in the following Oregon cities and in the following industry classifications:

1. **Respondent breakdown by city:** The 37 respondents represented companies located in the following seven regions in Oregon:

Central Oregon, Columbia Gorge, Eastern Oregon, Oregon Coast, Portland Metro Area, Southern Oregon and Willamette Valley.

2. **Respondent breakdown by industry type:** The 37 respondents represented the following 12 industry types (industry was defined by NAICS code):

Beverages, chemicals, cold storage, computers & electronics, food products, miscellaneous manufacturing, paper manufacturing, plastics, transportation & aerospace, wastewater treatment, water supply and wood products.

- D. Non-completed interviews:** An effort was made to contact all 97 customers who received the pre-letter. More information about non-completed interviews is in the Appendix.

- E. 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 opportunities and challenges for Energy Trust among its industrial customers, the results are not projectable to the entire industrial universe that Energy Trust serves in Oregon.

## II. Executive Summary

### 1. The majority of respondents is highly satisfied with Energy Trust and appreciates the value and benefits the program offers to their businesses.

- Energy Trust is viewed positively as an organization that delivers results.
- Almost all respondents said their energy efficiency projects have been successful.
- With the support provided by Energy Trust and its Program Delivery Contractors (PDCs), respondents have confidence to move forward with projects knowing they will be successful.
- Although the research indicated the program is fundamentally sound, it also revealed several areas where program enhancements might improve participation. These are described in the remainder of this summary.

### 2. Overwhelmingly the research indicated that bottom line concerns are the most important considerations in making decisions about whether to implement energy efficiency projects.

- ROI was the most significant consideration with many wanting to see a payback within 2 years. Lack of available capital is an obstacle for some, but even when capital is available, if the project doesn't pencil out or meet a company's prescribed payback period, it is unlikely to go forward.
- At both small and large companies, access to capital in this economy is very tight. If they can't do it with the current cash flow, they don't do it. Overall, the economy has impacted many of these companies, affecting staffing levels, company priorities, cash flow and access to capital.
- When companies balance one investment decision against another, they look at projects that have the greatest impact on the bottom line, whether or not they are an energy project.
- Energy Trust incentives are critical to implementing projects, often making the difference between whether or not a company moves forward with an energy efficiency project.

### 3. Lack of awareness of opportunities to save

While bottom line concerns are a given, lack of awareness of available opportunities also emerged as an influential issue. Respondents did not identify awareness as a major barrier, yet they expressed frustration over not knowing about more opportunities or how to take the next step to the next project.

- One of the most significant findings is that some respondents think they've done all they can or are uncertain about what they could do next. Some use the term "low hanging fruit" as a way of describing what they've done and why it's hard to move forward.
- More than one indicated they know there are more opportunities but they didn't know how to find them. With this lack of information, they do nothing.

Tied up in 'lack of awareness,' respondents also self-identified obstacles that prevent them from absorbing or receiving information:

- Time to pay attention to new information

- Understanding where to go to access new information
- A desire to learn hard facts that are relevant to their industry

Also embedded within 'lack of awareness' is that many respondents wear multiple hats within an organization. They have demanding jobs with many priorities, just one of which might relate to energy efficiency. Many have the desire to do more but simply don't have time to be aware, research projects or seek out information. They would like more direct outreach from Energy Trust or from the PDCs who can guide them on the path to their next project.

**4. Decision-making: One of the most valuable findings regarding decision-making is that many respondents are only presenting energy efficiency projects that they are confident their management will approve.**

- They self-select projects with only the 'certain' ones forwarded to upper levels for review. In many cases, only projects that are a slam-dunk get proposed (often based on whether the project meets payback criteria), and respondents rarely reported a project being rejected.
- Many respondents are pressed for time and resources and avoid projects with softer but worthwhile benefits that don't fit neatly into the company's specified criteria.
- The plant engineers or facility managers are important contacts as they are on the front lines and identify or initiate projects.
- Senior management, sometimes located several states away, typically make the final decision, one based on the dollars and cents – cost, payback and resources.

**The non-energy benefits of doing an energy efficiency project clearly have value to customers but currently are not a motivator to initiate projects.**

Respondents don't include non-energy benefits as part of their project proposals to upper management as decision-making factors. However, many respondents become quite passionate about these non-energy benefits "after-the-fact" and they serve as validation or reinforcement for doing the project.

**The role of the proposer:** The proposers of energy efficiency projects – plant managers or plant engineers – are spread thin in demanding jobs with many responsibilities.

- Some propose projects only every three to five years so they don't have the time to become experts or develop the confidence to propose more challenging projects.
- They rely heavily on the technical expertise provided by Energy Trust to develop their proposals, including providing the hard facts and figures to help them sell the financial benefits to their management.
- As an internal issue, most respondents understand how to work the system within their own companies to secure approval for projects.
- They may or may not be passionate about efficiency, but they are the gateway to the company and the key to unlocking further projects.

**5. Role of PDCs:** Although the role of PDCs was not originally planned as an in-depth area to explore in this research, it emerged as a frequent topic of discussion. The comments that arose indicated that while there is a high level of satisfaction with the individual performance of PDCs, there is significant confusion around the function of PDCs and where they intersect with Energy Trust.

- The function of PDCs and how they interact with customers is confusing for many and provides an area of opportunity for Energy Trust to improve outreach to customers.
- Overall, many respondents were perplexed by the term PDC or the relationship between the PDC and Energy Trust.
- Especially for those who have infrequent contact with Energy Trust, they were confused by who played what role and why they were called by multiple people.
- Many were confused by multiple contacts across programs.
- Some larger customers expressed a preference for one key contact they could rely on for help with all programs.
- Customers placed great value on the technical services provided by Energy Trust through the PDCs, but they aren't all clear on exactly how to tap into the PDC network to get more help.

Given that so many customers expressed concern about low awareness of Energy Trust and a desire for more information, this may be an opportunity for Energy Trust to think through how the PDCs develop business with customers and their strategy for ongoing follow-up to help them reach the next project.

## **6. Technical expertise**

The technical expertise provided by Energy Trust clearly has tremendous value to these companies. For many, the technical assistance was the difference between doing a project and doing nothing. However, there appears to be some confusion or lack of understanding about Energy Trust's role in providing technical expertise and exactly what these services are.

- Many seem to primarily associate Energy Trust with the incentives it provides and less so with the technical expertise services. For some, the technical expertise benefits are being associated more with the PDC firm.
- There also appears to be a lack of understanding of the full range of the technical expertise benefits available. Technical expertise is a broad term and it may need to be more specifically delineated to customers. For example, to some the paperwork handled by their Energy Trust PDC is just as valuable as an engineering study.
- Smaller, leaner companies without internal resources tend to need more outside help to identify and complete projects. Companies with more staff and resources can do more on their own, but all agreed that the technical help they do receive makes an enormous difference.



## 7. Promised savings and measurement of project results

- When proposing a project, few were concerned that promised project savings will be achieved and this did not emerge as a barrier. And almost all respondents reported being very satisfied with the results of their energy efficiency projects.
- However, while these respondents depend on good information to propose projects, they appear to spend little time tracking post-project results. Many monitor bills and savings for a short time after projects are completed, but once projects are done they are satisfied and move on to the next project on their list. They don't question that the projects will or have delivered the promised savings. This could be an opportunity for Energy Trust to help companies more precisely measure results as an incentive to support future projects.

## 8. Linking energy efficiency to environmental benefits

Many respondents mentioned the environmental benefits associated with energy efficiency. When asked about their company's position on energy savings or the benefits of energy efficiency projects, many respondents immediately mentioned, "It's good for the environment," or "It's the right thing to do." So while respondents are not factoring environmental benefits into their decision-making process, they are linking energy efficiency to environmental benefits and this appears to be very important and validating to many. Also of note is that respondents tended to use the word 'environmental' and not the word 'sustainability' when talking about these benefits.

## 9. Energy Trust messages

### **"Energy Trust pays me to save money."**

This was the most compelling message of those tested. As seen throughout the study, money is a motivating factor in making decisions about energy efficiency projects. The incentives provided by Energy Trust are often a deciding factor in the company's decision to proceed with a project. For most respondents, saving money or using their resources wisely is a good business decision and a very motivating one to invest in projects that enhance their operating efficiency.

### **"I'm paying for Energy Trust services and should take advantage of it."**

Reminding companies that they're already paying for Energy Trust services and should take advantage of it was not viewed as a compelling message.

- Several thought it could create a backlash for Energy Trust.
- Others felt it had little value because it is something they are highly aware of and don't need a reminder.
- Interestingly, quite a few respondents were not aware of the funding mechanism, what the charge is called and how it is applied to them.

### **"Energy efficiency is a competitive edge for my business."**

When it comes to linking energy efficiency with a competitive edge in business, many companies believe that this message has value but its benefits differ from

company to company. The most compelling aspect of a competitive edge message is that it lowers a company's operating costs and in turn makes them more profitable.

#### **10. Energy Trust: independent nonprofit or government agency?**

There were a few respondents who were unclear as to what Energy Trust is and whether it is part of state government.

- A few confuse Energy Trust with the Department of Energy.
- For those unsure of the connection, the idea of government involvement makes them wary because they associate it with decisions that could result in costing them money or that aren't in their company's best interests.
- For some, government also means an entity that is "big, bulky and burdensome."

#### **11. Observations by segment, demographics and culture**

Overall, the research indicated that energy efficiency decisions are not uniform across industrial customer segments. In other words, not all wood products companies are the same, food product companies, high-tech, and so on. Key factors that may be more predictive of decision-making behavior include:

- By energy usage
- By size of company (to a certain extent)
- By commitment to energy savings and having a culture that supports it
- By geographic location: There are indications that companies located in the Portland Metro Area are more attuned to energy savings and environmental issues and also have greater awareness of and access to Energy Trust.
- By 'heavy' vs. 'light' industry
- By economic health of company
- By education level: There were indications that companies staffed with employees with higher degrees may be able to navigate the Energy Trust system better. As one respondent said, "In certain industries, such as high-tech, the average employee tends to be a college graduate and many of the decision makers have higher degrees. They are going to be more quickly savvy about what Energy Trust can do because they routinely deal with complicated things."

### **III. Detailed Findings**

**This section provides detailed findings from the research. It is divided into eight topic areas as listed below. Each topic area begins with a summary of the topic results and is followed with respondent quotes. The eight topic areas are:**

#### **1. Decision-making**

- Decision-making criteria and processes
- Strategic position and priority of energy and energy savings
- Plans for implementing other energy efficiency projects
- Consideration of renewable resources

#### **2. Barriers**

- Results of six barriers explored with respondents
- Results of other financial-related issues

#### **3. Program Delivery Contractors (PDCs)**

#### **4. Messages**

- Results of seven messages explored with respondents

#### **5. Results of energy efficiency projects**

- Overall results of energy efficiency projects done to-date
- Measuring results of energy efficiency projects
- Energy efficiency vs. reducing waste

#### **6. Employee and customer engagement**

#### **7. Respondent suggestions**

#### **8. Terminology**

### **Respondent Quotes**

The detailed findings section of this report includes many verbatim comments from respondents. The fundamental principle and value of in-depth interviewing is to allow each respondent the opportunity to express their thoughts and perceptions "in their own terms" and to report the results exactly as expressed by the respondent.

Although respondent names and companies are not identified, each quote is preceded by the NAICS code and part of the state of the respondent's business.

- The North American Industry Classification System (NAICS) is the standard used by Federal agencies in classifying business establishments.

## **Decision-Making**

**This section summarizes the results of the following four questioning areas:**

1. Decision-making criteria and processes
2. Strategic position and priority of energy and energy savings
3. Plans for implementing other energy efficiency projects
4. Consideration of renewable resources

## Decision-making criteria and processes

1. Overall, one of the most valuable findings in decision-making is that many respondents are only presenting energy efficiency projects that they are very confident their management will approve. So it's kind of a "self-selecting" process with only the "slam-dunk" projects ever getting to management for review. In some ways this is reasonable because it's a reflection of the respondent's understanding of their management's criteria. It reflects that companies are able to get good information about project costs, savings and payback to help in making a decision.
2. But it also suggests there is little interest in pushing forward projects that may be worthwhile but don't fit neatly into the company's comfort zone. For starters, no one wants to present a project that might get rejected (one respondent said, Energy Trust needs to make me a hero). This is coupled with the fact that for many, this is not a primary focus of their job and it is something they do infrequently, making it hard to become an expert and to develop confidence in selling "riskier" projects.
3. As a result, respondents tend to focus their proposals on the "money" aspects that they know management is keen on and don't want to burden their proposals with extras such as the benefits beyond saving money even if they are aware of them and know the value.
4. Respondents also know that the decision-makers don't want to read long proposals. One respondent said: "They get that deer-in-the-headlights look if I present too much information".
5. Decision-making varies by company size, culture and commitment to energy savings. The role of vendors is often significant in initiating energy efficiency projects. Respondents we interviewed are the best targets for starting the conversation inside the company as they are the project initiators. They coordinate research—with or without Energy Trust help—and put together a financial proposal for management approval. In smaller companies the process is not only less formal but often the project proposer has much more influence and internal credibility. In larger companies, the process can be more formal and involve decision-makers at a much higher level or located several states away.
6. The incentives provided by Energy Trust are an important factor in the decision-making process. For some, it goes beyond just the money itself and includes the psychological benefit of knowing they're getting a deal.
7. The economy has had a big impact on decision-making. Since the economy tanked, some of these companies are in survival mode and their process for making energy efficiency decisions has changed dramatically from what it was four years ago. One respondent said, "Since the economy tanked, our company is in what I call tunnel vision—just looking for ways to save money and stay in business." But he went on

to say, “. . .if energy efficiency programs can help, we’re going to zero in on every one of those.”

8. Some seem to postpone energy efficiency projects. They know of a specific project they want to do and plan to do it but they have it on hold. This may be an opportunity for Energy Trust.

**Conclusion:** Respondents understand the criteria their management needs in order to make decisions about capital or energy efficiency project investments. And they are getting good information from Energy Trust to help them prepare proposals that are likely to be successful. But, given a demanding workload, tight budgets and a weak economy, respondents have more difficulty quantifying the value of projects that may be good investments for the company but don’t meet rigid guidelines for approval.

### **Respondent Quotes**

#### **Beverages, Central Oregon**

I take the initiative to get these projects started. It's not part of my job description and for example, if I had left the lighting the way it was, nobody would have said anything different about it. I do a lot of this research at home, at night. With the T8s, it started with a snippet of information I found that led me to believe this could save us money and would be green. Once I get the idea, I investigate it until I find a source contact that can help me and I go from there to find out what it would take—how much money and so on. I then prepare something for corporate and generally I need to do this in August for it to get budgeted in the following year. It has to be approved by the President, the CFO and probably the VP of operations and then it goes to the Board of Directors for approval. It sounds like a lot of approvals but if you do your homework and present it right, you can get approval—these are not dumb people by any means.

#### **Misc. manufacturing, Eastern Oregon**

I don't include the benefits beyond saving money in my proposals. I'm a simple, bottom line kind of a guy. If I can do a project for a 3-5 year payback, I don't have to go through all the rigmarole of trying to explain the extras. I don't need to include all those details if it qualifies on the payback. On this last one, I think I did put in "better lighting for better quality". But that's all I said.

I initiate and propose the project and then I present it to management. They're the decision makers but so far they've given me approval on everything I've presented. Actually they did say no on the lighting on the first go-around and then I sent it back to them and actually the catalyzer on that was when Energy Trust came out with the additional credit that was available through the end of the year and I threw it back at them and said you really need to do this project—it makes sense, we know it works and now there's an additional incentive, what do you think? And I got them to come off the money. It was pretty cool.

It's interesting that when somebody offers you an incentive or a discount, it seems to be a catalyzer to get approval. Our corporate holding company is the decision-maker on these projects and it's much easier to get them to say ok you can spend a quarter of a million dollars if you're getting this kind of rebate back. I don't know why that is because you would think they would do it anyway because you know you're going to save money. But for some reason it takes that discount to be a catalyzer and then they go for it.

### **Food products, Portland Metro Area**

Our decision making process is pretty simple. The reality is we're a small company. We have less than 30 people. And we have a very hands-on business owner. If he decides he wants to do something, he pretty much does it! That's not to say other employees aren't involved in coming up with ideas for energy efficiency projects. In fact, a lot of ideas come from our head of maintenance and his crew. They have their hands on the infrastructure stuff all the time and are going to see issues related to refrigeration, cooling towers, lighting, whatever. If they see a need they'll communicate it to the general manager or business owner and things happen from there or they don't. But the business owner makes the final decision. And, of course we look at ROI, that's part of the process. But it's not that formal in this company. I'm not sure the owner even knew what the Energy Trust incentives would be before he decided to do the freezer expansion or the lighting project. On the lighting project, I think it was the lighting contractor that got us in touch with Cascade Energy after he submitted his quote for the job. Then Cascade Energy did the official analysis and paperwork that outlined everything including the incentive. And once you see those numbers, it's like hey, no problem, let's do it.

### **Transportation & aerospace, Willamette Valley**

To understand how we make decisions you need to know we are a small company without a lot of pretense. The company was started out of someone's garage and we still have some of that mentality. Now we're in a warehouse and we're actually an industrial facility with about 75 employees. And I talk to the CEO all the time including when I have recommendations. Obviously, I don't make decisions with respect to money and just go out and spend it without approval. But because of the respect they have for my input, I can make recommendations and say this is what we need to do, and they take it seriously. The downside is that when there's a capital investment to be made, the "Oh my God" factor is hard for them to get over. But they're beginning to understand that we can't just keep doing it the way we've been doing it forever.

### **Computers & electronics, Portland Metro Area**

Usually it comes down to me researching what we have currently and what we figure will probably save money if we go to a different type of system, say lighting for example. If I find something that seems like it might be worthwhile to do, I research it and put together a capital project application and see if it flies. The decision maker will either be our CFO or one of our VPs. I'm the decision-maker only in the sense that I provide as much information as possible to the people that sign off on things. I just put it together

and send it up the chain and if it flies it does and if it doesn't, they either say backburner it or they just say no.

### **Plastics, Willamette Valley**

I'm the one that initiates and evaluates the project. After I figure out what I want to do, I talk to my President and give him a run-down of my plans but I'm the one that really decides.

### **Wood products, Central Oregon**

I pull together the information and our CEO makes the ultimate decision. For him to sign off on it, it has to meet the bottom line needs. It has to make sense financially. So had the Energy Trust incentives not been there, we probably would not have done either one of these projects. Also, when we did the first two projects there were also tax incentives—BETC [Business Energy Tax Credit] tax credits. That's no longer available on the current one we're doing but we're still doing project.

### **Wood products, Southern Oregon**

Typically we'll have a meeting and we'll talk about different projects we could use around the mill to help some type of efficiency for a payback. I'm more focused on the maintenance side and for my area, I came up with a placeholder called Energy Conservation. And I started investigating and working with RHT on a couple of different projects, the compressor and the lighting. We talked about projects and we did studies.

Anything over \$10,000 in our company has to go through an Appropriations Request and must be approved by corporate. So with the energy projects, once we came up with the costs and what the estimated payback was, I wrote an Appropriations Request, it goes back to corporate, they review and sometimes they review it with the Board. There was actually quite a bit of dialog back and forth, conference calls and so forth talking about these projects. And I had to sell them really hard to get them approved. Again, our company is still in the survival mode so money is very tight and where the paybacks aren't less than one year, you have to preach to them why you feel the projects are advantageous for the company to do. At that point, if they get approved, you can proceed with the project.

The lighting project started with just doing 50% of our mill—that's all I had approval for. But we ended up doing every fixture—over 1,000 fixtures—and went over budget by \$30,000. But I wasn't worried about it because it still made sense to do. I guess I was hanging out there a ways—taking the liberty of spending that much money. But I knew if the Board or my CEO came to me, I could justify what I did. But I would say there are very few projects are you willing to take that type of leap. The fact that we had the Energy Trust money, a grant from the State of Oregon and the pass-through on the BETC meant the payback was going to be a couple months! So on paper, it was a no-brainer—it made sense to do it.



### **Transportation & aerospace, Southern Oregon**

It's pretty much me that initiates energy efficiency projects. There was nobody in the company looking at energy costs when I got here in 1993. What drove me in that direction is that I have an Oregon Supervising Electrician's card and have been in the trade for 30 years. So I see all of that and it's the first thing I look at because it's the thing I'm most familiar with. Typically, I monitor all of our utilities. I track them on Excel sheets and look at the trends and when I see something that looks like it needs to be investigated, I start doing it on my own. I stack up some information to show what we're spending, what we can probably save and if the company's interested at that point, I probably get a hold of somebody like RHT and do an official study on it and get the so-called expert's opinions on what we could save if we made those changes. Then I would take that to upper management to see if they're willing to go along with that. So it would go to our VP here and then from that point he would take it up to the Portland Metro Area office (headquarters) where the CEO and chief financial folks are and they will decide. And obviously, all these projects take money so it's a question of what it takes, what it's going to save and what the payback time is—those are the things that drive decisions.

### **Wastewater treatment, Southern Oregon**

The DEQ [Department of Environmental Quality] requires that we have a capital improvement plan and we kind of go by that. And we go by growth, by equipment failure and maintenance costs. Anything over \$50,000 has to go for City Council approval. And we actually had money budgeted for this year to look into reuse of the methane off our digester. I think it was \$150,000 and they cut it back to \$10,000-15,000. Sometimes it's a struggle to get approval because they just don't understand the need or why it costs so much money. It's easy to understand why you need new lawnmowers but some of these energy efficiency projects are complicated.

### **Wood products, Southern Oregon**

Projects usually start by someone coming to me and saying we have a problem and can I come up with a solution to fix it. So we figure out what it would cost. With capital expenditures, we usually try and look at it through the Energy Trust and see how much they can help us with it. Like knowing that Energy Trust will help us pay for electric motors and help us pay for upgrades as long as what we do will cut our electric bill. We look at things we can put into the project that will help us save energy as opposed to not putting anything in and just going out and buying a motor and not even trying to think about saving electricity. Then I do all the paperwork for it and I show the cost difference between the two and then they make the decision from there. Projects have to be approved by the head financial people and the company owner. We're a relatively small company so the owner is very involved.

### **Food products, Southern Oregon**

I'm the one that initiates energy savings projects. As the technical services manager, I touch every single division of the company from accounting to production to farming to irrigation to drainage, all kinds of different departments. It's a really unique job. In that regard I see every facet of the company and therefore I constantly look for areas where

we can save energy because energy savings is right off the bottom line. Although I don't see the utility bills, I've been around long enough to know when we're wasting energy. Like in these lighting proposals—before I even said I thought it was a good idea, I drove around one night and saw what lights were on all night in the cold storage and packinghouses.

After I come up with a project, I present it to the owners. And they are the ultimate decision makers here—we're a privately owned company. I do all the research, I look at all the ROIs and put it all together, not anything real fancy—I do an Excel spreadsheet with all the costs, the benefits and the ROI. And then we talk about whether to do it or not. Everything I've proposed has been implemented. I don't propose it unless it makes sense. The main criteria for anything is the ROI, that's what they're really looking at.

### **Misc. manufacturing, Southern Oregon**

As president, I am the ultimate decision maker.

### **Wood products, Willamette Valley**

Sometimes a project gets initiated as a result of a salesman coming in and showing us how we could save energy on a product, such as new lighting. Other times, projects are initiated by someone here in the plant. If it's a capital project, the first step is to do a breakdown showing the cost and estimated savings or benefit. For us a capital project means it's pieces of equipment that are going to be put into the plant that are expensed or amortized over time and not just something that's a monthly hit on our bookkeeping.

The proposal will then go through the channels of our company. Depending on the cost, some can be approved locally, right here at our plant. Others need to go to a higher level, our vice presidents and CEO. Our corporate office is in the Portland Metro Area and they are very supportive of energy efficiency projects we propose. As soon as the project is approved, the project number is assigned and we start the process of purchasing whether it's going out for a quote or placing the orders for the items.

### **Wood products, Oregon Coast**

I initiate the energy projects and then I take them to the owners of the company. I meet with them to figure the payback on the projects. The owners are very smart guys. One of them can run numbers in his head and get it figured out quickly. Anyway, we talk it over and I say is this something we should do and they say great, do some research on it and see if there's help there from Energy Trust. The owners tend not to reject ideas that I propose. And they don't mind spending a little extra money to be green so to speak.

### **Misc. manufacturing, Columbia Gorge**

The energy efficiency projects start with me. In the case of our lighting project, it was actually a trade ally that brought us the idea. They presented it to me. Then another fellow came out, might have been someone with Energy Trust that the trade ally contacted, and did some readings and told me the differences it would make in the facility. I went through it and figured it would be a good thing for us to do. We had old

lighting in the shops and knew something needed to be done. Then I got all the information I needed and put it together and took it to my boss, the owner, and presented it to him and he approved it. By the time I present to the owner, I've basically already decided to do it.

As I recall, the trade ally was working hand in hand with Energy Trust. We did get the Energy Trust incentive. Without the incentive, I'm not sure we would have done the project. I think we probably would have but maybe not at that time. It was something we knew we had to upgrade. The guys had been asking me to do something for quite some time on it. We had the same lighting up since we built the place in 1980.

### **Food products, Willamette Valley**

I initiate energy efficiency projects. Typically I decide on a project I want to do and get some bids from contractors, and do some ROI work on it. The estimates from contractors will include the Energy Trust incentives. Most of the contractors these days can estimate what our Energy Trust rebates are going to be based on Energy Trust information they have. Then I would present that to my boss who is the VP of Operations and say to him, this is the project I want to do and this is the estimated cost and estimated ROI and the Energy Trust incentives. He'll say yes, this is a good project or no we're not going to do that this year. My boss rarely rejects a project I propose. Especially on the energy efficiency stuff because there's a corporate mandate to save energy. And my boss historically has been supportive of energy efficiency projects.

Timing-wise, there are two ways this can happen. The typical way is that every year in December I start my budgeting process and get together the projects I want to do and get the bids and so forth. We're on a July 1 fiscal year so our goal is to have our capital expenditure budget set by about April. The other way this can happen is if a project comes to my attention out of our regular budgetary time, say in the middle of the year. If I say wow that's exactly what we need, I'll go ahead and get bids together just like I would when we're doing our planning, and I'll go to my boss and say this just came up, not something we planned on but look at what it will do for us. If I can sell it, he'll take it to his boss, which is the president of the local company. So we don't have to wait until the next year to put a capital project in if makes sense to do now.

Sometimes my boss can approve the project and it doesn't have to go any further. So not all projects have to go the corporate level for approval. It depends on the cost of the project. They have these set amounts that if the project is this under this amount, you can sign off on it locally, and if it's more, it needs to go to the next level on so on. I'm not sure what those amounts are.

Most of the time I haven't had problems getting corporate approval because most of the time things are pretty cut and dry. The only time I've had frustrations getting approval is when I have a new item that just hit the market. For example, I wanted to go to fluorescents in our warehouse, the high bay, and I put together a proposal. It was a big project to do the whole warehouse because we have 900 fixtures. It was one that had to go to corporate and they wouldn't approve using fluorescents in high bay because nobody had done it yet and that was about the time that technology was really starting

to take off but they weren't quite ready to bite off on it yet. It hadn't proved itself yet. This was back in 2001.

As far as going through and getting approval, the process is the same for all our projects whether they're energy efficiency ones or others. But the criteria for a project can change depending on what's driving it. For example with an energy efficiency project, we want to see a savings in energy. With equipment and capital building projects, it may be for productivity. When we need to replace an item, it's a maintenance issue rather than productivity one.

### **Misc. manufacturing, Portland Metro Area**

The first part of the decision-making process is I will verify whether the project is viable, whether it's making sense. And if I'm confident I'll review with our plant manager here and if we both are comfortable with the project, I will propose that to our leadership team for approval. And once we get approval, then we can go and implement it. Approval is dictated by our needs as well as what's the opportunity. If a good opportunity exists, we rarely don't do it, although sometimes we might postpone it. An example of a good opportunity that allowed us to implement a project was one where we had both the rebate opportunity from Energy Trust and the grant opportunity from the Department of Energy. The leadership team that reviews the projects is a combination of local management and headquarters. In many cases, it's primarily local.

In terms of criteria, let me put it this way. The ROI is considered for all projects. But it's not the only criteria and with energy efficiency projects many times the way I've seen it is us doing the right thing. So if we think it's important, we'll do it even if it doesn't have the same rate of return we might expect in some other projects. But it's still a matter of making sure we can balance the priorities so that's where all these reviews and communicating with the leadership team come into to play.

### **Paper manufacturing, Portland Metro Area**

I'm the maintenance superintendent for the electrical group so I just get the job done on these energy efficiency projects. I don't engineer the job or do any of the calculations or the paperwork required by Energy Trust. Well I have a little input into the figures—the costs and savings—but a lot of time it's just out of electrical principle that you realize that that job is going to save money. And I leave it up to the engineering people to calculate actually how much money and they put all that into their proposals when they present the projects. We're owned by an investment firm that's located outside of the United States. For anything over \$80,000, we need their approval. But in the paper industry, an \$80,000 project is not a very big one. But as far as these energy efficiency projects go, the process of getting them together and approved and completed in the timeframe—all of that has worked well. A lot of it is just a matter of just getting the stuff ordered and getting it in here and planning the installation.

### **Misc. manufacturing, Portland Metro Area**

The process starts with someone making a suggestion for an energy efficiency project and that can be any employee that works here. We strongly believe in giving everyone a

voice—that's how great ideas are founded. The suggestions are then taken to upper management and viewed as to whether it's something we want to do or something that we need to do. And then of course we have to put a price tag on that. What is the initial investment and what is the payout over the years to do it. Sometimes it's a situation where we know we want to do it but we postpone it until we have sufficient funds.

Now because you can use Energy Trust to help you with this and they can help you run numbers is a huge benefit. So we do a raw data acquisition and if it pans out, we call Energy Trust and try to get the numbers closer to what they would be reality wise. And because we so strongly believe in being environmentally responsible, the financial criteria for energy efficiency projects are sometimes less stringent.

### **Cold storage, Southern Oregon**

The decision-making process starts with me. I do some research and then make up my mind. Now, I'm always looking for help. For example, on the refrigeration control project, I went through RHT and we got a grant for an engineer to come down and look at the system and see what his estimates would be and what he recommended. And he didn't recommend anything specific, just generalities. So I did my research and decided what system to buy. But once we had established the cost of it, then it's an easy sell to management. We spent \$200,000 on that project so I did ask for approval before I spent \$200,000. But if I'm spending \$10,000, I don't need to ask anybody—it's a no-brainer. So, in many cases, I don't even have to go to management for approval. Sometimes I think they don't even know we're doing the project. I see my boss about once every 2 months. He's a wonderful guy to work for. There's a managing partner that I also report to and his business philosophy is you hire good people and you let them do their job. I love it! I've adopted that model for the employees that work for me.

### **Chemicals, Willamette Valley**

We do a proposal for management on these projects but we don't have to go to corporate for approval. It stays in-house, local. What I looked at in making the decision to do the lighting was not just the energy savings but the fact that I have a lot of lighting work orders—changing the light bulbs and ballasting on the old fixtures we had. So we figured out what we've had for lighting work orders in the last several years and would it pay for the project. It would pay for itself pretty fast.

### **Misc. manufacturing, Southern Oregon**

I initiate the ideas for energy efficiency projects and do a proposal for the owners. I have to justify it: the cost evaluation, what it's going to save, what it's going to do, and what is the payback. So, I say we're going to save X amount on the electricity and to do that it's a \$30,000 upgrade and it will be this long before the payback. I also include what we'll get from Energy Trust in money back and what the help will be from the government. Then the owners decide. I can't say the criteria for energy efficiency projects are any different from others we look at. I know the incentives from Energy Trust make a difference.

### **Misc. manufacturing, Portland Metro Area**

I initiate the energy efficiency projects and I start by doing a proposal. For example, right now, I'm in the middle of working on an outdoor lighting project. We have [two lighting contractors] helping us. The nice thing about salesmen is they want to move their product and they'll do all the legwork, put together a nice cost estimate and do the Energy Trust paperwork. And now it's up to us to write our funding request. Once we get a funding request approved, we will pass it on to Energy Trust with the belief that with all the right info it will be approved. For approval, if it's under \$250,000 it does not have to go to corporate. If it's over that, it has to be elevated up the chain of command. And frankly for anything under \$100,000, it's very straightforward and we just approve within our own department without a lot of formal paperwork.

For the most part, anything I submit gets approved. That's because I have a good sense of the parameters for them to approve things and I don't waste my time selling [projects] unless I have a strong confidence that they will be approved. ROI is the key criteria for any project. They love to see them payback within a year but they will take them within 4 years.

### **Computers & electronics, Portland Metro Area**

Once we've identified an energy efficiency project we want to do, it goes to a high level for approval. The executives have final approval and they're in Europe, our headquarters. Some projects are rejected due to costs because we are a start-up and the executives have to prioritize where money is spent and of course a priority now is to put the money into the manufacturing to make more product. But I'm satisfied with the decision-making process here. We have a really flat management. The management people meet with us directly. They visit here and talk to us engineers directly. I've worked at places with multiple levels of management and at our company, it's pretty direct. I was thinking the other day that our president and our plant manager come here and talk to us and we can go up to their offices and talk directly to them. It's very open door.

I do think the criteria for energy efficiency projects are slightly different in the sense that management gives a slight edge to energy efficiency ones when weighing them. Because there have been a few projects where we are saving money but not a huge amount versus a non-energy project but they go ahead and approve those projects because they are saving energy and also have a positive environmental impact. We've put in some recycling systems that probably cost us money to do but it's the right thing to do environmentally. So it's not totally driven by cost.

### **Computers & electronics, Portland Metro Area**

We have a program in place. There are different groups they refer to as pillars and I head up the pillar that refers to utilities. So over the past 4-5 years, we've come up with 50 different energy saving ideas and we've gone through them and looked at the ROI and also look at what the Energy Trust incentive would be for those. Sometimes they pencil out, sometimes they don't. But right now, with our business down and the economy bad, the company is really into cost savings so unless the ROI is really good

they tend to not go for it. Frankly, if the ROI doesn't look reasonable, I don't even present the idea.

For approvals, it depends on the dollar amount of the project. And it's a bit fuzzy what the dollar amounts are. But say if it's \$30,000-40,000, it would typically have to be a capital project and then it has to go Capital Funding which comes from our corporate office, which is in another state, and has to be approved by them. But if it's below whatever the magic dollar amount is, it's a local decision—what we would refer to as an Expense, so some department here would have to fund it out of their expense budget.

### **Misc. manufacturing, Portland Metro Area**

I'm the one that takes the initiative on these projects and now that I know about the Energy Trust program, anytime we look to do a project like this—HVAC or boilers or chillers—the first thing we do now, prior to making any purchases or taking any drastic steps toward completion, we always get Energy Trust involved first to see if there's any incentive that we could take advantage of there. That's something I didn't know initially but once I learned of it, we basically always run everything by Energy Trust. Because sometimes there are incentives that I would never recognize or think of that they can apply. So it's a neat deal. And the energy efficiency projects I've had to deal with so far, the incentives are just huge and have been very beneficial so it was automatic, a no-brainer. Basically I'd be foolish not to take advantage of it.

I do present a proposal to upper management but it's not real in-depth. They like to see some basic figures and I usually support those with the Energy Trust engineering and data collection that Energy Trust has submitted for the upgrade and that's been sufficient at this point. Essentially the criteria for energy efficiency projects and other projects are the same. I go through the same process. I guess with the non-energy ones the difference is I don't have the incentives in there.

## Strategic position and priority of energy and energy savings

### This section captures the results of three questioning areas:

- Describe your company's position on energy and energy savings.
  - How important is energy savings at your company—is it a priority?
  - How would you rate your company overall in terms of implementing energy efficiency projects?
1. Many respondents said energy savings is a priority in their company. Some were more specific than others about how that priority is manifested in their company.
    - Some cited energy costs and increasing rates as the reason for it being a priority. Others cited environmental reasons.
  2. Some have an official policy. Others stated it's a corporate edict, or as one said, "We're required to reduce kilowatt usage by 5% every year". Still others said that although their company didn't have an "official" policy, it was communicated by management as an important priority.
  3. Many respondents were quite fervent about energy and energy savings being a priority. However, many of these same respondents would later state (in other areas of the interview) that there weren't more energy efficiency projects they could do and/or the financial barriers were too great.
  4. Many respondents consider their company to be "pretty high" on a spectrum of having implemented energy efficiency projects. For some this is because they feel they've "done it all", regardless of how modest those efforts may be. Others are simply proud of what they've done and consider it to be a lot for their company.

Note: The Employee and Customer sections of this report provide additional insights into the priority of energy and energy savings at these companies.

### Respondent Quotes

#### **Cold storage, Southern Oregon**

Yes, it rates pretty high as a priority. Because our power bills are a big part of our expense. And it's a controllable cost to some extent.

#### **Chemicals, Willamette Valley**

Oh, yes, it's a priority here. It's part of my job description to look for energy efficiency projects.

**Misc. manufacturing, Portland Metro Area** Energy efficiency is a corporate edict! We're owned by a large multi-billion dollar entity, and they're profit driven and so it's in their best interest to have efficiently running factories. But there's only so much you can do after you've done all the easy things like changing lighting systems.



**Food products, Willamette Valley**

Our company has a thing nationally that we're supposed to save 5% kilowatt usage every year. This is for all facilities and occupancy departments across the country. When they first came out with that policy, it was stated as reducing 5% energy usage but they changed it to kilowatt usage. It used to be easy to achieve that but squeezing another 5% just gets harder every year. We've done so many energy efficiency projects. We've already put in controls and replaced lights and equipment and doors and more. So now I'm not sure what we could do next but we're thinking about it. It gets harder after you've picked the low hanging fruit.

**Computers & electronics, Portland Metro Area**

We consider ourselves pretty energy efficient. When this facility was built it was built with high efficiency motors and VFDs and high efficiency fans, T8 lighting and so forth. We've looked at what more we could do in the area of energy efficiency with fairly minimal spending. Our chiller plant is an example. But when the PDC did a study for us, they didn't see a whole lot of improvement that could be made. They did come up with one idea for the chiller that might have some kind of payback.

**Computers & electronics, Portland Metro Area**

Oh, yes, it's definitely a priority! As a matter of fact, one of our founders is into that zero carbon thing in his personal life. And his beliefs make it important here at the company. And I consider us pretty high on the spectrum in terms of implementing energy efficiency projects. In fact when Energy Trust was at our site, I think they could see that I'd pretty much done everything I could within what would be a realistic cost for our company to do. We've done pretty much everything we can do short of rebuilding the building from the ground up!

**Misc. manufacturing, Southern Oregon**

I think of it as a priority in the sense that when we upgrade equipment or have to replace equipment, we consider the most efficient thing we can buy that also does the job. I would do another project if I had something to do but we did two big projects and spent about \$27,000—the compressor and lighting project. We feel we've upgraded everything that we were able to upgrade to make it more energy efficient.

**Misc. manufacturing, Eastern Oregon**

I would say it's a priority. But I'll give you this caveat: I think there's many things we do as a nation and as a state that we hang our hat on and that it's energy efficient and sometimes to me we get all humbled up in being green and we don't think through all the processes. And I'll give you a big picture example: wind energy—the only reason wind energy works right now and another one is ethanol—the only reason they work is because of government subsidies otherwise they don't pencil out. To me, true energy efficiency has to pencil out without government subsidies. How is that for getting on my political soapbox! I'm just a practical businessman and if energy is not a sustainable product, don't do it! I mean it's pretty simple. In the case of what we're doing right now with the lighting, that's really sustainable. Again, it's a no-brainer, you've got to do it.

### **Beverages, Central Oregon**

We don't really have an official position on it. And it varies by branch. Our branch happens to be extremely green-minded so it's a bigger priority here. I think the other branches could benefit by implementing more energy efficiency projects but I keep my nose out of their business. I think the difference in implementing these projects has to do with the sub-cultures or varying mentalities at each branch. Some just feel it's worked this way for 20 years and it's ok. But again our branch is fairly green-minded and so energy efficiency ideas are well received here—it's part of our culture. And it may also be related to the fact that we're in Central Oregon. I guess I would say the company overall does try to promote energy efficiency but we're more steeped in it here.

### **Wood products, Southern Oregon**

Our company would be considered fairly green. We created our own glue several years ago that is 100% formaldehyde free. So I feel at the company we're very responsible. Energy conservation fits in with our mission and with the way our plant operates. So that was a little bit easier to sell on the energy conservation side to do these projects even though the payback was a little longer.

### **Food products, Southern Oregon**

Oh, yes, it's a priority. We know that energy costs are going to go up and part of my job is to look for ways to be more energy efficient. Based on what we've done in last 3 years, I would rate us pretty high on having implemented energy efficiency projects. We've done the lighting and refrigeration.

### **Wood products, Oregon Coast**

Yes, it is a priority here! And if you've ever paid an electric bill, you would know why! We don't have an official position but we should! And we should make everybody aware of what we're trying to do here—put it on our website or something. That's something I want to talk to our management folks about. We're so environmentally conscious too. We do water quality tests 3 or 4 times a year and I'm happy to say all our samples come back clean and we put an extensive water trap system in to make that happen.

### **Wood products, Central Oregon**

I'd say energy efficiency is a mid-level priority here. And we're probably also in the mid-range of experience. We're not novices because we've done a couple projects. But I wouldn't classify us as being highly energy efficient or way up there on a spectrum. But we're energy conscious—if there's some return there by doing the projects.

### **Wastewater treatment, Southern Oregon**

It's a big deal to us! With rates going up, it has come to the top of the priority list. We're always trying to find ways to reduce power usage or if there's other things we can do like putting in solar power, reuse of our methane off our anaerobic digester and stuff like that. I wouldn't say we have a written policy on targeting energy efficiency. It's more of a

verbal one. When we go into budget meetings every year, with the power bills going up, it's discussed what are we doing to try to cut that power bill.

### **Transportation & aerospace, Southern Oregon**

Our VP here is very big on energy saving projects. I think we're kind of one of the leaders in the area of energy efficiency. We had a get together with PP&L at the Red Lion Hotel some time back where they talked about new ways of doing things and you had a chance to sign up for an audit to see what things could be done and I signed up for that because there's always something new coming along and the auditor came out and I showed him my books on projects we had done and we had a walk around and he said I don't know really what to tell you—you've pretty much done everything that we could help you with!

### **Plastics, Willamette Valley**

Oh, energy savings is a big priority. It's big time here! We're always looking at energy efficiency ideas and coming up with ideas. We've even looked into solar. But I think we've done pretty much all we can. We have 3 small HVAC heat units and heat pumps and there's not much I can do there. Like I say there's not a whole much there left.

### **Wood products, Southern Oregon**

Energy savings is a priority in the sense that there's a lot of discussion about turning lights off, turning machines off, and other things. We just don't have that many areas left where we can save electricity. Because we've done pretty much all the projects that Energy Trust will pay for. There's not a whole lot more that we can qualify for. And a big part of this is the economy and that our business has been slow.

### **Wood products, Willamette Valley**

We're a family-owned company. And the family is very much involved and supportive of these initiatives for our environment, doing the right thing and for the cost savings.

### **Beverages, Columbia Gorge**

Oh absolutely it's a priority. We're dedicated to operating our company in the most socially and environmentally sustaining manner possible. This is all on our website along with factoids about how we've installed energy-efficient lighting and air compressors to reduce energy use by 400,000 kWh each year.

### **Food products, Portland Metro Area**

We're audited by a third party company called the Food Alliance and they come in every 18 months and certify parts of our building for our customers who are big into sustainability and natural products and they want to make sure the partners they're working with are following suit. So, every 12-18 months we have to show them that we've done something different and new to save energy and to cut waste. Just as one example, we set up a system to cool machinery that instead of running water through it and out into the sewer, we actually hooked up a series of circulating water chillers and we saved about a million gallons of water a year doing that. We're owned by a conglomerate located in another state and being based where they are, they're a little

slow on the uptake on the green movement. Being in Oregon we've been quite a bit ahead of the curve in terms of selling sustainable products, organic products, grain fed products, and humanely raised products.

### **Paper manufacturing, Portland Metro Area**

Energy efficiency is a priority here. We at least weigh that factor into virtually every project we do. And I think now that we understand better what Energy Trust can provide and the incentives, energy efficiency has become a bigger priority.

### **Cold storage, Portland Metro Area**

One thing that has changed is we now have someone at the corporate office that is driving this energy efficiency initiative. They realize there's millions of dollars in savings through lighting and variable frequency drives (VFD) and other projects. So not only do I have local support but I also have corporate support. This guy at corporate recognized what we've done in the Portland Metro Area and he came out and met with Cascade Energy and rolled out a corporate program with Cascade about 2 years ago for all the divisions in the company. So the corporate office is saying to look for these things.

As a company, I'd say we're high on the spectrum of having done energy efficiency projects and also high on just being aware in general. We've been doing projects for years and they've been big projects—ranging from \$90,000 to over \$200,000.

### **Misc. manufacturing, Portland Metro Area**

Our company is an environmental steward. We have a corporate team that tends to look at energy consumption, what are the trends, are we seeing some opportunities at other local sites. The best way to put what we have is what we call our culture of continuous improvement. We focus on efforts to improve products, safety and energy efficiencies and everything. So when I look at an energy efficiency improvement project, I don't look at it in a void. I look for way we don't try to invent something new—we look for ways to leverage our strength, which is making sure we use our regular employees wherever we can. So we're constantly looking for that.

### **Misc. manufacturing, Portland Metro Area**

Energy savings is a priority here because we believe it's all about reducing the carbon footprint. And we strongly believe in being responsible as a manufacturing company and also in setting standards for other manufacturers by saying, hey look you can be a manufacturer and also be environmentally friendly and save some money in the process. Of course, we all want to save money! Every company is driven by that so that you can stay working. But we believe you can invest some of that money and put it into another system that doesn't really save but doesn't really cost you but makes you more environmentally friendly.

**Food products, Portland Metro Area**

We don't have an official position but it's communicated. Everybody understands it and management is a proponent: be more energy efficient and you save money on utilities. Plus we like to be as sustainable as we can.

**Misc. manufacturing, Southern Oregon**

It's a priority because that's what we're in the business of providing to our customers. So we're very pro green, very pro energy efficient. We have two main product lines here. We're always looking at energy saving angles. Right now, what we're doing is every time one of our fixtures dies, we upgrade it to a more efficient one. We're probably about half way there now.

**Computers & electronics, Portland Metro Area**

It's clearly a priority here. Management provides us with specific goals for energy savings, including our environment team. They detail the policy in our Annual Report. The whole position and priority is set from the top.

**Misc. manufacturing, Portland Metro Area**

No, we don't really have a position. There's no edict on what we need to do. But I would say it's a priority. Just in the last year we started a green team so they're always looking at cost saving initiatives for environmentally friendly energy saving—recycling and stuff. It's kind of lumped together all in one basket but they try to take advantage of anything that can make us a greener company essentially. And you do want that message associated with your company more and more these days. But we're also very much in a cost savings initiative and it certainly falls in line there too.

## **Plans for implementing other energy efficiency projects**

The most significant finding here is that some respondents think they've done all they can or are uncertain about what they could do next. Some use the term "low hanging fruit" as a way of describing what they've done and why it's hard to move forward. Also, one respondent made the point that technology is moving faster than depreciation and that it inhibits moving forward with energy efficiency projects.

There were also respondents that have their next energy efficiency project lined up and still others that have very sophisticated, ongoing systems to identify energy efficiency opportunities.

### **Respondent Quotes**

The respondent quotes below are divided into two categories: a) those that don't have plans for more energy efficiency projects or are unsure about what to do next, and b) those that have plans for additional energy efficiency projects.

#### **a. Those that don't know what to do next or are unsure**

##### **Misc. manufacturing, Columbia Gorge**

I don't foresee any projects in the future because I don't really know what that would be. We've done the lighting. There's no more upgrades we can do with heating our shops or office areas or our heat pump systems. Personally, I don't believe we've done everything we can but again, I'm just not sure what else we can do.

##### **Paper manufacturing, Portland Metro Area**

For us to get much more efficient, the easy picking fruit is probably pretty well gone. I guess an area where I see efficiencies coming up is in LED lighting. They're developing some really good LED lighting that is more efficient and generates less heat.

##### **Cold storage, Portland Metro Area**

We don't have much low hanging fruit anymore. This lighting project is one of last bigger projects I have and then I'm going to have to really dig into smaller projects because all the big ones will be gone. I do have an HVAC project underway and an air-handling unit that just got awarded.

##### **Wood products, Southern Oregon**

I understand that there are always things you can do but I don't know what that is now. We've done the ones that would be a larger payback or a larger project like putting energy efficient lights in.

##### **Misc. manufacturing, Portland Metro Area**

We've done all the easy things like changing lighting systems. So the things we're working on now are changes in behaviors. For example, we're trying to increase awareness among factory employees by putting banners in break rooms with metrics

that show accomplishment. I do know we're not going to be buying premium-operating time, which is one of the desires of PGE. We've still got to run the factory based on our customer demand, not on our ability to choose a peak time. But overall, it's becoming more critical to figure out what to do next.

### **Food products, Willamette Valley**

What we're running up against right now is that technology is moving faster than depreciation. So before we get these lights depreciated the technology is improving to point that it's cost effective to just pay for the depreciation and put in a new set of lights. In fact that's holding us up right now. We did a test for our LED lights in our freezers and the only reason we haven't done that is that we haven't depreciated the lights that we just put into the freezer. The lighting stuff is just exploding right now. Especially the LEDs. I expect the prices to start dropping. Just because everybody is pushing them. Accounting is not my forte. But I know when you have something on the books that you're depreciating out and you replace it then you have to take the remaining depreciation and expense to your bottom line. And so right now for instance we've got 10 years left on depreciation for our freezer lights. We can save a lot of energy by putting LEDs in but not enough to change the depreciation.

### **Transportation & aerospace, Southern Oregon**

I know there are still things we could be doing. I guess we could be doing power factor correction and other things. We've put variable drives on our paint booth set-ups—both of those—so they're running more economically. So, it gets down to looking at the power factor maybe on the services and backtracking to see maybe where we could bring that up a little bit.

### **Food products, Southern Oregon**

I think we'll do more projects. It just depends on how much capital is available. Even though there's a return on investment, if it gets out there 5-8 years, it gets pretty tough to justify.

### **Chemicals, Willamette Valley**

I don't know what we'll be doing next. We had a lighting project in the works but it got postponed and probably won't be done until late 2012.

## **b. Those that have plans for more energy efficiency projects**

### **Food products, Portland Metro Area**

We're looking at our lighting and our refrigeration. I got connected with this guy and that led to us getting connected with people at Energy Trust and they're doing some metering on our energy usage on the refrigeration system. And I think I have a meeting with someone from our PDC in the next week or so. He's going to come out and review our entire warehouse facilities and give us suggestions on how we can get rid of some of these 400 watt high energy bulbs and move into some of the other lights that are more efficient and brighter for our warehouses. So we're exploring things and we're definitely on the right track.

### **Misc. manufacturing, Eastern Oregon**

We are looking at doing some other projects with Energy Trust and those will be with the air compressors and the heating system. We'll probably do the air compressors next. The heating system will come later because we've had to gather some historical data for Energy Trust on these two buildings we acquired and now that we've been running the buildings for a year, we're getting some data.

### **Wood products, Oregon Coast**

As far as doing other projects, we're commissioning these new kilns today for our boiler. What it does is it retrieves water from the kiln that's been pre-heated and it puts it back in the boiler and it saving a lot of gas. So we're doing that.

### **Misc. manufacturing, Portland Metro Area**

I do have a few more projects I would like to do because we have one more building where we would like to make some more improvements but that does take some capital investment but I will keep that on the list. I'll make our corporate team aware of it for consideration year after year so that when that opportunity comes we'll go ahead and make that improvement.

### **Transportation & aerospace, Willamette Valley**

So far the lighting is the only project we've done. But I have other projects I've got some information on but haven't moved forward with. I'm currently considering automating three rotary compressors.

### **Beverages, Columbia Gorge**

I had a conversation with someone at Cascade Energy and we asked him to come out and look at plant lighting again. And we also want to revisit the steam thing—just to look at it in a different way.

### **Wood products, Central Oregon**

We've already purchased the equipment for our third energy efficiency project and that's for a new drier. It's a relatively new product for us—I guess they've only been manufacturing it for a year.

### **Beverages, Central Oregon**

Next year, I will be asking for new controls on our HVAC system in my budget. The controls on our HVAC system are 10 years old and they're not the best we can have. There are 2 companies that will be giving bids on the new controls to bring us tighter in the loop and make sure we stay extremely efficient in our heating and cooling. This is for our general facility, for the people that work here, and not for the rooms with the beer and stuff we're cooling.

### **Cold storage, Southern Oregon**

I have been so pleased with the energy efficiency projects we're doing that I haven't been hunting too hard for other projects. I do have some space that I'm thinking about



refrigerating and when it comes time to do that, I'll look at what incentives are there with Energy Trust. Also, I did go to a seminar in Eugene a month ago that was put on by Energy Trust and NEEA and one of the things that was brought up was KPIs (key performance indicators). And so that's what I've been focusing on around here since that seminar. What I can do with our baseline charges.

## **Consideration of renewable resources**

When asked whether they've considered installing renewable resources such as solar electric or solar water heating, many respondents said they have looked into solar electric but have rejected it due to the large upfront cost and long payback. Many have interest but say, "it's just not there yet."

### **Respondent Quotes**

#### **Food products, Southern Oregon**

One of the things I plan to do this year is look at some projects for passive solar and stuff like that that might have longer ROI but might give us some good capital and places to use our capital and gain some rebates and whatever.

#### **Computers & electronics, Portland Metro Area**

We were going to do a huge solar project a few years ago. I was working with Imagine Energy. But then the economy took a nosedive and on top of that the technology for solar actually became a lot better so it may have been better that we didn't do it at that time.

#### **Plastics, Willamette Valley**

We haven't done anything in this area. My view of solar is that it costs a lot of money and the payback is a long time! I'm not sure the solar is there yet for commercial use. I mean it's there but boy it costs a lot of money and the payback is a long time! I even had a solar guy come out and I said, hey I know I can't run the entire plant on solar but what if we just did the offices. And he did a proposal for putting solar on the roof and the payback was 6 years and it cost about \$3.5 million. And I said well that might be a little problem!

#### **Wastewater treatment, Southern Oregon**

The Public Works Director and the Project Technician have been looking at solar panels. We have some vacant property right next to the plant and I think they're looking at that and at one of our pump stations. We have about 7 acres and there may be some use there to put solar panels in.

#### **Transportation & aerospace, Southern Oregon**

Yes, and this was a sad thing. We got involved with AES in Eugene and designed two systems, ended up concentrating on a solar panel one for our warehouse. We got the BETC approved, had everything done, all ready to go, had all the paperwork ready, the next step was to put a deposit and get started on engineering and the market was just not there for us to be able to cut loose and do that, even as good as the project looked, the company was not willing to pursue that for fear of tying up revenue that they needed for other things. And we ended up having to let go of that project and lose the BETC. This was a huge hit to me personally—I put 3 years into that project, trying to make that fly. So that was very disappointing. We just couldn't do it.

### **Beverages, Central Oregon**

I'd love to see us with solar panels but that's probably isn't going to happen. It's hard to get dollars with the economy as tight as it is. But if the economy starts coming around and money isn't so tight maybe I can sell it. It's not in the cards now.

### **Wood products, Oregon Coast**

We haven't considered renewables. That's not something that's even come up in conversations. We're right here on the coast and we have a lot of cloudy days. We did talk to RHT about what it would take to convert our fleet of trucks from diesel engines over to natural gas. I don't think they're there yet with that process but when they are we'll probably take a look at that.

### **Food products, Willamette Valley**

We've looked at solar. In fact that was one of the things I was really pushing. I went to corporate a couple years ago and was hammering on those guys—why aren't we getting on this bandwagon. I have about 300,000 square feet of roof that's not doing anything. So you could put about a 1.75 megawatt solar array up there. At the time we looked at it, it would have been single biggest array in Oregon. But it was going to be \$18 million. It just doesn't pan out. The other thing is the way our corporation is set up, our local plant would have the expense and corporate would get the rebate. So for some reason, with solar the rebates or savings don't get back to us locally.

### **Beverages, Columbia Gorge**

We've looked into biomass and we've looked into solar. Years ago when they started pushing this—there were solar contractors that were kind of coming out of the woodwork. We called them carpetbaggers! And some had some pretty grandiose proposals. We had one where there was no payback—it was a huge, incredible investment and the payback just wasn't there. But the biomass we looked at because we're generating a waste solid stream so we're always looking at what we can do to minimize that. Several years ago we got DEQ certification to use it as an agricultural soil amendment but there was no market for it per se. So now we're working with a local composting company and they're using it to add to their compost piles. In the brewing industry there's a lot of interest in that.

### **Misc. manufacturing, Portland Metro Area**

I have kind of been hearing what people are proposing and I'm not sure it's there yet. I've haven't gotten a proposal that is good enough to go ahead with. But I think we'll be seeing more and more solar in Oregon. I have heard quite a bit on wind from the PGE seminars I've been attending. PGE is significantly investing in wind.

### **Food products, Portland Metro Area**

We believe in doing the right thing, so for example, we looked at doing a solar panel. We thought we could derive 30% of our power from solar but when you look at a \$2 million dollar bill and a long payback, well it just wasn't affordable.

### **Paper manufacturing, Portland Metro Area**

We actually have looked into biomass here. In fact, we've looked at a number of scenarios as far as producing power here at the plant ourselves either from waste or from natural gas and every time we even get close to it something happens and drives the price up to where it's really not feasible for us to do it.

### **Food products, Portland Metro Area**

We had some guys come from a solar panel company last year and did a dog and pony show. But after we penciled it out it didn't seem like it was worth it especially after all the infrastructure changes and the amount of money it would save, it wasn't really worth the trouble. It would have barely given us a 15% savings on our power and after 10 years, we would probably have to redo it because technology advanced and improved. Plus, we're right next to a cement facility and there's dust that blows around in the summer and it would cover the solar panels and create a maintenance issue for us having to get up there and clean things. So that's why they decided against solar.

### **Cold storage, Southern Oregon**

I've looked at putting solar panels on the roof and I'm going to look at that again when we're not so busy. We also looked at buying from PP&L, the Blue Sky program. But decided against it due to the dollars and cents.

### **Misc. manufacturing, Southern Oregon**

There was a VP here that did a cost evaluation to put solar panels on our roof. He did it because he knew somebody that made solar panels. But it wasn't cost-effective for this building. We would have had to be in the business for probably 100 years before we broke even on it.

### **Misc. manufacturing, Portland Metro Area**

I'm not opposed to solar but we're not in the gift giving business, we're in the money-making business. We've got shareholders that expect something from us. Maybe that's something that could be proposed to Energy Trust—help up figure out how we can make it pencil out. We did look at a cardboard compactor that was run on vegetable oil and solar power but it would have taken 3 times the roof square footage that we had and it would only run 6 months out of year.

### **Computers & electronics, Portland Metro Area**

We're finally getting around to putting solar on our own roofs!

### **Computers & electronics, Portland Metro Area**

We did look at solar 5 years ago and got some measuring equipment on the site but it didn't work out. I can't remember all the details. We do subscribe to the Clean Wind program through PGE. It's sort of a circular thing—PGE charges us so much a month for their Clean Wind program and we get a credit from the Department of Energy on our public purpose charge every month. It's not like we paying more—it's just we're paying for the Clean Wind and getting a credit from the Energy Trust. So that's kind of a cool

thing. It's net zero for us but it kind of contributes to the environment. And as long as it doesn't cost the company any money, they're fine with it.

**Misc. manufacturing, Portland Metro Area**

You know we have talked to some people about solar options but at this point it seemed like more of a headache than it's worth—it's more effort than payoff.

## **Barriers to Participation in Energy Efficiency Programs**

**This section summarizes the results of six barriers explored with respondents:**

1. Inability of projects to meet payback criteria
2. Lack of available capital to invest
3. Lack of awareness of opportunities to save
4. Lack of technical expertise to design and complete projects
5. Lack of certainty promised savings will be achieved
6. Lack of a clear decision-making path to proceed with energy efficiency projects

## **Inability of projects to meet the company's financial payback criteria**

Respondents were asked in general about this barrier but also specifically whether their company has a hurdle rate or minimum payback period for energy efficiency projects. Overall, of the two financial barriers — payback and capital — payback is the more significant barrier.

### **1. Most companies identify and follow internal payback guidelines. Some are looking for one to two years and others willing to go as long as three to five years.**

"Payback is very important. Our rule of thumb for our company is one year or less. So anything more than that we have to pitch it quite a bit harder to Corporate in order to get the funds released."

### **2. A few indicated a willingness to go even longer if the need for the equipment was great, if it reduced maintenance over time or the long-term savings was such that it made the project worthwhile.**

"I'd say payback is the biggest barrier. As a company we look for that ROI to fall within a 3-year payback, typically a 2.5 or 2.8 is a good payback time. Some of these go a little longer but the project itself, the commodity, lasts a great long time, like it's a 20-year fixture or something that we know once we get there we're going to have a long-term investment before we have to replace it again."

### **3. Respondents were also asked if they have ever moved forward with an efficiency project that exceeded their hurdle rate and what were the other benefits of that project that made the difference. Many simply said no. One said, "Haven't tried one yet to tell you the truth." A few said yes:**

- **One customer indicated they will also factor in other benefits and said:** "We shoot for 2 years. However, we will consider an energy efficiency project that's between 3 and 5 years if it has some of the other benefits we talked about (see note below for explanation of "other benefits."). So sometimes we'll look beyond just the ROI or the dollars, but overall that's what is most important and what we look at most carefully."
  - \* Note: The "other benefits" this respondent is referring to included: Lighting resulted in employees being able to do the job better, made bulbs easier to change, and helped expedite their food safety coding audit. The VFD on the evaporators helped to better control the temperature and kept the rooms from overcooling and freezing product.
- **Another customer was willing to take a longer payback period in order to achieve higher kilowatt savings:** "We try to get everything under 2 years if possible. Two years is a slam-dunk. But I've personally gone out 7-9 years and gotten an energy efficiency project approved. That project got approved because it reduced kilowatt usage. So the company can see an advantage in

saving energy and sometimes the projects are a good quick payback and sometimes they're not.”

- 4. Respondents were also asked how financial payback criteria for EE projects compares to investment criteria for other projects, and how do they balance their budget with energy efficiency and other priority projects.** By and large, respondents identify investment priorities that are most important to the company’s competitiveness or bottom line. Many indicated that maintenance projects or “something that you have to do” are the first to be completed, whether or not it is an energy-related project.

“First and foremost is whether we can get our product to market. So let's say we need 20 new trucks because they're breaking down and I'm proposing an energy efficiency project that's the cost of one of those trucks. Well there's no question that we need to buy the truck first because without the truck there's no money coming in. You've got to make sure you can meet that need first.”

“All energy efficiency projects simply fall into what's best for company so they don't differentiate between EE and non-EE projects.”

“Production efficiency will outweigh energy efficiency every day. We do a lot of things because we need to do it to be competitive in the industry. We’ve had to upgrade our packing houses and stuff like that to get a higher quality product but that didn't make us more energy efficient but hopefully getting a better product out of the deal so we have an edge vs. our competitors.”

**Conclusion:** Payback is important in making decisions about energy efficiency. Other factors may also be considered, but management making the decision is looking at the return on investment. In establishing investment priorities, companies look at projects that have the greatest impact on the company’s bottom line, whether or not they are an energy project.

### **Respondent Quotes**

#### **Computers & electronics, Portland Metro Area**

The biggest barrier to all projects including energy efficiency is ROI. The ROI guidelines here are limiting. The company looks for ROI on a project to be less than 12 months. Sometimes they can be talked into 15-18 months. But often the incentives Energy Trust offers aren't enough to swing even 15-18 months.

#### **Beverages, Columbia Gorge**

For major projects we look at payback and we look at about 3 years. We had 2 audits done through Cascade Energy this year. One focused on HVAC and refrigeration and the second focused on natural gas—specifically our boiler and what we could do improve things there. And on the natural gas one, which involved other sizable projects, there was a 9-year payback and so we decided we'd be better off improving efficiencies



and achieving things in other areas with the money we would be putting out for this particular natural gas project.

### **Computers & electronics, Portland Metro Area**

Payback is a big barrier. We're a manufacturing company and we have to be careful. We have to determine whether the ROI is worthwhile or should we wait until the technology gets better. We don't have a set number, but if it's something within 5 years, we'll look at it pretty seriously.

### **Misc. manufacturing, Southern Oregon**

For me, a 3-year return is good. Five years is probably about tops. Now with some other things I purchase, like machines, I'll buy the best I can get and get every mile I can out of it rather than buying a less expensive machine and have to replace it in 10 years. I'll pay more money and get something that lasts me 20 years. I try to get the bang for my buck.

### **Beverages, Central Oregon**

We don't have a set payback period. When we did the T8 lighting, I could show management that it would take approximately 7 months to make their money back and they let me do it. It was a \$68,000 project, out of pocket to us was \$12,000 and we made that back with the savings in energy within 7 months. Now if it gets down to whether I paint the building or do I put in solar panels, I would say our priority is to maintain what we have before we go down the road of doing something else. The owners are going to make me take care of the buildings and stuff before letting me take on an energy efficiency project.

### **Wood products, Southern Oregon**

Because our company cares about energy conservation, it's sometimes easier to get approval on energy efficiency projects even though the payback is a little longer. On the electrical items, we were able to reduce quite a bit of energy. However, you're talking fairly large equipment as far as price tag goes and the payback was fairly lengthy on it. I think even after the incentives, we were about 3 years on it. If the BETC comes through, we're able to reduce it to 1.5-2 years. But it made financial sense to do that. Without any of the incentives we were at about 6-year payback and we would not have done it at this particular time.

### **Misc. manufacturing, Portland Metro Area**

ROI is the biggest consideration. Our company loves to see them within a year but will take them within 4 years.

### **Paper manufacturing, Portland Metro Area**

Lack of available capital and payback are about equally the same in terms of being barriers to doing these projects. If a project has more than 1.5 year payback, maybe 2 years at the most, we just don't do them. With the Energy Trust extra money kicking in, a lot of times that will lower the payback on a project so that we can go ahead and consider doing it right away. I know we've had several of them that way. Some of the

projects had quick enough paybacks that you'd be stupid not to do them but there's been other ones that the extra financial incentive helped give the project the final push to get approval.

### **Transportation & aerospace, Willamette Valley**

Generally we look at 5-year maximum payback. But I think the lighting was going to be something like 5-7 and the compressor would be a little further out, which makes the owners nervous because they don't know what the company will look like that far down the road.

### **Wood products, Central Oregon**

We do look at payback but we don't have any hard and fast guidelines that we use as criteria—we just look at our projects and see if they fit our needs and direction of the company. We're in a pretty fortunate position where we don't have to evaluate 5 projects for the coming year and only do 3. I guess we're a small company and we can only take on a certain number of projects due to our small size but it's pretty clear what we're going to do. We have a map forward and we just focus on what we're able to do.

### **Wastewater treatment, Southern Oregon**

I don't know for sure if there even is a minimum payback criteria. I don't have one personally. I'm sure the engineering firms that are doing the design studies have one.

### **Transportation & aerospace, Southern Oregon**

We don't really have an established window for payback. I mean I have my own—I think 4 years is not bad. And some of these projects have paid back in months! But the company doesn't really set one and in the past we've not talked about that as a determining factor. If there is a difference in criteria for energy projects versus others, it's on a higher level than I see or I am on. You talk a maintenance project or something you have to do, obviously those get done first. If it's a beautification project—painting the building or landscape work—that gets lower priority until things are caught up enough. Energy projects—well I suppose if they're fast enough payback—whether there's ETO or BETC available or not—I mean if there's something that there's no credits available for, and it's still a fast payback, they consider that probably in between the other two project levels.

### **Wood products, Southern Oregon**

A 2-year payback is our standard. It's rare that we would go ahead with an investment that didn't meet that. The two projects we did met the 2-year payback. But something large like that—that was a big expense—I think we were up around \$700,000 and so a project that big they would probably consider that and say oh, you're not going to pay that back in 2 years, probably stretched out a little further. So they are willing to take that into consideration. It's not cut in stone—like beat the 2-year period.

### **Misc. manufacturing, Eastern Oregon**

The biggest barrier is payback. Although our company doesn't set a minimum payback period, if I can't justify a reasonable payback, they're not going to let me spend the

money. So I have my own internal mechanism that if this is a 5-year or less payback, I consider that a no-brainer. I mean I just think we ought to do it. When a project approaches a 7-year payback, I question whether it's beneficial to spend the money. My thought process behind that is that maybe there will be some better technology down the road and I'll get a quicker payback.

#### **Wood products, Willamette Valley**

I think typically our company is looking at a payback of 3 years. And of course, the faster the payback the better. It will fly through the system really quick if we have a 6 month or 1 year payback. It gets everybody's attention real good!

#### **Wood products, Oregon Coast**

This is going to sound kind of selfish but I like at most a 2-year payback on energy efficiency projects. But this is a sawmill so some of the other projects we do just don't fall into that criteria. They're projects that just have to be done. Some things have to be replaced or done to stay in business.

#### **Food products, Portland Metro Area**

If we can get a 4-5 year return on investment, that's pretty good for us. For example, the natural gas boiler we put in was \$110,000 and our gas bill is about \$1000 a month. So we're only looking at \$12-13,000 a year. So I think over the next 5 years that's going to be a pretty significant amount of money and pretty soon it will pay for itself on a daily basis. So I think realistically 4 years.

#### **Misc. manufacturing, Portland Metro Area**

No we don't have an exact set thing. Like if I put in a project does it have to pay for itself in exact 5 years—no it doesn't really work like that. I think one of the things is how long do you plan for your company to be in business. Well if you only plan on being in business for 10-15 years, then no one would do it. We plan on being in business for 100 years.

#### **Chemicals, Willamette Valley**

All I do as a maintenance planner is just get everything put together and then submit it to purchasing and our head of engineering. So I'm not involved in any of that stuff—payback and hurdle rates.

#### **Misc. manufacturing, Southern Oregon**

We pretty much work on a maximum of a 3-year payback.

#### **Computers & electronics, Portland Metro Area**

I have to say no, we don't have a minimum payback period or hurdle rate. When I worked at Intel we had a 3-4 year payback. I don't see that here. I have done some projects that have a 10-year payback as well as some that are shorter. I think management looks more closely at the project itself than having a set project payback period.

### **Plastics, Willamette Valley**

Our only payback on these projects was set by Energy Trust. And even if the payback didn't meet Energy Trust's criteria or we weren't going to get incentives from them, we went ahead anyhow. Because we're here for the long term so if the Energy Trust payback was 3-5 years and our payback is going to be 10, well we're still going to be saving money over 10 years. And it gives us cutting edge technology and our customers come here and say, wow, you've got a nice shop—you've got all the latest equipment. Now because we're saving energy that's a big thing but if it were just a wash, we'd probably still do it! We don't really have to make budget decisions about doing energy projects versus other ones. That doesn't happen to us. If we do have multiple projects, we just juggle them.

### **Cold storage, Southern Oregon**

Our payback goal is 3-3.5 years. However, just today I'm working on a project where I have to change a 15 horsepower motor and it had a motor that wasn't energy efficient and the payback on buying a premium efficient motor was 4.5 years and I did it! I made that decision because I know that pump runs about 20 years before it needs to be replaced and so I decided for 4.5 years to break even but then I've got 16 years left where it's going to continue to save money and power rates are going up. So the 4.5 years, I guess that's a soft number because you and I both know power rates are going up.

### **Plastics, Portland Metro Area**

There are and there aren't different criteria for energy efficiency projects. We define the criteria differently for energy reduction and elimination of energy projects because the paybacks are different, the scale of the projects are different. Energy Trust is there to help provide a non-biased view, almost like a third party. And almost anything that's approved here comes with rebates or incentives through the Energy Trust. I think when Energy Trust sanctions a project, then the assumption is that it's a viable project when upper management looks at it. This is sponsored and approved by Energy Trust—then managers say oh, then that's ok. There's tons of credibility there!

### **Wastewater treatment, Portland Metro Area**

Some of our energy efficiency projects, I want to say the larger ones, even with a good payback, we still have to put the project into our capital improvement plan and that plan is something that gets reviewed every year. Of course projects compete for the available dollars so there is some of that. But I can't tell you when we've had another project out-compete an energy efficiency project so the energy efficiency project fell off the table. I don't know if that's ever happened! We've been fortunate because our budget is pretty healthy and although Washington County definitely has taken its economic hits, it's not as bad as some areas. So I think our revenue has been pretty good during these harder times. So energy efficiency projects compete with obvious things like if we have to expand the treatment plant in order to accommodate population growth or to replace a very necessary piece of equipment that's going to wear out, we're going to do that, no question. But we've had the funds to do that as well as the energy efficiency projects.

## Lack of Available Capital to Invest

1. Many respondents felt strongly that lack of available capital is a barrier to investing in projects. One customer indicated that even when savings may be coming later, if the initial money is not available to pay for it, the project won't happen. Several respondents indicated they have to balance limited resources against other priorities that also have an impact on the bottom line.
  - A few said capital is the biggest barrier and bigger than payback.
2. Another group of respondents felt that access to capital resources may be an important consideration but it is not a barrier.
3. Customers with deeper pockets and healthier financial resources evaluate a project's initial upfront cost along with other financial factors such as payback or savings in making their decision to push forward.
4. Self-Capitalize vs Financing: Respondents were also asked if they typically self-capitalize or borrow, and would an increased availability of low-interest loans increase the likelihood of doing projects.
  - Most respondents said their company self-capitalizes and doesn't borrow money.
  - Many acknowledged that their companies borrow money for other parts of their business, but energy efficiency projects tend to be self-funded. A few seemed to be opposed to the idea of borrowing at all.
  - Given that most of these respondents are not borrowing money to begin with, even the idea of lower rate loans had very little appeal. Most just said no and reiterated their company's philosophy on borrowing money in general.

**Conclusion:** Capital is a barrier, particularly for companies without large cash reserves. Companies tend to want to finance these projects on their own if they can, before tapping outside resources.

### **Respondent Quotes: Quotes are divided into these five categories**

- a. Capital is a barrier
- b. Capital is not a major concern
- c. Other "capital" quotes
- d. Self-capitalize vs. financing
- e. Appeal of low interest rate loans

#### **a. Capital is a barrier**

##### **Beverages, Central Oregon**

Lack of capital is absolutely the biggest barrier. If you have an idea and you can show what it will do for you but there isn't the initial money to pay for it, to wait on the savings, then it's not going to happen! The T8 lighting with kickbacks was pretty easy. You're talking about \$12-13,000 out of pocket—you can't beat that! It was a \$67,000 project

and it cost the company \$12,000. I mean there was no argument whatsoever. I presented it and got told immediately, get it done. But I had done all the homework, I had done all the numbers, I had everything for them. But even if I have my argument points put together well—hey, put out \$50,000 and I can pay it back in this timeframe—the first thing is that there has to be beginning dollars for the project.

### **Wood products, Oregon Coast**

Well lack of available capital is to a certain degree a barrier because some of those energy efficiency projects are pretty spendy. And quite frankly, we probably wouldn't do many of them if there weren't incentives involved. But the biggest barrier to doing energy efficiency projects is a hard question for me to answer.

### **Misc. manufacturing, Columbia Gorge**

This is a big barrier and it's bigger than the payback issue.

### **Transportation & aerospace, Southern Oregon**

I would say capital is a bigger issue than payback and it's typically what would kill a project.

### **Misc. manufacturing, Portland Metro Area**

Yes it's a barrier. We have projects we both want and need to do that we just don't have capital. And the capital's a huge thing because basically we're talking about changing systems. On a smaller scale you can modify systems but generally you're talking about changing a system so that's an enormous amount of capital and where does it come from and here's the scary part, when does it return. Because our lighting system cost \$60,000 and for a company our size that's a huge chunk of money. We are just fortunate to have in-house electricians and mechanics that can actually do that work. So they make a decent wage but I'm not paying them a contractor's wage, which is really astronomical. I can pay an electrician here \$35-40/hour whereas if I contract with an electrician it will cost \$85.

### **Chemicals, Willamette Valley**

This is a big barrier and it's why my project didn't go.

### **Computers & electronics, Portland Metro Area**

Yes, that can be a barrier. We're a relatively small company, say compared to Intel. We work with a lot less funding and a lot less people, and as a start-up we want to focus on our manufacturing—how can we produce more product.

### **Computers & electronics, Portland Metro Area**

Yes, it's a barrier.

### **Paper manufacturing, Portland Metro Area**

Lack of available capital and payback are about equally the same.

## **b. Capital is not a major concern**

### **Wood products, Willamette Valley**

That hasn't been a problem for us. And quite frankly the way Energy Trust finances these things, you can hardly afford not to do it! Even if you have to go out and borrow money short-term. It just has such a good payback and savings. If you pass it up, you're really making a mistake.

### **Plastics, Willamette Valley**

For us it's just not any problem. It's not a concern. Now, I'm not going to waste money or leave money on the table. But if it makes good business sense then we're going to do it, regardless.

### **Wood products, Central Oregon**

The overall capital cost is certainly a consideration but I'm not sure it's the biggest barrier. We're in a fortunate position where we're making money and we have capital available for projects.

### **Cold storage, Southern Oregon**

I would say lack of capital is a big problem for other businesses but not so much for us. It's great to say there's a 3-year payback on a project but if you don't have the money to do it and you have to borrow it and then your payback gets out there 5 years—it becomes pretty hard to do, hard to make decision to spend the money.

### **Food products, Portland Metro Area**

I think it just depends on the scope of the project and every business is different in how much they capital they have. Our owner likes to keep a pot of money handy to have a cushion for emergencies, which is a wise practice and that helps. Not every business owner is going to do or can do it for whatever reason. And so that helps our business do things.

### **Misc. manufacturing, Portland Metro Area**

No that's not a barrier. Now, I'm saying that kind of casually. But we're fortunate enough to be managed by a company that has a tremendous amount of cash capital available. So as long as the formula meets their expectations, they'll invest in it. So the availability of capital isn't as critical as how it pencils out in return and with Energy Trust participation, a lot of those things are a lot easier to push forward.

## **c. Other "Capital" Quotes**

### **Food products, Portland Metro Area**

The nature of our business forces us to be very cash heavy. Because we deal predominantly in the beef market, we work with some arcane laws like the Packer Act of 1921 that says when we buy product we have to pay for it in 5 days. So we're writing \$200,000-300,000 checks every 5 days. So as a survival mechanism we have some

creative financing with interest income and things like that. We're constantly rolling money around in our accounting system so capital is usually not an issue for us. Now some smaller companies, they borrow to make payroll and then they pay that back and they're constantly engaged in this borrow and pay, borrow and pay. But as I said, just the nature of our business doesn't allow that. It forces us to be very cash heavy. Overall, cost is really the thing that's always on our mind. It's not a matter of desire or will to do energy efficiency projects—that is there from the top of our organization down.

### **Transportation & aerospace, Willamette Valley**

In our case, particularly since 2008, capital reserves shifted to operating reserves rather rapidly by the middle of 2009. We didn't have any troubles but that had to happen. And now we're coming back slowly to a similar kind of capitalization that we had before but it's still not the same. My point being that if there's going to be a capital investment there's got to be something to pay for it with. They can't have stuff sitting over there not doing anything for them. The total initial investment does make a difference, because that's the part where they go "oh my god" because they've haven't even thought about what it's going to do for them.

### **Misc. manufacturing, Southern Oregon**

All of our projects here are basically on cash flow. If there's not much cash flow, we deal with what we have. If we got cash flow going, we can start looking at upgrading things. When the economy tanked, it kept us from going forward with energy efficiency projects.

### **Wood products, Southern Oregon**

It's hard to answer which is the bigger barrier—lack of capital to invest or payback. That's a loaded question. Because there isn't a set of criteria that you meet that would be a checklist for people to say approved or not approved. When it comes to energy, it's something that continues to go up and we're taking another 7% hit at the beginning of the year. If you look at our financials, we didn't save any money with electricity this year compared to last year. We did if you look at the kilowatt usage—it was down. But our rate continues to go up. So all you're really trying to do is keep your fixed costs even. Had we not done that project, we would have been close to \$200,000 more in electricity this year and that goes right to the bottom line. So when you do these projects, and we know that our rate continues to climb, it's easier to get management to buy off on long-term capital or a little more than a year (payback) than it is to run a normal fixed asset that would only be looking at a year. Because a \$200,000 savings this year is \$400,000 next year—and that's not actually far off number wise!

### **d. Self-capitalize vs. financing**

#### **Wastewater treatment, Portland Metro Area**

We don't borrow money but we do sell bonds. We have bond indebtedness outstanding. We don't use tax money. The bonds are all paid with revenue from our ratepayer fees.



**Wood products, Central Oregon**

We self-finance our own projects. I don't think we'd consider borrowing but our CFO does look at loans and that sort of thing so I can't say absolutely not, but probably not.

**Wastewater treatment, Southern Oregon**

We used to try to self-fund everything but now we can't keep up with it. We did this project about 15 years ago and it was self-funded and it was like \$7-million. We have borrowed money. In fact for the last project we borrowed money from the State through the State Revolving Fund (SRF). The other way we could do it is to float a bond or we could go to the bank and get a loan. But that all has to go through the Council and they have to approve it.

**Transportation & aerospace, Southern Oregon**

Typically, we've self-capitalized these projects, we do our own funding—we haven't borrowed money. We budget for it—try to get it into the next year's budget and then work on it when that rolls around. In the case of the solar project, it could have gone either way—there were some favorable financing options on the table there. In a normal economy we might have gone the direction of borrowing money for that.

**Beverages, Central Oregon**

Pretty much we self-capitalize. Although due to our industry, we borrow hundreds of thousands of dollars every day and pay it back it back the next day. And we use money, especially when it's slow, off and on a daily basis and we try to attack every area we can so we don't have to borrow on a day-to-day basis. But I don't think management would say go get a loan to do an energy efficiency project—they're going to say budget it and we'll see if we can make it fit.

**Wood products, Southern Oregon**

Prior to 2005 the business philosophy was you borrowed as much money as you could and you bought mills and new equipment and you extended yourself way out. When the economy tanked, we actually owned flooring plants and quite a bit of other stuff. We ended up selling all of our flooring plants and getting back to our basics in order to reduce our debt load to where we could function again. So what we're trying to do now with our capital is do it all with cash. Not borrow for the project. So we are now self-capitalized. But it didn't used to be that way. We used to be more willing to borrow money. Business profits were up high enough that you didn't really worry about it. If you're making \$100 million a year and you want to borrow \$500 million, you don't really worry about it because you have a lot of income coming in. But when you get to the point where you're only making \$1 million a year and you still have all this interest that you're trying to pay—you're paying \$8 million a year just in interest—it doesn't pencil out.

**Food products, Southern Oregon**

We tend to self-capitalize. But if the project has a good ROI, we will find the money, generally speaking. There's lots of alternatives out there to find capital. And, of course, every company borrows money. Sometimes it makes more sense to borrow money than

use your own capital. You can borrow money at 3% but you can get 6% on an investment, then there's no reason to use your capital. So that's a decision the owners make based on the project.

#### **Paper manufacturing, Portland Metro Area**

Oh, most definitely we self-capitalize. We're owned by an investment firm located outside of the United States but we don't really like to go to them for money. And they like that because we send them a check every now and then!

#### **Misc. manufacturing, Southern Oregon**

We self capitalize. If we had borrowed money, we wouldn't be in business right now. When the economy tanked, if we had bills to pay, we would not have made it. So our first priority is what do we need right now to stay in business and we bought about \$300,000 of equipment in last two to three years. That's why the \$50,000 lighting project is on the back burner.

#### **Computers & electronics, Portland Metro Area**

We self-capitalize. But we consider loans and we also considered third party investment on the solar panels for our roof. We looked at the option of having our utility fund and partially own the installment, which would reduce our capital. But management decided not to go that route.

#### **Misc. manufacturing, Portland Metro Area**

To my knowledge we haven't gone out to borrow money but I'm not in the finance end of things.

#### **Misc. manufacturing, Portland Metro Area**

We prefer to do it on our own. We don't want to borrow money from anybody. I think that's just the way to do it. But every company does borrow. I think what determines whether you borrow money is what is the return, how long does it take you to pay back that money. If it's a 10-year plan—we won't do it. A 3-year plan, we probably will. For 10 years, if you figure out the interest rate, it's just not worth it.

#### **e. Appeal of low interest rate loans**

##### **Plastics, Willamette Valley**

Even with low interest rates, we wouldn't be interested. We like to be unencumbered. I think there's a lot of people that get in trouble by borrowing money.

##### **Misc. manufacturing, Eastern Oregon**

Even if low interest rate loans were available, that is not a route we would take. Cheap money is a great thing and we've looked at it a couple times. There's actually some block grant money available in Eastern Oregon that we could utilize ourselves but unfortunately whenever you do low interest money there's usually a horrendous amount of governmental red tape. And when you don't need to do that, there's no reason to do

that and succumb to that—telling God and everybody about your first born and what color diapers they wear.

**Wastewater treatment, Portland Metro Area**

I'm not as close to the financial world as I probably should be to answer this question with a great deal of certainty. But I think right now our borrowing costs are so low when we go to the bond market that I don't know if a low interest loan program would actually offer loans at an interest rate that would be as low as we pay on bonds.

**Misc. manufacturing, Columbia Gorge**

We don't borrow and low interest rates wouldn't influence us.

**Beverages, Central Oregon**

I don't think our company would be interested. I can't be 100% sure because I've never really asked. But typically, we're a pay-as-you go company.

## Financial Barriers: Other Related Questions

The following summarizes the results of three other financially related questions:

- 1. When your company cuts its operating costs by reducing energy waste, do you have that money available for other projects or does it roll into a general fund?**

No respondent indicated that the savings from energy savings projects get earmarked for more energy efficiency projects. There were some who qualified their answer by saying they wish this is what happened and there were a few who are working toward a system where this could happen. Most respondents just had a brief response to this question, saying, "It goes to a general fund."

- 2. Has your company ever worked with an Energy Services Company (ESCO) or leased equipment? If yes, what was your experience with this? If no, would your company ever consider working with an ESCO?**

There appears to be very low awareness, usage and appeal of ESCOs, and a low incidence of leasing equipment. Almost no one was aware of the term "ESCO", or if they said they were aware, they didn't appear to have a clear understanding of what an ESCO is. To those unaware, even after the term was briefly explained, there was low interest in working with an ESCO. Almost no one said they lease equipment.

- 3. Do you use a lifecycle cost analysis for purchases you make?**

Many respondents were unfamiliar with this term and aren't using it within their companies. There were a few respondents that say they do a life cycle cost analysis, and a few who realized they were in fact doing a life cycle cost analysis after the term was explained to them.

## **Lack of awareness of opportunities to save**

Although lack of awareness of opportunities did not emerge as a major barrier, many respondents stated that there is low awareness of Energy Trust and its programs and that they want more information. While clearly companies can't initiate their first project without information, awareness of programs and opportunities appears to be an ongoing need even with companies that have completed past projects. Companies expressed interest in as much information as they can about possible opportunities that will work for their business.

While several respondents offered up suggestions as to how Energy Trust might deliver ongoing information, they also self-identified obstacles that prevent them from absorbing or receiving information already delivered through current channels. These include:

### **1. Time to pay attention to new information that comes their way.**

"I wouldn't say I'm that aware. I've stumbled on most of these things. But I tend to resist people coming and banging on my door and saying hey I have this great idea to save you money—I say go talk to somebody else, I don't have time. Does that make sense?"

### **2. Regular access to all possible information**

"I'm at a distribution center that's been working with Cascade Energy for almost 8 years and it's their business to be aware of the opportunities. But I've found they're not aware of all of them and that surprises me."

"It's not a barrier for our company. But I have that feeling that there are things out there that I could take advantage of that I never get to see. Because somebody didn't think to tell me about it, not realizing it's something I could use. Energy Trust is in the energy savings business and they're dealing with companies in the whole state of Oregon. So they have to be seeing more energy efficiency products than I ever will."

"Even now that I know about Energy Trust, I still think there are probably opportunities I'm not aware of."

"I'm not getting enough info on opportunities available. And there's probably so many things available out there that we have no clue about that would actually fit a niche here."

"I'm not really sure if not knowing the opportunities is a barrier because I don't know what I don't know. We're not planning any other energy efficiency projects but that's probably because I don't really know what's available to a facility such as ours that could improve it."

### **3. Reaching the proper contact or channels within the company**

"I'm in maintenance and I can't know everything about what is available."

"I'm aware of opportunities. But I am the only one that has gone down the road of energy efficiency that I know of in all the branches of our company. So for others here, it is a problem."

### **4. An expectation of more direct contact from Energy Trust with facts that apply specifically to the needs of their business**

"I think Energy Trust needs to do a mailing to certain folks—Energy Trust knows who the bigger users are. And they've got to acknowledge the trickle-down effect—where the low hanging fruit, the big projects, with companies like ours are not so accessible because they've already been updated. So Energy Trust needs to go out and do a little reconnaissance."

"I don't think it's a barrier because I think for the most part, we're pretty on top of it. But I do think more information could always help, any little bit of insight into technologies or examples. Real world examples. Maybe there are things we miss. Sometimes you need to step back and look at it from a different set of eyes."

"We were not aware of Energy Trust until we started talking to the air compression people. It would have been helpful to find out more through Energy Trust directly."

**Conclusion:** Lack of awareness is certainly an “entry” barrier and an ongoing challenge for companies looking to do more. Among suggestions for increased awareness and improved delivery of information, respondents said:

- Target high energy users
- Focus on hard number results, specific examples and short documents
- Provide less paperwork and offer more succinct information about programs and savings
- Focus on entry projects first to get companies hooked

### **Other Respondent Quotes**

#### **Misc. manufacturing, Portland Metro Area**

I think Energy Trust needs a better way to get the message out there about how you can get these cost savings and other benefits. I do think there are programs out there that people don't know about. And I've heard this from other companies. In fact I brought up some of the stuff we've done here and 70% of the people I talked to at other companies said, Oh really, I didn't know that.

#### **Computers & electronics, Portland Metro Area**

Once I became familiar, it's been a useful program and Energy Trust has been helpful and responsive.

**Misc. manufacturing, Southern Oregon**

Energy Trust needs more visibility. You hear commercials for what you can do in your home but for industrial companies there's not much flow of information on Energy Trust. Maybe it's just where I'm at in the Southern Oregon area.

**Misc. manufacturing, Portland Metro Area**

I think Energy Trust continues to be a good resource for those who know about it but I'm not sure everybody knows about it.

**Wastewater treatment, Southern Oregon**

I don't know much about the services and incentives that Energy Trust offers. I would like to know more. If people aren't aware of what's available, it's a problem. And others within our organization may use Energy Trust more than I have so they may be more familiar. But maybe it's something where Energy Trust could come down and talk to us or do a workshop even with the City Council as to their services and what they provide.

**Wood products, Oregon Coast**

I would like to be made more aware of energy saving projects. It is almost accidental how I hear about opportunities. For example, I'll hear it off hand from a kiln or boiler salesman—they're salesmen, a necessary evil. But they'll say you know there's some energy savings on this project and I know of a mill that did very well with the Energy Trust on payback and incentive. I say well ok let me make a call to our contractor, RHT, and see if you really know what you're talking about. I'll go straight to the source to find out if that's the case. And sometimes that is the case and there is some money and we didn't know anything about it and when we call RHT, they say yes, there is some help there, let's get together and we'll talk about this project.

**Misc. manufacturing, Southern Oregon**

I learned about Energy Trust by accident after I made a phone call to order some product and was told it wasn't energy efficient. The result was it ended up saving me about \$200 a month in savings on my one project and \$80 a month on my lighting bill. Those were major things. It was my supplier Grainger that tipped me off about the Energy Trust program. At first, it sounded too good to be true but I did my homework on it and said ok. It was a \$10,500 bill but we did it and got all of our money back.

## **Lack of technical expertise to design and complete projects**

The definition of “technical expertise” varied from company to company. Respondents assigned several different attributes to their interpretation of technical expertise, among them, advice and guidance to identify and design products, preparation of technical reports and studies, project implementation, and preparation of paperwork to secure project incentives.

Companies that identified a lack of technical expertise as a barrier did so for these reasons:

1. Able to implement projects but missing the engineering talent to identify and design projects
2. Under-staffed in the maintenance or facilities department with a long list of hot priorities to manage
3. Lack of in-house expertise and reliance on their own third-party vendors to help identify possible efficiency projects
4. Lack of time and manpower to research potential projects
5. Well-staffed but with a desire for outside experts to help identify opportunities they may have missed
6. Access to technical research and studies at no charge that the company otherwise couldn't have funded.

Even among those who see it as more of a hurdle, they have come to rely on and value assistance from Energy Trust or Program Delivery Contractors to fill the gap.

Overall, the majority of respondents indicated that technical expertise isn't a barrier for their company in part because they have capable in-house staff or trusted vendors to assist them. These customers have established a system for acquiring assistance and implementing projects that works for them. Several also indicated that it isn't a barrier because of the services they receive from Energy Trust. At the same time, they could imagine that it is a barrier for smaller companies with limited resources or expertise in-house. Most customers indicated they would not or could not have completed their projects without some kind of technical assistance from Energy Trust.

**Conclusion:** While respondents differed in their interpretation of what comprises “technical expertise” and how much of a barrier it represents, overwhelmingly, they agree that access to technical expertise provided by Energy Trust is a huge value.

### **Respondent Quotes**

#### **Wood products, Southern Oregon**

The time and resources to put energy efficiency projects together is a barrier. The technical expertise to implement them is not the big barrier. On the technical side, once the project is a go, we have the ability in-house to get the project done. We have the manpower. But having someone like RHT to help us get the projects together is a great



help. Once I established the relationship with RHT, they were a huge motivator, a huge driver in getting all of these energy efficiency projects through. Right now most of us are doing three jobs under one title that used to have three people. And I don't think we're much different from the normal company out there. So there's a time constraint—you don't have the time to invest in putting these projects together. Having somebody like RHT come in and say let me take a look through your mill and see what you have and just throw some ideas off you and then you say, yeah, this doesn't sound too bad. And then say well why don't we put something together—they're doing a lot of the legwork for you and getting it to the point that it will entice people to say hey, this really makes sense, we really should be doing this. And they're also doing the paperwork—to get the incentives, etc. It makes my decisions a lot easier.

### **Misc. manufacturing, Columbia Gorge**

We don't have the expertise in-house to figure out what energy efficiency projects need to be done and what it would take. Our problem is not so much with implementing the project, but designing and figuring it out. When Energy Trust came in and did a survey for our lighting project, it was very helpful.

### **Misc. manufacturing, Eastern Oregon**

The technical expertise is a huge value! These projects would not have happened without the Energy Trust. I can tell you that. But you need both the incentive and the expertise. It starts with the incentive and then it's the technical expertise. Knowing there's an incentive gets everybody's attention—free money. Then the first question that comes up is how much is this going to cost and is it going to save us any money. And the only way you can answer that with true certainty is to do what the Energy Trust has done and that's provide engineers that come out and look at your facility and do the calculations and come back and say this is what you can expect. Then I can take that "what you can expect" paper along with the cost of the project and along with the outline of what the incentive is and the calculated payback and say hey guys let's do this. That's what has to take place.

### **Computers & electronics, Portland Metro Area**

When I worked at Intel we had a lot more technical expertise right in the company. And here at this company, we have much fewer resources in terms of staffing so I've had to rely more on consultants and having that resource through Energy Trust has really helped out a lot with my management. We probably would have had to pay a consultant \$10,000 for the free audit Energy Trust did of our HVAC system. I don't think I would have gotten that money from my management to do that study. And, as a plus, Energy Trust sent third party consultants who had never been in our plant before and they came up with some out-of-the box ideas we would have never thought of.

### **Wood products, Central Oregon**

Because we're a small company, all of our projects are looked at in terms of the time and manpower available to dedicate to projects. We try not to bite off more than we can handle. So it's not so much the lack of technical expertise that keeps us from doing things—it's the manpower.

### **Food products, Willamette Valley**

One of the reasons these energy efficiency projects don't get done is because most companies, including ours, have fewer maintenance people than they need. And that's because maintenance is a cost, we don't make money for the company. So most of the time in maintenance, you're up against it all the time. And when you're staffed that way, you don't spend a lot of time looking at what you think is right or what you could do in the area of energy efficiency. Because you have a whole lot of things that need to be repaired. If somebody runs through the freezer door with a forklift, you've got to fix that pronto and you're not going to be thinking about ways to increase energy efficiency in your refrigeration system. We've got plenty to do. So for us that's a major reason why we hadn't gotten around to improving our refrigeration system until we participated in the Refrigeration Operator Coaching program sponsored by Energy Trust and led by Cascade Energy. This forced us to look and scrutinize and take the time to do it. Now we saved 9% on our total energy use. Just doing the tune-up on the refrigeration system.

### **Beverages, Columbia Gorge**

We don't have the technical expertise in-house to take on some of these projects. We rely on Energy Trust and RHT. We were relying on our service contractors that provide maintenance on equipment but weren't satisfied with what they were providing.

### **Cold storage, Southern Oregon**

I'm not an engineer. And some of the stuff requires engineering knowledge and the ability to calculate—how many kilowatts are we going to save, those kind of things. That is a little beyond the scope of what I'm comfortable doing so it's better to have RHT or someone like them do that for us.

### **Misc. manufacturing, Portland Metro Area**

Yes, in some ways I'm certain there's something to be said for that being a barrier. We do have a very capable and competent staff—we've got a great facilities department, environmental department and IT department. But getting an outsider's input is very helpful in helping us coordinate our own efforts and identifying and showing us examples of how we can be more energy efficient.

### **Wastewater treatment, Southern Oregon**

Technical expertise is not a barrier because we contract that out. We have a Masters Services Agreement with Carollo Engineers to do a lot of our work. We don't have a lot of in-house engineering staff that's capable of handling that.

### **Food products, Southern Oregon**

This isn't a big barrier for us because we have more knowledge in-house than any consultants you could bring in this place. We have experts, really experienced people—in refrigeration, in production and packing. And the owners are really savvy. They've been around the block. But I do think Energy Trust's partners like RHT bring a lot to the table. They come in and do an energy audit, and say here's where we can save you

some money, here's how we get this project going, do you want to do it, and kind of take the ball with it. And I think that's a good thing for companies because I don't think most companies have the horsepower internally to do these projects without some help. Energy Trust's partners like RHT are gatekeepers essentially, and as a gatekeeper they know where to send you from there and to guide you. So I think it's a valuable resource.

### **Computers & electronics, Portland Metro Area**

The technical expertise helps but it's not really a barrier because the technical expertise is on the one end of it. On the other end, I have to look at the application within our company and is this something we really need or want to do or is it and is it cost effective. And sometimes it doesn't make sense for our company to it. But if we do decide to take a closer look, having that well of knowledge and experience offered through Energy Trust is great and it helps to answer a lot of questions and it's important.

### **Computers & electronics, Portland Metro Area**

If we don't have it, we can get it so I don't see that as a barrier.

### **Food products, Portland Metro Area**

We're really fortunate to have a couple of maintenance people that are really, really talented. So here it's not a problem. But I can see it being a problem in other business environments such as a legal office or dentist office where nobody has that type of expertise.

### **Wastewater treatment, Portland Metro Area**

No not a problem. Anything we do that is at all significant we contract out. The lighting retrofits that we do, we do design those in-house and we have done a few of them with our own in-house labor. But if they're of any size at all we typically contract out the actual construction part of it.

### **Wood products, Willamette Valley**

Typically not. We have our own engineering and electrical departments and maintenance departments and they are up to date and capable of doing these projects.

### **Cold storage, Portland Metro Area**

Not a problem. We have a maintenance staff on site and I have a superintendent that runs that crew. I'm very versed at working with contractors and pricing and executing contracts. But I'm sure there's many companies out there with limited resources where this is a problem.

### **Misc. manufacturing, Southern Oregon**

We have a full engineering staff, we have a full machine shop, we have lots of electricians. If you look online, you'll see we build all that stuff so we've got it all. So we're very capable of doing everything.

**Plastics, Portland Metro Area**

That's not a problem here. We have plenty of people that are technically capable. We have a ton of engineers, we're not lacking for technical expertise. But I can understand it could be a problem for other companies depending on the nature of the business. I imagine if you're a lumber mill, it's a totally different mindset.

**Wood products, Oregon Coast**

Without the support from Energy Trust, this would be a barrier. I rely on RHT to help with these projects. Some projects get pretty complicated and I can't work full time on it so I have to have their help. There's such an amount of paperwork and research that has to be done and I just don't have the time for it so I go to RHT and I ask for help. I mean a guy could spend his whole day on this stuff but there are better things I have to take care of. RHT actually does all the hard work. And they really help us out. We've gotten some really great input from them.

**Misc. manufacturing, Portland Metro Area**

Not a barrier because of the expertise provided by Energy Trust and our PDC, which is PGE.

**Transportation & aerospace, Southern Oregon**

Not a barrier because between myself, RHT and a local contractor that's very sharp on electrical energy conservation—between the 3 of us we can pretty much figure out how to make it work.

**Plastics, Willamette Valley**

Not a problem because we use the Energy Trust engineers and the engineers and technical people from our suppliers.

## **Lack of Certainty Promised Savings will be Achieved**

This didn't emerge as barrier for most respondents. Most respondents indicated that they only propose those projects that they are confident will achieve the desired savings. More than one customer said, "if we pull the trigger and say we're going to do something, we're already sure it will provide the savings we want." There appears to be very little risk-taking involved because customers rely on consultants, studies and calculations that project results in advance. One customer said, "we do our homework and we're pretty thorough in making sure that the equipment is going to perform as promised and achieve the energy savings."

**Conclusion:** Customers are receiving projections and information that gives them confidence in the outcome of their projects. Respondents don't propose projects until they are certain they will deliver as promised.

### **Respondent Quotes**

#### **Wood products, Oregon Coast**

I am never concerned about whether the savings will be achieved and that's because I am pretty sure when I go into something that the savings are there and will happen. I get good information. I have to put some faith in the people I talk to that they know what they're talking about. So if they say it's going to save us money on energy—electricity or gas—we're probably going to go ahead on the project.

#### **Wood products, Southern Oregon**

By the time I pitch an energy efficiency project to corporate I believe it myself! I'm not gutsy enough to speculate on something.

#### **Misc. manufacturing, Portland Metro Area**

I have confidence going into all the energy efficiency projects I propose that they will be successful and I've always seen the results that were promised.

#### **Computers & electronics, Portland Metro Area**

If we pull the trigger and say we're going to do something, we're already sure it will provide the savings we want. So that's not a concern for us because it's part of the process we do beforehand and we don't go into it if we're not sure.

#### **Wood products, Central Oregon**

We do our homework and we're pretty thorough in making sure that the equipment is going to perform as promised and achieve the energy savings.

#### **Wastewater treatment, Southern Oregon**

Being uncertain of the savings is not an inhibitor for us doing things but it's always a concern especially if you have to go back to the City Council and say it didn't pan out and we didn't save anything. But also that's why we hire engineering firms because it puts a lot of that risk on them.

### **Transportation & aerospace, Southern Oregon**

This hasn't been an issue for us because we've been able to prove the savings. Here's the old equipment, here's the new equipment—calculate the running hours and there's your savings. We have never had a situation where we were disappointed that it didn't achieve promised savings.

### **Food products, Willamette Valley**

By the time we get to point of figuring out what we want to do and have gotten Energy Trust involved, it makes sense financially to do the project and we don't worry about whether the savings will be delivered. But for example, lighting is cut and dry for me. If you replace a 400-watt bulb with a 300-watt bulb you're going to save 100 watts every time the light is on. But there are some things that are a little bit more obscure and that's where you would rely on Cascade Energy to come up with numbers. Like our freezer doors for instance. I personally couldn't quantify how much savings there would be going from this door to this door personally. But Cascade was able to come in and do a bit of research and take some measurements and calculate that out. And I was confident of the savings.

### **Misc. manufacturing, Portland Metro Area**

I feel pretty confident about the savings. But that's because I can figure it out—it's all about mathematics basically because that light bulb needs so much energy, it runs so many hours a day. And it costs so much per kilowatt-hours so I can figure that out straight across the board. But I think what happens with other companies is they don't have the knowledge to figure that out so it becomes a trust issue—of having to trust the Energy Trust and what those numbers are. Because nobody knows where to get those numbers unless you have some kind of experience or educated background to dig that stuff up or to educate yourself. When we did the lighting, I had no education on that. Fortunately here, I'm allowed to educate myself to do these kinds of projects.

### **Computers & electronics, Portland Metro Area**

Our management accepts "calculated" savings on the energy efficiency projects we propose because a lot of the energy efficiency stuff we do gets lost in the noise and there's no way to verify it. So if we tell management an energy efficiency project is going to save \$10,000 a year, there really is no way that's ever verified. We don't have sub-meters out there to actually allocate energy usage to certain areas. So if management accepts our calculated savings and the project is approved, that's it.

## **Lack of clear decision-making path to proceed with energy efficiency projects**

Respondents do not believe their internal decision-making process is a barrier to taking on energy efficiency projects. One company acknowledged that sometimes within the chain of command there are executives who aren't knowledgeable about energy efficiency and don't know how to talk about it to upper management, which "can become a bottleneck for approvals at higher levels." Another indicated that with "top-level management 300 miles away it slows things down."

**Conclusion:** Overall, respondents may not always like how these decisions are made internally, but they understand how to work the system within their own companies to secure project approval.

### **Sample Quotes**

#### **Plastics, Portland Metro Area**

There have been occasions where I've needed to get my first level of approval on an energy efficiency project from an upper manager at our company who just happens to be not very knowledgeable about energy efficiency and doesn't know how to talk about it to his upper management. That can become a bottleneck for approvals at higher levels.

#### **Transportation & aerospace, Southern Oregon**

Well, that one can be iffy. With our top-level management 300 miles away it slows things down even though there are fax machines, telephones and email. So sometimes it's not clear how quickly I'll get approval and if there is a slow-down in getting approval, whether it's because of the distance or it's intentional.

## Program Delivery Contractors (PDCs)

As a natural outcome of discussions throughout the interviews, the subject of the PDCs, their role and where they intersect with Energy Trust came up with regularity. While not an intentional part of the discussion guide, customer comments do offer some insight into how PDCs and their role are perceived.

Overall, there appears to be some confusion regarding the PDCs. Many customers aren't aware of the term PDC and/or don't have a perfect understanding of the Energy Trust/PDC relationship. Even among the few respondents who were familiar, it is a term rarely used by them. If they could remember it, most respondents simply refer to the name of the company they worked with or they refer to them as the engineers or contractors. It wasn't uncommon for a respondent to inaccurately state the name of company or to only remember the first name of the person they worked with but not the company name.

There were a few that didn't understand that there is a relationship between Energy Trust and the PDCs. For example a customer might have a long-standing working relationship with a PDC and appreciate that they help them with the paperwork to get Energy Trust incentives but doesn't realize there's an "official" relationship between the two entities.

### Some challenges emerged that may fuel the confusion:

- 1. Communication:** One customer noted that, “frankly, the challenge is sometimes I have no idea who I'm communicating with. Originally I was talking to somebody from Energy Trust and then all of a sudden I'll get an email from somebody from Cascade Energy, and they're saying they are the "somebody" for Energy Trust and then I'll get a different call from Energy Trust on something else.”
- 2. PDCs Relationship with Energy Trust:** More than one customer was unclear as to how the PDCs are connected to Energy Trust, giving rise to some misunderstanding about Energy Trust itself.

“I don't work with Energy Trust per se. I work with this other company in town called RHT. My take on it is that Energy Trust is through the State and is a big company or I guess another aspect of government that is up in Salem or Portland or wherever they're at and trying to get through to talk to Energy Trust is a headache. In the beginning stages of an energy efficiency project, we like to get the information quickly and RHT is able to do that. But if I call Energy Trust, it drags the project out and also then I kind of have to figure it out myself whereas RHT knows all the ins and outs of it. It's not important to me that I work directly with Energy Trust because I think it's big, bulky and burdensome.”

“I have to say the whole set-up was a little bit confusing for me in the beginning—the connection between Energy Trust and PGE and who does what.”



“I'm not familiar with the term PDC and, at first, I didn't understand their relationship to Energy Trust but now I see that they're basically the agent. Now that I get that, it makes sense to me because Energy Trust can't do all that. But maybe it's the job of the PDCs to get the word out to contractors and end users—how much of that is the responsibility of the PDCs versus Energy Trust?”

“We don't have direct contact with Energy Trust and I have no idea what a PDC is. All I know is there are these outside people that come in and basically try to sell us a commodity deal, then they work the paperwork through Energy Trust and they make x amount of money and we get a little kickback.”

- 3. Multiple contacts across programs:** Some larger customers were very knowledgeable as to how the Energy Trust/PDC model works and were very satisfied with the services received.

One customer indicated that he works with several different programs and PDCs and would welcome something like a “key customer manager” to serve as a single point of contact for everything. He said, “it would be nice if my PDC was my main contact for all of our projects not just industrial efficiency. And it wouldn't matter to me who that person worked for, whether it was Energy Trust or PGE or whatever. I just want one person. Because it does get confusing and time-consuming to be dealing with so many people.”

This same customer would also like more direct contact with Energy Trust and not just from their PDC, “Our contact at PGE is great. And he doesn't know everything but he certainly knows how to answer our questions or find the info to answer our questions. And sometimes he does call us and say I've got some new scoop on something you'll be interested in, let's meet and I'll tell you what it's about and that's very nice. But maybe I'd also like to receive a quarterly update directly from Energy Trust on the latest programs and incentives or maybe even have a live body come in and tell us things on a regular basis.”

As with all areas of this research, some customers are “heavy” users that have frequent contact with their PDC and are also very savvy about the PDC relationship. But many smaller customers that invest in energy efficiency projects every three to five years are contacted less regularly by their PDC and are less knowledgeable about their connection to Energy Trust. There appears to be a correlation between the size of a company and its geographic location to its awareness of PDCs.

**Conclusion:** Clearly, customers place great value on the services provided by the PDCs. It may not be surprising that the term PDC has low awareness among customers, but because it appears to be such an established term in Energy Trust's vernacular, it seems unusual that it isn't more widely understood. And because the model of using PDCs is such an integral part of Energy Trust's delivery system, it does seem that customers may need clearer communication about how the process works so that it doesn't become a barrier to achieving the end goal.

## **Respondent Quotes**

### **Beverages, Columbia Gorge**

In the beginning, I wasn't aware that there was a connection between Cascade Energy and Energy Trust. I wasn't clear on how it all worked. But now I understand Cascade Energy is the contractor for Energy Trust. And that works for me because we need that help and I believe Cascade is representing Energy Trust's mission and objectives.

### **Cold storage, Southern Oregon**

I'm not aware of the PDC term but I am aware that RHT is a sub-contractor of Energy Trust. But I'm looking at RHT's card right now and it doesn't say anything about Energy Trust. But that's not a problem for me. Anyway, when we did our project, I went to RHT first and they contacted Cascade Engineering and got an estimate of what the study would do and then I think it was Energy Trust that provided the money for that study but I'd have to go back and look that up to be sure. I do remember I couldn't just do the study and then not do something. But I didn't have to do the entire project. You're probably more familiar with some of this stuff than me—the energy efficiency measures—I just had to do one EEM, whatever that was.

If I had anything to say about Energy Trust it's that there are so many programs and so many paths you can take and so many options, that it's confusing. That's why it's really helpful to have contractors to assist me. They've helped me with some projects also. She is an awesome help. She fills out the Energy Trust paperwork for me.

I will say I always have to think about in my head the difference between Energy Trust and the Department of Energy. I try to keep them straight but it's not an automatic thing. It's something I have to think about. But I do know the difference.

### **Wood products, Southern Oregon**

I heard about the 90x90 project from RHT, not from Energy Trust. And that makes me wonder are there other projects being put out by Energy Trust that I don't hear about? And how many other people would have taken advantage of the 90x90 project if they had heard about it? So maybe every time Energy Trust comes up with a new project offer, they should send out an email about it and not just rely on the customer hearing about it from someone like RHT. Now if I got an email from Energy Trust, I'd still call RHT first and ask hey what do you know about this? And they would explain it to me in layman's terms. But the Energy Trust email would catch my attention and I would say maybe we ought to do this. And I'd also know that I was aware of all the offers out there.

### **Food products, Portland Metro Area**

Frankly, the challenge is sometimes I have no idea who I'm communicating with. Originally I was talking to somebody from Energy Trust and then all of a sudden I'll get an email from somebody from Cascade Energy, and they're saying they are the "somebody" for Energy Trust and then I'll get a different call from Energy Trust on something else. Sometimes I'm like who are you and why are you calling me and what's the purpose. The person I had spoken to from Energy Trust had reached out to one of Energy Trust's partners at Cascade and at first it seemed to me like Energy Trust had

contacted a vendor to come out and help us do work and I wasn't quite to that point yet. But then I finally understood it.

I had started talking many months ago with I forget who it was at Energy Trust but then all of sudden I got a letter from Cascade Energy saying the Energy Trust has approved funding for a technical study and I was like what are you talking about—we never talked about a technical study. And all of a sudden it led to the refrigeration project we're working on and so I guess the Energy Trust had said well we think this can be studied and metered and learned about and maybe there's some savings and we'll put up the funds to do that with Cascade Energy and so there was just some confusion in that whole process.

Now that I've gone through the experience, I'm pretty clear on what's going on. I am somewhat familiar with employees at both Energy Trust and Cascade Energy. And then I'm working with a PDC and his email is actually Evergreen Efficiency.com but he has Energy Trust of Oregon in his email. So it's confusing to say the least. And when some of these guys visited us, they were throwing out all these acronyms and I'm like what are you guys talking about. It's just hard to get everybody figured out!

So that really is the challenge and maybe it's a lack of understanding on my part on how the process works. But maybe Energy Trust should offer a proper explanation of all this. They could say: we don't actually do this stuff, we work with this person and they're going to give you a call and they're our representative and they're going to evaluate this and do this for us and report back to us. You know, I'm sure this stuff is all clearly explained on Energy Trust's website but I just never thought to go there and look for it.

### **Food products, Portland Metro Area**

It was actually the head of our maintenance crew that was aware of Energy Trust and he asked our contractors, can we get some Energy Trust incentives for these projects? And they were kind of huh? So right away that showed me that Energy Trust needs to do a better job of informing contractors. But maybe that's as hard to do as reaching the end customer like us. Anyway, we eventually got hooked up with Columbia Consulting—no, I think their name is Cascade Energy.

### **Food products, Southern Oregon**

This respondent had specific problems with two different PDCs as follows:

- **Respondent lost out on a business energy tax credit (BETC)**

How do I put this delicately—well, I got screwed out of a BETC rebate because I didn't get good advice from my vendor who was supposedly able to work directly with Energy Trust but then they were forced to work with a PDC and there was a pissing match between the PDC and the vendor and I lost the \$35,000 credit over the deal. It was because we made a down payment on the lights too early. So since that happened I've refused to do business with a third party vendor in Oregon, which is sad because I'd prefer if I could use them because they do all the research for free, which really saves me time. But now, I work directly with the PDC because I can't afford to ever have that kind of mistake happen again. So I don't feel that good about the PDC over this BETC deal because I think they should have done a

better job working with this third party person and communicating with them and being more of an advocate for me.

I think Energy Trust should make sure that its PDC partners explain very clearly the guidelines for the business energy tax credits from the Oregon Department of Energy. It's like most government agencies: Energy Trust only gives a shit about Energy Trust and Oregon Department of Energy only gives a shit about Oregon Department of Energy. And they don't play together. And the customer gets caught in the middle. But because Energy Trust is the entrance agency, in my opinion it's their responsibility to adequately inform the customer. Because the BETC, which I think are going to go away next year, those are a different agency but on a ROI, that tax credit can make the difference of the project going or not. Therefore it's extremely important that Energy Trust uses all the tools in its tool kit to get these kinds of things through the decision makers. In this case, we would have not done the project without the tax credit. And now we lost it. It was a deal breaker.

- **Respondent got poor service on energy study**

I thought the energy studies done by the PDC that Energy Trust hired were poorly done. In the past, this PDC has successfully worked with us on a number of energy savings projects but this time they turned it over to an entry-level engineer. This guy was abysmal and wasn't helpful at all. They didn't listen to us, they didn't want our feedback. We came up with more savings and suggestions than this so-called professional energy firm did. Now lighting is a no-brainer, it really is. It's usually a one-to-one replacement. It's just newer equipment, more energy efficient and has sensors in it to shut it off and on. How tough is that to figure out! But refrigeration engineering stuff—the energy savings in that is a little dicier and a little tougher to do and we got a sub-par job. Fortunately, we have enough experience in here with our refrigeration people that they were able to advise me on what we should include and we got it in there.

### **Wastewater treatment, Portland Metro Area**

The one thing I've noticed and I'm guessing there's not many organizations like mine—I have so many reasons to call Energy Trust and need to interface with them on so many different types of energy efficiency projects. And I'm wondering if for clients like us it would behoove Energy Trust to assign us a Key Customer Manager. It might be improved for customers like us if we had a single point of contact for everything and that person could refer us to other people who are specialists in certain areas.

The way it's set up now is that PGE is our PDC for what they call industrial efficiency projects, and because we're one of PGE's largest customers, they have assigned us a Key Account Manager for those types of projects. It works out well and I know the folks there well and I feel like I'm dealing with Energy Trust when I talk to PGE. But my point is that it would be nice if my PDC was my main contact for all of our projects not just industrial efficiency. And it wouldn't matter to me who that person worked for, whether it was Energy Trust or PGE or whatever. I just want one person. Because it does get confusing and time-consuming to be dealing with so many people.

For example, even within the industrial efficiency projects there's still an issue with lighting: Energy Trust has a new buildings program and if I want to deal with lighting on a new building or a substantial remodel, I need to go through Energy Trust's new buildings program but that kind of project for us is not very common. But for the existing building lighting, I have a good relationship with the fellow who comes and inspects our buildings for lighting and we've done a lot of those. So I guess it would be nice if all the lighting were all together or if there was some way to work with a point person who could be main interface on that.

Another example is renewables. It would be great if I had one point person on this. Here's what I deal with now [he stresses all these people have been great]:

- On hydro our contact is an Energy Trust employee but I'm not sure. We've corresponded through email and have had 3-4 phone calls over last 6 months and I want to say he's an Energy Trust person but I can't be sure.
- On biomass our contact is an Energy Trust employee. He's great and I have a good relationship with him.
- On solar is an employee at Energy Trust. I have talked to him a number of times in the past. But the projects we're doing are all power purchase agreement projects where the solar developer is actually dealing with Energy Trust and I'm filling out forms but I don't really talk to Energy Trust.

### **Computers & electronics, Portland Metro Area**

We have a person that's employed by PGE, he's our PDC. He works for PGE but he's working through Energy Trust. Because we're a large user, he comes out regularly and looks at our projects and helps identify if there's any type of Energy Trust funding for these types of projects. But I don't know if all customers have that support. I assume a lot of small customers especially those in Southern Oregon don't get the support we do. So for us, it's okay to be working with the utility but I think in the outlying areas, it might be better if customers had people directly from Energy Trust. Or maybe Energy Trust and the utility should be working together to meet with customers and talk about the programs available. For example, in Eugene, the local utility down there is EWEB (Eugene Water & Electric Board) and they could hold forums for industrial and commercial customers and bring in Energy Trust people to talk about available programs. I don't think that's happening right now.

### **Plastics, Portland Metro Area**

We've had pretty good support from the Energy Trust and their affiliate on our projects. By affiliate, I mean PGE, Triple Point Energy. It used to be Strategic Energy Group, I guess. For example, on the HVAC project, it was an employee from Triple Point and she brought in an engineer from another firm. So he must have contracted out with Energy Trust.

### **Misc. manufacturing, Portland Metro Area**

I think I'm familiar with the term PDC. I think for us that's PGE and I've met with him. I think that's probably something I've noticed with Energy Trust compared to other organizations. They're leveraging the experts to go and communicate with the

customers, people who understand the customer's language. Being a government entity, Energy Trust can't be good at everything and they can't sustain something that constantly needs change. So I think it's good that Energy Trust operates by finding the right person for certain duties. Even when I've gone through the IEI program, it's not necessarily the Energy Trust employees doing it—they use contractors hired by Energy Trust to do those projects. I think that's a good way to continue to get more people involved.

**Misc. manufacturing, Portland Metro Area**

I can't remember who the engineers were that helped us on our water loop system. But you can find it in our case study. The fact that they weren't on the direct payroll with Energy Trust wasn't an issue for me at all. Because they actually do work for Energy Trust—they're contracted out. So they work for Energy Trust one way or another.

## Messages

**This section summarizes the results of seven messages explored with respondents:**

1. Energy Trust pays me to save money.
2. I'm paying for Energy Trust services and incentives on my power bill and it's important to take advantage of it.
3. Benefits beyond saving money: Money savings are just the beginning—saving energy makes my business run better, more comfortable and increases worker productivity. When I save energy, I'm saving money and boosting my business at the same time.
4. Energy efficiency is a competitive edge for my business. Also, I can win points with my customers if I demonstrate that my company is using energy wisely and not wasting it. Using energy wisely is a good indicator of a well-run business.
5. Energy Trust has technical expertise that can help me save energy and implement projects with existing staff.
6. Energy Trust makes it easy to save energy by providing free technical expertise that's worth thousands of dollars.
7. Renewable energy, like solar and biomass, can deliver rate stability for my business.

## **Message: Energy Trust pays me to save money.**

Overwhelmingly, respondents believe that “money” is an important Energy Trust message. Whether it is a discussion of the incentive savings upfront, a project payback, or a long-term investment in energy savings, money is a compelling and motivating factor in making decisions about energy efficiency projects. Several companies indicated that, “there are projects we wouldn't have done if we hadn't gotten the money from Energy Trust,” and “money is the big motivator.”

More specifically, respondents believed this message was very compelling. Several felt the message needed to be linked with other key messages, such as: fulfilling an environmental commitment, or “making an investment that pays for itself and then some” or “how easy Energy Trust makes it to get the money.” While these respondents found nuances in how to craft the money message, they also agreed, “money is still the bottom line. It still boils down to we live in a capital economy.” “Anything to do with cost savings, including that Energy Trust will pay us, is a big factor for us, especially in this economy. It's ugly out there and economists are saying it's not going to get better soon.”

**Conclusion:** In this economy, saving money – whether in the short-term or over the long-term – is a good business decision and a motivating message to invest in projects that enhance a company's operating efficiency.

## **Respondent Quotes**

### **Computers & electronics, Portland Metro Area**

This is a strong message. The most compelling reason for me to do an energy efficiency project is cost savings because that's one of the reasons they keep me around! And there are projects we wouldn't have done if we hadn't gotten the money from Energy Trust. So, the most important message from a business standpoint is: Energy Trust can save you money and we can help you do it. And then you take the message to the next step, the environmental reasons. Because trying to lessen our carbon footprint and making the world a better place to live is also important to us. And I would phrase it that Energy Trust reimburses customers versus the wording that Energy Trust pays customers.

### **Plastics, Willamette Valley**

I think for some people this is a strong message. How do I say this—cost savings for us is extremely important—we're going to take advantage of any cost savings we can. But just because we're going to get money back from Energy Trust does not mean the project is a slam-dunk. It's a factor.

### **Cold storage, Southern Oregon**

Honestly, I don't think we would have done some of the projects if it hadn't been for the incentives. Actually I can say we wouldn't have. So the message about Energy Trust paying me to save money is probably the strongest message. It's better than saying to



people you're paying for it, take advantage. Energy Trust needs to say, the money's here, we want to help you.

### **Plastics, Portland Metro Area**

Well, let's face it, money is the big motivator. But what we also have going for us in Oregon is doing the right thing. We're preconditioned to be more environmentally conscious. So some will do energy efficiency projects because they serve a dual purpose—it puts money back in your pocket and it's the right thing to do. But money is still the bottom line. It still boils down to we live in a capital economy.

### **Wood products, Central Oregon**

The Energy Trust incentives are the strongest message. I would lead with that message. That's what caught our attention. That's what we're looking for. I guess I would say if we hadn't had the incentives we probably wouldn't have gone ahead with the projects so knowing there are incentives out there or that Energy Trust can make some projects "pencil" that wouldn't normally, that's a good message.

### **Wastewater treatment, Portland Metro Area**

Well this is another message that because we're aware of it, it's not that compelling for us. I think I figured we pay Energy Trust about \$75,000 a year and we get far in excess of that back. It's in the hundreds of thousands probably. I mean it's great for us but because we know about it, it's not a message we need to hear or that is going to get us to do more energy efficiency projects. But I'm trying to be sensitive to differences in how other businesses might look at this. Some companies are cash strapped or don't look at things as long-term as we do or just don't know that Energy Trust can pay. And even with the Energy Trust incentives, you still have to be willing to pay some of your own money to make energy improvements. And now that the BETC is gone, there's kind of a hole in this thing. I guess if I were Energy Trust I would think about promoting the concept of making an investment that pays for itself and then some. It's simple. If you show people they're going to save money, they're going to listen. And to add to that, the financial concepts of ROI: if Energy Trust had some data that showed what various project types typically return for their customers and Energy Trust basically advertised that—what if it's 8 or 10%--in today's world that's an amazing return on investment! I think that would resonate.

### **Transportation & aerospace, Southern Oregon**

Maybe it's better to stress the overall long-term savings—I realize that obviously there you're back to a saving money message. But I think if people could see where the savings stack up over years as energy costs go up—a larger savings next year and an even larger savings the next year, that might help more.

### **Wood products, Southern Oregon**

I think people pretty well understand this so I'm not sure how much it needs to be emphasized. I talk to other maintenance supervisors around the Valley and a lot of times I hear them say I have a project that Energy Trust is helping us with and it's really

great and Energy Trust really kicked in a lot of money. They realize what Energy Trust does. Most of the projects I hear about are lighting.

**Food products, Southern Oregon**

I think they already do a pretty good job of that.

**Wood products, Southern Oregon**

I think Energy Trust needs to lead off with the money—that's what is going to engage a lot of people. And if you can show their initial investment is fairly low and their payback is relatively soon, that's going to get them in. But maybe start with small projects. They have to see the benefits of their work in a short period of time in order to get excited about things. And hey, I know there are seminars out there but who's got the time and resources to go to a seminar to listen to somebody.

**Misc. manufacturing, Southern Oregon**

I'm always looking to save money wherever I can! That's what most important. So that I can make myself more competitive.

**Wood products, Willamette Valley**

Anything to do with cost savings, including that Energy Trust will pay us, is a big factor for us, especially in this economy. It's ugly out there and economists are saying it's not going to get better soon.

**Misc. manufacturing, Columbia Gorge**

That kind of message always catches my attention! That will catch anybody's attention.

**Food products, Willamette Valley**

Well it seems to me from Energy Trust's standpoint, people are interested in saving money. That's got to be the bottom line. In my business if we can do something that's "green" that doesn't necessarily dictate that we're going to do it. Green is a big buzzword right now and it's good for advertising and good for the environment, blah, blah. But the bottom line is, does it pay for itself. Another aspect of this is to promote how easy Energy Trust makes it to get the money. And from talking to people at other businesses, I don't think people realize how easy it is. I've never had to spend an afternoon filling forms out and stuff like that. Most of the contractors are set up and they'll fill out the forms for you.

**Beverages, Columbia Gorge**

Yes, it would be a good idea to push that message.

**Paper manufacturing, Portland Metro Area**

With the Energy Trust money and the BETC credits, we were able to finance projects that maybe didn't have that good of payback if weren't for that extra incentive to become more energy efficient. It's helped us. We're kind of a small mill and not a big corporation. It's helped us put in some projects that otherwise we probably wouldn't have been able

to. And if we hadn't done them to improve our overall efficiency, we might not even be here right now! So it definitely helped.

**Cold storage, Portland Metro Area**

Yes, it's a strong message.

**Misc. manufacturing, Portland Metro Area**

Obviously money is going to be the seller. Especially now in these economic times—nobody has any money! Or if they do, they don't want to get rid of it.

But I think the message about Energy Trust paying money needs to go hand in hand with being environmentally conscious and of reducing amount of footprint each business is creating. That's where I go. I think the carbon footprint thing is huge here in Oregon. Other states don't give a crap. But at same token if you tell them look you're going to save a ton of money, everybody would be into that.

**Chemicals, Willamette Valley**

Getting the money from Energy Trust makes a huge difference. It was the reason I was pushing some of my energy efficiency projects through.

**Food products, Portland Metro Area**

This is a message that should be stressed. But maybe Energy Trust could say: Hey you could get some of your money back and then some!

**Misc. manufacturing, Southern Oregon**

This is a very motivating message, without a doubt! That could make the difference. In fact when the owners got approval from our board to do the energy efficiency project that was a contributing factor. They said yes.

**Computers & electronics, Portland Metro Area**

The most compelling message Energy Trust could deliver to us is that they are increasing the incentives! It's all dollar based at this company so that's what would be most compelling.

**Message: I'm paying for Energy Trust services and incentives on my power bill and it's important to take advantage of it.**

Overall, respondents did not view this message as one of the most compelling. A few thought it might create a backlash and said, "I think you run into the danger of people saying take it out of my energy bill!" Others thought it only had value to businesses unaware of it and/or small energy users and suggested, "This is not as motivating a message for me because I already know it. But I think it would be compelling for other businesses." A handful of respondents were fully aware of how much they were paying into Energy Trust and had a goal of getting an equal amount back.

Quite a few were not aware of the funding mechanism at all, what the charge is called and how much it is. Some indicated that they don't see the utility bill at all or the charge itself isn't obvious to them in reviewing power bills that can be very complex already. Even among those who thought it was good information to have, respondents were lukewarm about its value with comments such as, "it couldn't hurt," and "yeah, maybe." Another customer said, "That's nice information for me to know and it might be of value to decision-makers to know we're paying but I'm just not sure whether it would be a big motivator for the CFO or CEO."

**Conclusion:** While there was interest in the information, there's uncertainty about the value of this as a strong message.

**Respondent Quotes**

**Food products, Portland Metro Area**

To be honest, I think that message could go either way. I think for myself, yeah, that's a service I'm paying for, why not utilize it. But then I think Energy Trust might get some people that say, Why in the hell am I paying for that? So I think the message is good but it has to be phrased in a good way. It's funny because as a consumer, I think it's a great message but I don't know how it would go over with businesses. I think some might say, well get rid of that!

**Cold storage, Southern Oregon**

I think that would inspire. Although the negative I see on that is people saying well, if you've got this war chest and you know people aren't taking it, then maybe you'd better reduce how much you're taking on my power bill each month. You might get a kickback that way. Frankly, I'm not obsessed with making sure I take advantage of every dime I've kicked in—I don't think that way. Although I certainly don't feel bad about getting money back!

**Misc. manufacturing, Portland Metro Area**

Here's the way I would put it: I think businesses need to be informed of it but I don't think it's a message that needs to be stressed. If people know what they're paying for, then they can decide whether to take advantage of it. I'm not the type that likes stuff

forced on me or to feel pushed to do something. I just like the information, which is presented on the bill, and I can do with it as I choose.

### **Wood products, Central Oregon**

Yeah, maybe. The fact that Energy Trust pays me is a better message.

### **Wood products, Southern Oregon**

I don't see that as motivational. I just see it as yeah, okay, we're paying for it.

### **Misc. manufacturing, Eastern Oregon**

You know I just found out about this yesterday. I called a colleague to say I needed some help to get this project done in time. And he explained that Energy Trust wasn't really the State and he explained that the way Energy Trust works and the way it's funded and I said I didn't know that—that's really cool! I mean it's like my own money that's going into this trust and it's everybody's money. I had no idea! I don't see the utility bills—they go straight to our corporate office, which is located in another state, and they don't ask me whether they're right or wrong, they just pay them! That's why I didn't really understand what's involved in the energy bill and that there was a surcharge on there for the Energy Trust. I think it's a great idea but I didn't know it was there until yesterday. I thought the Energy Trust was something that the state of Oregon funded for benefits of its citizens.

### **Wood products, Willamette Valley**

I don't get involved in the energy bills. But I'm sure someone here is aware of that. Energy Trust has got to be paid and funded somehow! I think if I were Energy Trust, I'd combine it with other messages. I'd say: hey, you're getting paid to do this project and it's going to save you in the long run and you've helped pay for it so why not take advantage of it.

### **Paper manufacturing, Portland Metro Area**

We just try to get back as much of that as we can. We're always looking for projects that help offset that additional tax so we don't have to pay it. We're very aware of it and always make sure we have projects out there to meet those requirements. I know Energy Trust was set up to promote increased efficiency and it's self-funded because of the additional fees put on power. And it's up to us to get those fees back on our own. And the companies that don't do that, if they're very big companies not doing it, they're pretty crazy. For us it's so obvious, it doesn't need to be stressed.

### **Wastewater treatment, Portland Metro Area**

My goal is to always get more money than we pay! And I think we do that. It's not a motivating message for us because we're so aware and we're such a large energy user. But it might be for the businesses that don't do projects that often—smaller businesses that use less energy. For someone like us, we're very aware! I've even studied the issue of opting out and whether it would make sense for us and I don't think it does because if you opt out of that public purpose charge then the amount of incentives you

can get from Energy Trust goes down and I think we're better off paying the charge and getting the full incentive.

**Computers & electronics, Portland Metro Area**

Yes, definitely a good message. Paying into it means we should get something out of it. That's what it's there for.

**Plastics, Willamette Valley**

Well, I don't know about that message. I think you run into the danger of people saying take it out of my energy bill!

**Wastewater treatment, Southern Oregon**

I didn't realize that's how Energy Trust was funded. We should be taking advantage of that.

**Wood products, Southern Oregon**

I think it is a good message. It's the same as with the Blue Sky initiative. You're basically paying for it, why wouldn't you take advantage of it?

**Food products, Southern Oregon**

I don't look at the power bills because I've already got enough to do.

**Misc. manufacturing, Southern Oregon**

I have Pacific Power and I look through the bills but I have about nine different meters on my buildings and looking at the bills and the kilowatt hours and trying to figure out what are the charges on here for—it's confusing. And I don't understand all the Federal excise taxes and all that—it's just like a phone bill. What the heck are all those charges!

**Wood products, Oregon Coast**

This is not as motivating a message for me because I already know it. But I think it would be compelling for other businesses.

**Misc. manufacturing, Columbia Gorge**

I think that's a good message but my bigger concern is that I haven't been contacted enough to know what's out there. Educating people to what's available in energy efficiency is more important.

**Food products, Willamette Valley**

I think Energy Trust should stress this. I think they should be saying "let us give your money back to you". That would be the way to word it.

**Beverages, Columbia Gorge**

That probably wouldn't hurt.

**Misc. manufacturing, Portland Metro Area**

I did not know that.

### **Chemicals, Willamette Valley**

I had no clue about this. This is the first energy efficiency project I've been through and RHT has been real good to work with and my contractor was great. But the information I got from those two is all I really know.

### **Food products, Portland Metro Area**

Well, I knew the money was coming from somewhere. But I didn't really understand it. It probably wouldn't hurt to stress this. That would be an interesting thing to explore because a lot of people really don't really understand it. Actually, first they aren't even aware of Energy Trust and that the money exists and then on top of that, ok where did the money come from: where's the money coming from. But I'm just not sure about this as a message. I know there have been critics of the Energy Trust program. People claiming, and I think this was about a year ago in the news, they were publicizing how much money they had already given to businesses for energy upgrades. And some people were going wait a minute, these guys are getting too much money. I think it was envy on the part of other parts of state government—we're dying over here, we want some of this money. But the issue kind of went away.

### **Misc. manufacturing, Southern Oregon**

I'll bet you if 10% of the people have any clue about that, that would be a miracle. It's a hidden cost. I don't think that information is out.

### **Computers & electronics, Portland Metro Area**

Our electric bill is \$1.3 million a month so I look at that 3% service charge and I think I need to do some projects and get that money back! But having said that, I actually think it's kind of an anti-message, personally. If you raise it, people might tend to scrutinize it. I've never used that to promote projects because I think some people think of it as a kind of tax. And I don't see it that way at all because I know what Energy Trust does and they do more than just take the money and hand money back. I know the people at Energy Trust work really hard to come up with these programs and find programs that work for people. But some people who don't know that might see that as a negative. Even yesterday something came up in a workshop: Ok we pay this 3%, how much of that really goes to the program and how much goes to overhead and administrative cost? And it's a very small amount. Energy Trust works on a very low operating budget. I recall that 67% goes to programs. I talked to a company that's nearby us and they use a lot of energy too but not as much as us, and they're going to use the 3% as a promotion to solicit ideas from their employees—hey what projects can we do because here's how much money we're paying.

### **Computers & electronics, Portland Metro Area**

Yes I think that's a good idea. But in our case, I'm not sure how else we could take advantage of it. We do get credits. We did a project back 7-8 years ago and we got a very large credit from them. For example, last month our public purpose charge was \$21,000 and we got \$3,600 in credit for renewables and then energy conservation was almost \$12,000 and so it reduced it to about \$5000. So we benefited that way.

**Transportation & aerospace, Willamette Valley**

I wasn't aware of this. That's nice information for me to know and it might be of value to decision-makers to know we're paying but I'm just not sure whether it would be a big motivator for the CFO or CEO. I guess there's no such thing as free money.

**Plastics, Portland Metro Area**

Yes, this is a good message. And if you're not taking advantage of it, your accountants should be throwing their arms up in the air!

**Misc. manufacturing, Portland Metro Area**

I think that would help.



**Message: Energy efficiency is a competitive edge for my business.**

Many respondents feel that their investment in energy efficiency has given them a competitive edge in their industry, but it is based on how they define “competitive edge” and how they view those benefits for their business:

- Some see their projects as giving them “bragging rights” and enhancing their reputation as a good corporate citizen with their customers. One company said, “It is good corporate responsibility. You never want to be pointed out in the industry. We do try to tout the fact that we are responsible corporate citizens.”
- Many felt that any investment in saving money is good for the bottom line and can be passed on either as savings to customers who pay a lower price or simply savings to the company, and reinvested into other projects. One company indicated, “In big business that’s really what you’re looking for – a competitive edge, lowering your expenses. Allowing the money to stay in the pool so you can drive prices down so you can get bigger customer volume.”
- One company views its programs as meaningful to employees, who see such investments as signs that “the company is here long-term, they’re not going anywhere.”
- Another company views its investment as adding to their ability to manufacture a superior product, which enhances their reputation for quality among dealers and end-user customers.

Even among respondents who believe that efficiency measures are important to their bottom line, companies were divided as to whether it helped them secure business from their own customers or simply just a good business decision for themselves. Some felt that it isn’t important to customers as part of the buying decision. One company indicated, “We don’t advertise a lot of what we’ve done in energy efficiency because if we do then customers are going to say, if you reduced your power bills, why don’t you reduce my rent?”

**Conclusion:** Although many companies agree that this message is accurate, because the interpretation and perceived value differs from business to business, it may not be the strongest or best “lead” message in Energy Trust communications.

**Respondent Quotes**

**Misc. manufacturing, Portland Metro Area**

I don't think this is a compelling message for Energy Trust.

**Plastics, Willamette Valley**

I think this is important message. I think energy efficiency is a competitive edge not only with customers but also with employees. The employees look at it and go 'Wow! This company is here long term, they're not going anywhere. Look at what they're doing—

we're getting all new machines. This is great! And they're not letting any people go—we're not going to get fired'. This is especially true now when there's a lot of uncertainty when you go to work, especially among manufacturing employees. And then customers, even existing customers that have been with us forever, they come in here and say jeez, look at this—and then the word of mouth gets out. For example, we've now got one of our customers bringing in a process from one of our competitors because the competitor can't run it, their machine doesn't have the capability and they've been struggling with it and so the actual competitor is coming in here next week and we're going to put this process together and let him see it run! Our energy efficiency programs have also given us a competitive edge by allowing us to charge less. We can cut to the chase on that and say well we're only going to charge you this much because these machines don't cost as much to run. So your product doesn't cost as much.

### **Beverages, Central Oregon**

I don't think it gives us a competitive edge because I don't think it's something our customers will weigh in their decision to buy from us. A customer is not going to say I like this wine a lot but I'm not going to buy it because it wastes energy. They're going to say I like this bottle of wine a lot because I can sell it to my customers and make money. What our company does green wise, the effect on customers is extremely minimal.

### **Food products, Willamette Valley**

It absolutely does give us a competitive edge. My boss got a hold of me and said we've got a couple of customers that want to tour the plant and talk about what we're doing for energy efficiency and recycling and that sort of stuff. There's a couple of customers very interested and it turned out to be a very good tour.

### **Food products, Portland Metro Area**

If we can lower prices through being energy efficient, it can keep us from raising our prices. Anytime you save by being energy efficient, it's going to save somewhere else.

### **Transportation & aerospace, Southern Oregon**

I think there is some advantage there. Like being ISO 1009 certified or being a LEED building or whatever. I think it's a good thing to have on a website or in publications. And if we had done the solar project it would have given us some real bragging rights.

### **Wood products, Southern Oregon**

I don't see it as a competitive edge for us. Yeah, maybe you can produce the product a tiny bit cheaper and then we could possibly sell it a tiny bit cheaper. But the mark-up on our products is so small there's not a whole lot of room for that. Our competitors are in the same boat and to drop our price a half of a percentage point is not really that much. I don't think that would help us see an increase in sales because our price was down say 3 or 4 cents vs. a competitor's product.

### **Wood products, Willamette Valley**

Oh, it definitely helps. But as far as getting more business in this economy, it's not helping with that. But energy efficiency efforts help give us a competitive edge just

because they lower our manufacturing costs and the more efficient we manufacture, the lower our costs so our customers have been able to buy at a better price. And we're still in business whereas a lot of sawmills have shut down because they can't compete. The economy downturn while it's been bad, it's also made us step back and look at our processes and how we can work more efficiently and do a better job of manufacturing. What we've done in the past has been wasteful and there's no reason to go back and get sloppy again. I do know there are some customers that look at a company's energy efficiency efforts—I don't know what percent. I used to work at Weyerhaeuser and they had customers who looked at that kind of thing and it definitely did bring in some.

#### **Misc. manufacturing, Eastern Oregon**

This is very important. I can't put a price tag on it. Let me explain—we are the world's largest manufacturer of our particular product. One of the reasons we are the largest is because we offer something to the market that our competitors don't. And that something is superior quality. Our dealers pride themselves on the fact that when our product goes on the dealer lot, they can park it on the lot and they can sell it immediately. They don't have to go through and scrub it down and shine it up. They can open the door and sell it! Now in order for me to deliver a product like that in the marketplace, I have to have good lighting in my shop so that I can see if there's a hairline scratch, so I can see if there's a dirt smudge on the countertop, so I can see if there's a smudge on the outside. You would not believe the things we throw away, like there's a gas bottle tank that they use for propane, if it has a tiny dent or a scratch, we don't put it on. It has to be perfect before it goes out the door. And perfect comes from inspection and being able to see really well in a factory environment. Our customers put it outside in the sunshine and see it but we have to be able to see it in the plant.

#### **Food products, Southern Oregon**

It's not a competitive edge. I would say it's very dubious whether our energy efficiency programs have led to more sales. Of course, it is a factor that it saves money and that helps the bottom line. But for example, that doesn't mean we lower our prices—the savings just gets sunk into the bottom line.

#### **Misc. manufacturing, Southern Oregon**

It probably gives us a competitive edge. It helps the bottom line overall.

#### **Wood products, Oregon Coast**

Yes, I think so. I think that's the case. Right now we're kind of in a tunnel vision because of the economy. With energy efficiency programs, we're going to zero in on every one of those because we're looking for ways to save money. Our customers are simply looking for the best price on wood products. That being said, you have to buy logs correctly. You can't pay too much for a log and then convert to lumber and lose money. There's a fine line. You have to be careful, you have to buy right.

#### **Misc. manufacturing, Columbia Gorge**

Not in our situation—that wouldn't be what we would consider.

**Beverages, Columbia Gorge**

I don't know if our customers necessarily want to know about this but when they find out about it, they respond to it positively. It even comes up when we're interviewing prospective employees—they notice it on the website. It definitely resonates with people.

**Food products, Portland Metro Area**

I would say it's important to a number of customers. In the food business, not all of them. But to some it is of paramount importance.

**Paper manufacturing, Portland Metro Area**

Oh, most definitely! We see a breakdown every once in a while that our head engineer puts out and it's part of what one of the paper industry organization's puts out. We compare each other all the time on who uses the least amount of electricity per ton of paper. And several times we've been number one on the West Coast. Now our customers don't know this because we don't advertise it that way. But it does help us to be able to undercut a higher cost producer. We can usually undercut them on the sale of paper because if it's costing them \$50 more a ton because of their electric bill to make paper, then that's a \$50 a ton advantage we have on the sale of that. And I know, several years ago, we were losing \$50 a ton on paper, and another company in Minnesota was losing \$150 a ton on paper. And they were big enough to ride through that downturn in the market. But if we lost \$150 a ton on paper for very long, we'd be belly up. So it's something we always think about.

**Cold storage, Portland Metro Area**

In big business that's really what you're looking for: a competitive edge, lowering your expenses. Allowing the money to stay in the pool so you can drive prices down so you can get bigger customer volume.

**Misc. manufacturing, Portland Metro Area**

Absolutely! We are a company that is about saving energy for people. Because every product we ship is Energy Star qualified. And we do take effort and pride in continuing to come up with solutions that will meet the customer expectations on top of saving energy and costs for them in the long run. Because many of our products do go into a home for many, many years. Our product lasts a lifetime in many cases. So we want to make it good and help the customer save, it's a win-win.

**Cold storage, Southern Oregon**

People aren't choosing us because we're environmentally conscious. And because we're primarily a leasing company, we don't advertise a lot of what we've done in energy efficiency because if we do then customers are going to say, if you reduced your power bill, why don't you reduce my rent? It gets people to thinking if your costs went down, why doesn't my rent go down. So we keep a pretty low profile on some of the stuff we do.

### **Chemicals, Willamette Valley**

I would imagine it gives us a competitive edge but I don't deal with anything like that.

### **Misc. manufacturing, Southern Oregon**

Right now to stay in competition with our competitors, we're buying a \$250,000 kiln and that really outweighs saving a \$1,000 a year on lighting. So we put the lighting on hold. After the economy started coming back up and we got busy, we had to farm out about \$150,000 of machining work because either our machines are broken down or we don't have the capacity to run the size of material. So we're going to pay \$250,000 for a new kiln that's big enough and we don't have to farm this out and the checks stay in the house!

### **Misc. manufacturing, Portland Metro Area**

Yes, you bet! And Energy Trust should stress that more. It's good corporate responsibility. It's never good to get a PR rap of being a big energy hog and not paying attention and not caring. You never want to be pointed out in the industry. We do try to tout the fact that we are responsible corporate citizens. And it's more than lip service—it is true. We do monitor and measure our carbon footprint for a number of reasons: because it's good and because we have suppliers that require it. We are a Tier 1 supplier to Ford Motor Company. They require us to watch that stuff. We've been a supplier for them for 20 years. Companies like that can be powerful and if you want to be part of that chain, you have to play by their rules and those are some things they do edict: If you want to do business with us, you will monitor green house gas emissions, you will measure your carbon footprint, you will reduce your waste streams, your solid waste production. We do recycle our cutting oils, we do reclaim and sell our scrap metals and our cardboard and our plastic—those are just some of the few.

## **Message: Technical Expertise**

Two of the seven messages explored in the research had to deal with Technical Expertise. They are:

- Energy Trust has technical expertise that can help me save energy and implement projects with existing staff.
- Energy Trust makes it easy to save energy by providing free technical expertise that's worth thousands of dollars.

In answering this question, respondents were not always able to differentiate between the nuances of the two message statements. Again, as in the discussion of technical expertise as a barrier, respondents defined what constitutes "technical expertise" based on how it fills their own needs.

Responses were generally divided in two categories: the first were companies that acknowledged the value of the expertise provided but overall had more of a lukewarm response to its merit as a compelling message.

The second, and larger group of companies, feel that having access to technical expertise through Energy Trust, however they view the benefits to themselves, is a strong message. In many cases, they derive the benefits highlighted in both messages: help in saving energy, implementing projects and having access to free technical services.

**Conclusion:** Customers see high value in the technical expertise they receive from Energy Trust and believe it is an important message to communicate. And it may be an opportunity for Energy Trust to delineate more specifically to customers all the benefits available through the "technical expertise" category.

### **Respondent Quotes**

The quotes below are from respondents who were enthusiastic about this message.

#### **Food products, Willamette Valley**

The fact that they offer free technical expertise worth thousands of dollars is a very compelling message! Energy Trust needs to let people know it's available.

#### **Misc. manufacturing, Southern Oregon**

Energy Trust should tout that more. I mean that's what they're all about. They should be trying to educate people about it.

#### **Wood products, Oregon Coast**

There is no question that Energy Trust should stress this more.

#### **Misc. manufacturing, Columbia Gorge**

I think Energy Trust should tout this more because it was a big help to us. Where we really appreciated the help was in figuring the projects out and not so much on the implementing.

### **Misc. manufacturing, Portland Metro Area**

I see this as a big plus—that the technical expertise doesn't cost anything.

### **Beverages, Central Oregon**

Let me put it this way. We sell beer. That's what we have expertise and knowledge in. Energy Trust and PGE have expertise in energy. And if they don't stick that message right in front of us and say 'Look!', most people aren't going to pursue it. Don't get me wrong, I work for some good people but most people already have enough to do or just don't have the drive to get into energy efficiency projects. If you don't get that message in front of people, your odds of going down that road are slimmer.

### **Plastics, Portland Metro Area**

Yes, that's a good message. Energy Trust gets support personnel in here. They brought an engineer in here a couple days ago to look at our HVAC system, to look at putting together a list of maintenance items we could do or capital projects we could look at doing.

### **Misc. manufacturing, Portland Metro Area**

That's important because some of these projects you only do once every 5 years and it doesn't make sense to have in-house expertise to do them. You can rely on Energy Trust when you need that type of help.

### **Computers & electronics, Portland Metro Area**

Energy Trust needs to promote more of that. As I mentioned earlier, I don't think my management would have approved some of the studies done by Energy Trust if they hadn't been done for free.

### **Cold storage, Southern Oregon**

Yes, absolutely. Because I thought I was totally aware of Energy Trust but I wasn't aware of how much technical expertise they provide for free.

### **Wastewater treatment, Portland Metro Area**

I think the technical expertise message could resonate. Maybe not so much for us because we're aware, but I'm trying to put myself in mind of a smaller business owner who might be daunted by the technical part of it. Anyway, typically what happens with our industrial efficiency capital projects is I'll call my PDC at PGE. Hey, we've got this project and this is what it's about and she'll say ok I need to meet with you and learn more about it. They call that scoping. So she'll meet with us and she'll go back and talk to her bosses and they'll make a decision about whether we should do a study to figure out exactly what the energy savings might be. So if they give us a thumbs up, which I think they have always done—I think only one of these they've said no on—anyway then they pay for the study. The fact that they pay for these studies is very valuable. In some cases, we may not have done the project if we had to pay ourselves. Usually they're \$5,000 or \$10,000. I can't think of one that's cost more than \$15,000 or \$20,000. So our consulting engineer who's usually on their list of approved engineers, will do a

study and basically most of the time it will say you're going to save money, you're going to save energy, it makes sense to do this. So then we work with the PDC on how much money they're going to pay us to offset some of the project costs. So it works reasonably well.

### **Wood products, Southern Oregon**

RHT is a valuable asset that I do use. Normally I call RHT if we're thinking of doing something and I'll ask them what they think. They'll do number crunching for me and just kind of throw out ideas for how we could do the project to make it qualify for Energy Trust. And they help with the paperwork. They don't usually do engineering. I don't use them that often. I usually call them once or twice a year to get their take on a project we're considering.

### **Misc. manufacturing, Portland Metro Area**

Energy Trust really helps us put the pieces together successfully and we've also gotten very good feedback on Energy Trust's ability to work with our internal groups, to see these things through. We worked with Energy Trust on the engineering of the air compressing system. PGE was kind of involved with us through all that as a support and answering questions and making sure things were running smoothly. I was very impressed with the response from both Energy Trust and PGE and how that all played out.

### **Transportation & aerospace, Southern Oregon**

I think that fact that Energy Trust provides free technical expertise is a strong selling point. RHT is a good group. They've been great to work with and are very helpful. RHT makes an effort to contact us when there's any changes coming and we sit down and talk about it. We got started with RHT because they were able to set up some monitoring equipment to calculate the savings and the current usage to show us what we were really looking at long term. And that was a big advantage. And we have just kept working with them! The paperwork is not burdensome, the speed at which things go through the process is not that long. When there are incentives coming in they generally go through RHT before they get to us because RHT does all the paperwork for us. And I'm usually surprised when they call and says hey I got a check here. It likes oh, wow! That was pretty darn quick.

### **Food products, Portland Metro Area**

Yes, I think providing the technical expertise is a critical piece. That's kind of the lubrication for us! Cascade Energy did a lot of the number crunching and that was a valuable resource. Just creating the reports that you could look at—they were very detailed. I was really impressed with the material they put out. They obviously know what they're doing. They acted like our consultants basically. Cascade Energy has been very easy to work with. They seemed to know what needed to be done and what forms needed to be filled out. So that was a big help. We used Cascade Energy on a refrigeration project here, we added freezers, and we did a lighting project and Cascade Energy helped us and in a lot of the cases, created the paperwork that Energy Trust needs and I just filled in the blanks and signed it and sent it in. I really like that we don't



pay Cascade Energy directly because they get their money from Energy Trust. And I think that makes a huge difference. Now if we had to turn around and pay Cascade Energy that would be a damper! But I think Energy Trust understands that and that's why they set it up that way.

### **Food products, Portland Metro Area**

The technical expertise provided is great! We often don't know where to turn for this kind of help. And since we're certified by the Food Alliance as a sustainable business, it's important for us to keep trying to better ourselves in energy efficiency. So this kind of thing provided by Energy Trust really does add value. I can have somebody with a lot of knowledge come in and say, well you know if you consider doing this, if you put this variable speed drive on this and that will reduce your energy there and so on. That type of information is invaluable to me. We thought we were doing all the right kind of stuff with our lighting and it turns out we could do even better. So that type of info for me as a business person really is invaluable and that somebody's there not just passively waiting for someone to find them like a contractor might. Instead Energy Trust is actively searching for this type of stuff and trying to help companies—that is great.

### **Plastics, Willamette Valley**

This is a good message but isn't that all going to go away? I heard the program was going to be suspended and that you have to have everything in by the end of the year because it's going away in March or something like that.

## **Message: Benefits Beyond Saving Money**

While many respondents believe the benefits beyond saving money are very valuable, no one felt this was the most important message. For many these benefits aren't recognized and appreciated until the project is completed. And although some become very enthusiastic about the value of these benefits after-the-fact, they still reluctantly admit that had they known upfront, it wouldn't have been a key decision-making factor.

Several echoed this customer's comment, "I think all those benefits beyond saving money are motivating. And I would add that sometimes it's just the right thing to do. But my gut feeling is when selling it to management, they're going to want the life cycle analysis and a payback and to see that it's the best place for the company to invest its money. Wish it wasn't that way but it is."

Another customer said, "I think a message like that may always be secondary to the money message. And there's good reason for that because in private industry you have to profitable or you have to close the doors. There's no such thing as a nonprofit industrial plant! So we all have to aware that are money issues associated with all projects. And because business executives are often CPAs, they are going to look at the money period."

More than one respondent indicated that the environmental benefits of these projects is important to them and their business. "This is a good message but it's not the driver. It's something we take into consideration. For us philosophically, some of these projects are just the right thing to do. I mean it's not all necessarily driven by money. I do think it's good to have somebody like Energy Trust out there making people aware of these other benefits associated with energy efficiency projects."

**Conclusion:** Despite the recognition of the value of these other benefits, most respondents indicated it isn't a prime motivator now or likely to be in the future. Ultimately, most respondents indicated that money savings or payback is the key factor in making decisions.

## **Respondent Quotes**

### **Wood products, Southern Oregon**

I think it's important but frankly, it would have been a small motivation to do our energy efficiency projects. But there are sometimes hidden benefits to projects. When we did our blower project, the noise level was cut in half, something we did not think about until after the project was done. It didn't have any monetary payback for us but it was a payback in that now OSHA's not out here taking measurements on noise anymore and employees love it.

**Wood products, Willamette Valley**

With some projects, I think our company has considered some of these other benefits. But I have to be honest, a good majority of why we do energy efficiency projects is because it helps us become more efficient because of costs.

**Wood products, Oregon Coast**

I don't think a message like that is going to fall on receptive ears in this economic climate.

**Chemicals, Willamette Valley**

The biggest thing is the money savings. But the lighting project improved efficiency because people could see. And it really was a morale booster for employees. And it was great for me not to have so many work orders like we did on the old lights. I think Energy Trust should mention these things.

**Computers & electronics, Portland Metro Area**

It probably wouldn't hurt if Energy Trust stressed that more but it wouldn't make a big difference here.

**Transportation & aerospace, Southern Oregon**

Yes, that's somewhat motivating. And I think some of it is kind of a geographic thing too. Because areas like Ashland and Eugene and Portland tend to be more conscious of environment than maybe Bend or Lakeview or more rural places. There seems to be a larger awareness there and I think pushing the environmental impact side of it would be received better in those areas. But saving money is the most important message.

**Food products, Portland Metro Area**

I don't know what kind of feedback Energy Trust would get if they started talking worker productivity and some of the other stuff you mentioned. As an employer, I don't necessarily think about those things in doing these projects. But I do think about it being better for the environment and of course, I know it's better for our bottom line.

**Wood products, Southern Oregon**

Energy Trust should lead with the money message.

**Misc. manufacturing, Southern Oregon**

It's important to have good lighting and to get improved production because people can see and they can work faster. So that's an efficiency in itself and it is a motivating reason for me to do these projects. It's not just direct money savings that I look for but also long-term investments such as better lighting because people can see better and work more quickly. And the morale—nobody wants to come into a dark, dingy workplace.

### **Misc. manufacturing, Southern Oregon**

This isn't a strong message because it won't make any difference in how we decide to do a project. I will say the lighting project helped employees do a better job so I consider that a 2-fer project.

### **Misc. manufacturing, Portland Metro Area**

Yeah, you can look at the benefits in a number of ways but in the end, unfortunately or fortunately, our big parent company looks at it in dollars. So a project can result in increased employee productivity and even stronger morale and being more efficient but it all boils down to the dollars. I think Energy Trust should focus its message on we're here to help and just try to get more visibility and do more glad-handing.

### **Computers & electronics, Portland Metro Area**

I think a message like that may always be secondary to the money message. And there's good reason for that because in private industry you have to profitable or you have to close the doors. There's no such thing as a nonprofit industrial plant! So we all have to aware that are money issues associated with all projects. And because business executives are often CPAs, they are going to look at the money period. Having said that, I think the time is good for to put more emphasis on a message about benefits beyond money. I guess I'm mainly thinking the environment benefits because businesses, especially in the NW, will be receptive because I think they're looking more at the benefit to the environment and not just money.

### **Plastics, Portland Metro Area**

I personally think that's a great message. But I'm also practical in knowing that my upper management may not share that feeling. So I factor that in when I present my projects. If Energy Trust says hey, how would you like to save millions of dollars in your corporation, I'm sure they'd get the attention of a lot of CEOs out there. But at the same time they could be saying hey how would like to save all this money and oh, by the way, here's all these other benefits you'll get—there's benefits beyond just the bottom line. Maybe Energy Trust needs to get to know its audiences and then target its messages by specific customer. Let's face it, most CEOs are driven by costs—that's why they got to where they are—they were able to save money or justify why they were spending it. So they're only going to care about dollars and cents. But some also recognize the benefits beyond money and some are energy conscious and green. If Energy Trust could target those businesses and tailor a message to them, it would be a win-win situation.

### **Food products, Southern Oregon**

If it doesn't save money, I wouldn't waste people's time. Bottom line is that there's not much marketing value in this country with being green. There's a lot of emphasis on it. But how many people go to Walmart and they don't give a shit if it was made in China, they just want to buy the cheapest stuff and that's the way most Americans work. Unfortunately, only a very small segment of the country cares about energy or about being green. So if it doesn't save money, it's not going to make sense, especially to business people.

**Message: Renewable energy, like solar and biomass, can deliver rate stability for my business.**

Overall, this message wasn't applicable to the respondents and didn't produce any meaningful findings. Many of these respondents are not invested in renewable projects and weren't able to offer real opinions on the relevance of the message. Even to those respondents who replied by addressing rate stability in general, the message was not compelling.

**Sample Respondent Quotes**

**Computers & electronics, Portland Metro Area**

Well maybe that could be a good message. I don't know. I think it's pretty well accepted that utility rates go up.

**Food products, Willamette Valley**

I'm not so sure about that message and whether Energy Trust should tout it. One of the things we saw or that we talked to people about it and I'm not sure whether it's an Energy Trust thing or more of a PGE thing but the...what do they call it where you do load shedding at particular times...demand response. That's something that I thought was kind of an innovative idea. For us in particular I don't think it's going to be in the picture just because of product integrity but there are companies where that could be a reality and I think that's a viable option for people. And I guess rate stability, if you generate your own power that could have an effect on that but of course solar is limited to what happens during the day of course.

**Cold storage, Southern Oregon**

You would make everyone happy if you could deliver rate stability. As a business owner when the power rate goes up what are you going to do, you're going to pay it—you don't have an option. It's an unknown, it's a wild card. When we write leases, we have to write into those leases that if the power rates change by a certain percent, your lease changes by a certain percent. A year ago in January we got a 12% bump. In the refrigeration business those things are a big part of operating expenses. And it's the same way with any company. One of our tenant's power bill is huge. They're leasing about 60,000 square feet from us now and the building is 100,000 square feet and the power bill last month for that building was \$24,000. So a 12% bump is a lot of dollars. So yes, rate stability is a huge thing because you can't plan for it.

## **Results of Energy Efficiency Projects**

**This section summarizes the results of the following three questioning areas:**

1. Overall results of energy efficiency projects done to-date
2. Measuring results of energy efficiency projects
3. Energy efficiency vs. reducing waste

## Results of Energy Efficiency Projects

### How would you describe the results of your energy efficiency projects?

Almost all respondents said their energy efficiency projects have been successful. The main reason is the money savings. Respondents were in general agreement that the Energy Trust program delivers what it says it will.

In addition, many respondents mentioned the unexpected benefits delivered beyond saving money. But it remains clear that although customers may love to sing the praises of these benefits (and even become quite passionate about them), they still are not an important factor in making a decision to proceed with an energy efficiency project or deemed an important message.

### Respondent Quotes

#### **Computers & electronics, Portland Metro Area**

Our projects have definitely been successful. They've done exactly what we expected them to do. And first of all, that's to save money. But there's also the fact that we want to be carbon neutral as much as possible. And also, the visual aesthetics are considerably better with the new lighting. You can tell a huge difference between the lighting levels and just the overall environment based on the new light fixtures. So I guess in that regard it would be something we take into account for employees.

#### **Plastics, Willamette Valley**

All of our projects have been successful. We're saving a ton of money. We've done the lights, the compressor, machinery and processes. But a big benefit to me is the electric machines are so quiet! Also it used to get unbearably hot in here with the old lights and hydraulic machines. So it's much more comfortable. But those benefits are not nearly as important as the cost savings.

#### **Wood products, Central Oregon**

The two projects we've done have been very successful. We did an air compressor project and a new drier project. The projects have been successful from two standpoints: the equipment performs, which is our primary objective, and they resulted in the energy savings that we anticipated. It started with us wanting to buy new equipment. We had an old air compressor that had limited life and when we talked to Rogers Machinery Company about it, they said do you know about these Energy Trust programs. And we didn't know about Energy Trust at that time but we looked into it and that ended up saving us money.

#### **Transportation & aerospace, Southern Oregon**

We started in 2000 doing projects with Energy Trust. We've done 2 compressors, air driers, VFDs, several lighting projects, and replaced an oven for baking parts. It's always been a very good net result. Energy Trust has always been very helpful and RHT has always done all of our paperwork and studies.

In addition to the savings, there have been some side benefits from some of the projects that we didn't expect or think about. One of the ovens we replaced was 50KW oven and I think we took it down to 12 to do the same job. But a side benefit of that was the smaller oven didn't require cooling water to run through the door jacket to keep the door from warping and we found out we were spending about \$10,000 year on water to keep that thing cool. So that was a huge benefit that we didn't even think about. We didn't realize it was taking that much water to do that process. So it was a savings there as well. And on the lighting projects we've done, not only are we saving energy because on most of them we're using occupancy sensors on each fixture but we get better light out of it, more light and fewer shadows and I firmly believe that increases production as well. Employees really appreciate it.

### **Wood products, Southern Oregon**

The projects we've done have been successful. Mainly the fact that we were able to save money as we projected and that the products that we did install lasted, they didn't break down, they didn't create more work for us than we were originally doing. Like the lights—they've been here for 6-7 years now and we've had to go in and change some but not any more than what we were doing in the past. I mean if we had to go in every 2 months or so to change light bulbs that would have created more work for us than what we were doing to start with.

### **Beverages, Central Oregon**

With the lighting a big benefit was the impact it had on employees' attitudes. If you read psychological profiles on the work environment, you know that a brightly lit facility creates better attitudes and I have seen this first hand. There's less turnover and a more positive feeling about the doing the work. But these benefits don't really have much impact on us deciding to do a project. What has impact is the Energy Trust kickbacks and what I can put to the bottom line in savings. Let's face it, the company wants to make money. It obviously wants the employees happy and good and everything else but money is the priority.

### **Food products, Southern Oregon**

Although money savings is first and foremost, these projects have been successful also because of other benefits they provided. Now, our major project has been refrigeration and we see ten times the energy savings from that project than we will ever see with the lighting project. But the lighting project has had lots of other benefits. We got better lighting—the change in color on the lights has really helped employees do their job. Plus, it's more energy efficient, it's no longer a nightmare to change a bulb, and it allowed us to go to a different type of bulb that is food safety coded—that was a big deal for us. We just went through an audit today and the fact that we could say that we have food safety coding helped in the audit. The refrigeration also had the benefit of allowing us to control the temperature and keep the room from overcooling and freezing fruit.



### **Wood products, Southern Oregon**

When we define success with energy savings, the ROI is a huge portion of it. But the financial is only part of it. It's also that we want to be the best in everything we do. If you're not savvy about what's going on inside your mill—if you're over-compressing, you're spending energy, and then you're really not up to what they would require for a world-class maintenance team. As the head of all maintenance, it becomes my responsibility and doing these energy efficiency projects has made me much prouder of our system and of our people.

Our first project was a compressed air upgrade to our existing system and an unexpected benefit of that was it identified another energy savings project for us. Once we put in the new system, we were able to get a baseline and start monitoring how much air we were using and then it became apparent to us that it makes financial sense to fix air leaks and other ways we were using air. This was something that was not visible to us before we did the first project. And of course, you tend not to fix things that aren't visible. Then the icing on the cake was that Energy Trust offered the 90x90 project, which was to look at your demand side and fix air leaks, air consumption, blow-offs and those types of things. And the payback on that was great too. It was very short as far as what we had to spend to fix the issues and what the energy savings was.

### **Misc. manufacturing, Southern Oregon**

We've done two big projects with Energy Trust, compressor and lighting, and we spent about \$27,000. The Energy Trust program has worked so well for us that I have tried to encourage other businesses to take advantage of it. Also I really appreciated that Energy Trust found a pass-through partner for me and I didn't have to worry about using the tax credit and I got my money fairly quickly. I put up the initial capital to do the project and then it was refunded to me fairly promptly, within 3-6 months.

### **Wood products, Oregon Coast**

We've been really satisfied working with Energy Trust and RHT. My gosh, they've provided some really good input and have been a lot of help. And I'll be frank with you, a lot of these projects we probably wouldn't have spent the money on them if there wasn't some incentive, payback for us.

### **Misc. manufacturing, Columbia Gorge**

Our lighting project turned out really well. The biggest thing it's done is to improve the lighting in our facility. Employees can see what they're doing better.

### **Beverages, Columbia Gorge**

The jury is out right now on the results of our latest energy project. But that's because typically when I keep track of our utility costs, I track those as a kilowatt cost per barrel packaged so I'm looking at it as it relates to production basically. And right after we completed this last project, our production ramped down—it always does in the fourth quarter. So I won't really know the real measure until production ramps back up.

**Wastewater treatment, Southern Oregon**

The only thing we've done through the Energy Trust is lighting improvements. The lighting is definitely more efficient. But it's just such a small part of our power bill that I'm not sure we see much savings.

**Misc. manufacturing, Portland Metro Area**

Our energy efficiency projects have been successful—we have achieved significant energy savings.

**Food products, Portland Metro Area**

We replaced our old 10,000-gallon water boiler with a super high efficiency natural gas, basically on-demand water heater. It's saved us a lot of money. Our natural gas usage has dropped off quite a bit and our water usage has fallen too. So considering the amount of water and natural gas we consume, it was a great situation for us. And I know Energy Trust sponsored some of that and there were rebates and credits. So that went very well.

**Misc. manufacturing, Portland Metro Area**

The projects we've done with Energy Trust have been totally successful! For us success means having Energy Trust or the people they contract with help us make sure we're getting the value of the dollar that we're putting into the project. They've been very informative and the customer service is awesome.

**Misc. manufacturing, Portland Metro Area**

We did an air compressor project and it went well—it was fairly seamless. We worked with Rogers Machinery. They were very knowledgeable and it seemed like they had a good relationship with Energy Trust. Rogers helped orchestrate a lot of activity: the energy monitoring and the paperwork and stuff. It was done in a timely manner and it was very helpful to have them bird dog a lot of that activity.

**Computers & electronics, Portland Metro Area**

Our results have been very successful and the positive results are driving us to continue this program. I think one of the measures of success is the employee engagement activity and the awareness. It's a behavioral thing. For example, just a few months ago we had equipment on order for a new area and an energy team member questioned the tool owner about use of CDA in the tool. So we're changing behaviorally by asking more questions from our tool owners and our purchasing people and they're starting to become more aware of it as well. And I've seen that start to change this year.

**Computers & electronics, Portland Metro Area**

Success to us is focused solely on the dollar savings and I would say our results have been very successful.

**Misc. manufacturing, Portland Metro Area**

The last project we did was an air compressing system in 2010. And I would say it was successful and it continues to be. By success, I mean we run more efficiently. So we updated some older equipment so our system doesn't have to work as hard to accomplish the same thing and it also saves energy as well.

**Transportation & aerospace, Willamette Valley**

Lighting is the only project we've done and it's been successful as far as overall reduction of power for lighting. As far as reducing the overall cost of using lighting it has saved money. It's between 30-40%. But it's just automatic you get almost get a 50% reduction in wattage. So it has done its job and it was good for that.

## Measuring Results of Energy Efficiency Projects

### How do you measure results of energy efficiency projects?

Overall, it appears most respondents aren't doing much to "precisely" measure the results after an energy efficiency project is implemented. Some explain this by saying it's difficult to calculate results of specific energy efficiency projects because of how they're metered or other "system" reasons; others say it's not their job; others say once the project is done, it's not a major concern.

It's interesting to note that while the upfront engineering studies done by Energy Trust are important in calculating what the estimated savings will be, once the project is approved and implemented, respondents aren't that concerned about exactly what the delivered savings were. Some track change for just a short period of time, and when satisfied they're moving in the right direction, they move on to their next project.

**Conclusion:** Post-project measurement appears to be a low priority. This may be an opportunity for Energy Trust to help respondents more precisely measure results, which in turn, could provide compelling support for the respondent to propose more efficiency projects.

### Respondent Quotes

#### **Wood products, Oregon Coast**

When it comes to measuring results, that's a tough question. You're putting me on the spot! I do at least look at the electric and gas bills. But I guess with the energy efficient motors, we're not doing anything to track or measure results. Now this kiln project we're doing is the biggest project we've done to date with help from Energy Trust, and we're going to install a meter on our boiler that will help us determine how much natural gas we're actually using and where we can save. It's a pretty good tool. I should have included it in the original proposal. I looked it over but didn't include it and wouldn't you know there's help from Energy Trust by using this valve on the boiler.

#### **Misc. manufacturing, Portland Metro Area**

I can't really tell you for sure how the lighting project panned out in terms of savings or other measures. It's been a couple years. I monitored it for the first couple of months and it's really pretty hard because we're a welding facility and we use so much power anyway and it's so up and down. So it's pretty tough to tell what it did in that aspect.

#### **Cold storage, Southern Oregon**

I make an effort to measure results. What I do is take our power bill and restate it in today's rates. I actually figure the rate every month. The rate I figure is the total dollars we spent divided by the total kilowatt-hours. That's how I measure what the project has achieved.

### **Beverages, Central Oregon**

I'm not tracking the savings from these projects anymore. I used to. Typically, I will look at the bottom line after we do a project to see if we got the savings—to see it produced what I told them it would produce. Then I'm done! I don't go back and revisit and say oh, we're up a dollar this month. No, I move on.

### **Food products, Southern Oregon**

I know we've seen savings on these projects, but the way we're metered, it's pretty tough to really document on a monthly savings basis. With the lighting, I know that's true just from walking around, not seeing lights on at night that used to be on all the time.

### **Misc. manufacturing, Southern Oregon**

Because of the way we operate here there is really no way to determine what the exact savings has been because we've had 4 guys working overtime and at all hours and all the lights are on in the shop. And that might go on for a week or two and then it drops to working 8 hours. They're not on a separate meter so there's no way I can track and see if that's good. The one thing on that, even if it costs us more for the electricity, we didn't have enough lights in the paint shop. It was like painting in a cave. So one way or another we needed it. And when we updated it with better lighting, I know the savings here is on us producing a better product.

### **Computers & electronics, Portland Metro Area**

Success to us is focused solely on the dollar savings and I would say our results have been very successful. But it's hard to calculate. Our electricity is \$600,000 a month so if we save \$10,000 a year, it kind of gets buried in the whole pile there.

### **Misc. manufacturing, Portland Metro Area**

We tracked the results on the air compressing system for about a month and the numbers were relatively close to what the engineer had estimated and then we stopped after that. But our system settings are all essentially the same as they were so I made the assumption that it's more efficient and less expensive.

### **Misc. manufacturing, Portland Metro Area**

I do track results and measure the savings. And one advantage of that is that if I can continue to execute successful projects, which deliver what we promised, it helps me get approval for the next project. And also it's important to track results so that we can learn from it and if something went wrong, how did it go wrong.

Our energy bills get tracked in a system where we all have the ability to see what everyone is doing company wide. And corporate reviews those too and if they have questions they will call me. Or if I see something in our own analysis that represents an opportunity, I will review it with corporate and say hey here is something we've seen, is that something you're aware of or you see as an opportunity. And it's not just cost alone. You've got to look at it by what the unit is, how much consumption is, how much time you're using it per year or month compared to last year.

### **Food products, Willamette Valley**

Just about everything we've done has paid off. On the energy front, we look at kilowatt savings. To me that's more of a constant because our rates are going to change so a project we did in 1995 for instance saves so many kilowatt hours and may have saved us \$3000 but now it's saving us \$7000 just because of rate changes. Our corporate office hired Cascade Energy to monitor power usage at all of our warehouses across the country. There's a website dedicated to these results and I pull it up quarterly to see Portland results versus other warehouses. Typically the Portland results are in the top 5. And we feel pretty good about that because of all the efforts we've done.

### **Paper manufacturing, Portland Metro Area**

I'd say most of our projects have been successful although I never see the numbers of what our power usage was before and what it was after. Because our electrical engineer does all the power stuff and accounting of course he sees the difference in the bill. But I never even see those figures. I have heard from others that these projects have really paid off well in terms of efficiency. I know that the electrician that was doing the lighting would calculate what the total wattage was and what it was when we were done, and yeah we knew we were saving electricity but I mean we never put any of that into a spreadsheet to show exactly how much.

### **Misc. manufacturing, Southern Oregon**

I do a little bit to try and measure the results. Like I look at the electrical bills and try to figure it out. But it's hard to gauge because rates went up shortly after we did our projects. So it kind of balanced out. So due to the rates increasing the savings I was shooting for weren't seen. But obviously I'm saving money because with the rates going up, I would have been paying a higher bill.

### **Wood products, Willamette Valley**

I don't know much about how results are measured but I've heard quite a bit of feedback that they've been very happy with the payback on them. And here in our warehouse, we have really seen that, with the new lights and the sensors, it has resulted in the lights being off when nobody is there. So we've been very happy with it.

### **Cold storage, Portland Metro Area**

I don't spend a lot of time on measuring results because I'm spread pretty thin. But Cascade Energy has put in monitoring devices on our kilowatt usage and so I can go out monthly and look at my report and kilowatt usage and percentage of where I was last year and see how I'm tracking. So as I think about new initiatives, I start monitoring to see how effective what we've done has been—did it really drop it by 2% or 10% depending on the project. So I do have some ways of looking at that.

### **Misc. manufacturing, Portland Metro Area**

We try to measure the results. The lighting project is pretty simple because it's hard data that's already there. So we just take that data and fill it into a spreadsheet and we can figure wattage and how much money it costs us from PGE and how long the lights

run and that kind of stuff. I think anybody can figure that stuff out pretty easy—you just need the numbers. In the beginning of a project, generally Energy Trust already does that. They're telling you how much you're going to be able to save, how much it's going to cost initially and then when the payback happens. So those numbers are already there.

### **Computers & electronics, Portland Metro Area**

From day one, I have collected data from the PGE bill and started tracking by functional area so I could look at the biggest users. And this last year we began tracking the data using our new monitoring targeting reporting model. The model doesn't quite fit our needs but we're going to refine it next year to make it even more useful to us. I track our three different product areas as separate energy users as well as look at from the whole.

### **Chemicals, Willamette Valley**

I think there's somebody here that measures the results of these projects in terms of what our savings were. I'd have to check on that but I'm pretty sure. It's not me.

### **Plastics, Willamette Valley**

I know we're saving a ton of money but I can't tell you exact numbers today because right now we're in the middle of budgets and year end and so the monitoring has been kind of put on the back burner but I can tell you I think we're saving a ton of electricity. And it's so hard to pinpoint that because it's not like if I'm running 20 machines that they're all running the same product—there's a mix so there's a lot of variables in there.

I can do it if say I'm running Product A in #1 Machine and I can tell you how much it's drawing as opposed to what it did before in an hydraulic machine. But if I'm running Product A in #5 Machine, then no, I can't tell you because I didn't have #5 machine before or it was only running in hydraulic. And it's a product mix thing too and I can't even actually say, ok the bill is 30% less than last month because maybe last month I ran jobs that ran a long time and there was no set-up or down time or anything. So it's hard. And that was one of my first questions. I asked every engineer that came out from anybody, can't I put a meter on each machine. But evidently that's beyond our capability. Even some of the operators wonder how much it costs to run the machines.

### **Wood products, Central Oregon**

We did a follow-up study when we completed the air compressor project but we have not done follow-up studies after that. But we are aware of how the equipment is operating and we keep track of our monthly bills. In terms of electrical bills, we look for anomalies there and if we have a big spike then we say hey what changed last month, what's going on? So we don't do extensive follow-ups but we do keep track of things in general.

### **Transportation & aerospace, Southern Oregon**

With some of these projects, it's hard to quantify the savings other than you know you took out a ballast that uses this much power and put in this one that uses this much

less. Our usage here goes up and down so much with production you don't get to see it on the bill. But you calculate that by the equipment you changed out and that is your savings—it's just hard to see it when the actual bill comes. But I do monitor all our power bills and look at our demand charges and track those things to see we're not getting out of kilter.

**Wood products, Southern Oregon**

The only way we track the savings is just by looking at the electric bill. What was billed last month compared to this month. Is it running normally. That's about it.

**Wastewater treatment, Southern Oregon**

We track energy costs by looking at our power bill after we change something. We also have an energy profiler through Pacific Power that we use to track things.



## Energy Efficiency versus Reducing Energy Waste

**When it comes to saving money through energy efficiency programs, what's more motivating in your company—energy efficiency or reducing energy waste?**

- Some respondents said they didn't differentiate between the two or simply that "they're one and the same."
- Other respondents hesitated in answering this question or asked for the question to be repeated or explained.
- Although some did identify one of the two aspects as being more of a motivator, overall it's difficult to draw a conclusion from the responses to this question.

### **Respondent Quotes**

#### **Plastics, Willamette Valley**

I would say it's the efficiency. Because there was nothing wrong with our hydraulic machines—they would have continued to run forever. But we made a \$3 million commitment on capital equipment. And as I said, not all of them were fast paybacks—it was long term.

#### **Wood products, Central Oregon**

Probably reducing waste. That's something that's a little higher level of our philosophy I guess. For example, we have raw materials we use in manufacturing product and we're very aware of raw materials ending up in the trash can versus in finished goods. That sort of waste is much higher on our radar and so philosophically we're looking for ways to reduce waste and that kind of laps over into energy and other things besides raw materials. I guess that's why I would say it's more important for us to reduce waste rather than be efficient.

#### **Wastewater treatment, Southern Oregon**

I don't see a whole lot of difference between them. For our operation it's mostly the second one—waste or just that you're paying the power company money that you may not need to. Or if say we could reuse the methane off our digester we could save energy there.

#### **Transportation & aerospace, Southern Oregon**

There's a lot of overlap there. I guess my reason for going into this was trying to save the company money in a way that I was familiar with. Since I've started I've gotten more familiar with other ways. But because I monitor all the costs of all the utilities it's very obvious to me where we have things to be worked on. Out of 16 services we have one that has a very high demand charge and so that's one of the projects I'm working on now is to find out where that's generated and to get that down. And I think I know where that is but I guess it's just getting some documentation to try and justify doing the project and to fix that. But I think the wasting money in a sense is what drives me.

### **Wood products, Southern Oregon**

That's all one and the same to me. I don't differentiate. As far as waste goes, we're a wood product company so everything we cut up is used—we put scrap through a chipper and we sell the chips. So there's not a whole lot of waste. Everything we purchase we pretty much use—either as product or we sell as chips. But of course we do try to keep down the waste as much as we can. But again in my mind not really waste because we cut it up and use it.

### **Beverages, Central Oregon**

I target both! I want to be efficient because that's money savings and I want to reduce waste because it puts money to the bottom line. So the T8 lighting was a big one for me. Not only did it brighten it up but I would have rooms that had 40 plus lights on 24/7 because you really couldn't turn them off because you didn't know when somebody was going to have to go back there—we can't wait 15 minutes or more for lighting to come on for ability for someone to see. So I didn't burn all that energy. On the flip side of it, as they enter these lights are flipping on and it's bright and it's a positive reflection on everything—attitude and what not. So it was a win-win on both sides for that one.

### **Wood products, Southern Oregon**

The first thing that came to my mind was that you stated the same thing in two different ways. Because it is waste. It's no different than me cutting off half of my panels and throwing it away than having air go up into the atmosphere—you're still paying for that—it's still coming off your bottom line that you're not getting any return on. So energy, natural gas any of those items, you have to manage just like the product you're making.

### **Wood products, Willamette Valley**

I guess one of things we see in reducing waste is you look at it this way: the install of the equipment on our air compressors gave us the ability to shut one of our compressors down. I believe we had about 3, and when all 3 were running that's basically energy waste. But that also falls into efficiency too.

### **Wood products, Oregon Coast**

At this point we just try to be more efficient. Waste is a necessary evil here but the waste itself is the by-product and it's used in particleboard plants and wafer board plants. For example, we produce a huge amount of hog fuel and it goes to a company that uses the hog fuel to fire their wood fired boilers that produce steam for their kilns and actually generate electricity.

### **Paper manufacturing, Portland Metro Area**

I think you can gain both. But when I think about waste I think about it differently in the sense that we've done so many things in our mill to improve our process control. If we can stay on grade on the machine and not make it off grade paper, which part of it turns into waste and part goes back into the process and therefore we're putting energy into it twice. So process improvements really cut back on your waste and also improve your bottom line. To pat ourselves on the back, when I came here 10 years ago we said if we made 550 tons a day we'd be doing great—sitting on hog heaven—we now make

750 tons a day and wonder if we're going to be able to keep running. So we've increased our productivity by close to 40% and that's the only way we've been able to keep running, by getting better and better at what we do.

### **Cold storage, Southern Oregon**

I don't differentiate. I look at the bottom line. I'm dollars and cents. But again we think really long term in our business and we're really well-funded.

### **Misc. manufacturing, Portland Metro Area**

It's the same thing to us. We use them interchangeably. Waste is just that to us—it's waste, it's lost opportunity.

### **Misc. manufacturing, Portland Metro Area**

The other thing is that in the end, whether the payout is 10 or 20 years, it is something that ends up saving us money. And in the case of our new light system that we have, there's less waste. It's super important to us. We recycle everything! Wherever we can cut cost and reduce carbon footprint, we do it! Even if it costs us a little bit of money to do it.

### **Computers & electronics, Portland Metro Area**

We do track our waste. Even our waste that goes out of the plant. We separate all our materials so they get recycled--metal, cardboard, so forth. We used to ship materials between our facilities using Styrofoam and we looked at that and we eliminated it! We don't ship anything in Styrofoam anymore. A second thing we did is when we ship our modules out we were using little plastic spacers and some of customers ask what do we do with these plastic spacers—they appreciated how little packaging we use, but after we got customer calls, we started recycling the plastic spacers—we take them back from customers and we either reuse or recycle. So we're constantly getting feedback from our customers on materials waste and packaging improvements. So we do think in terms of both efficiency and waste reduction. But that's something that Energy Trust should promote—the reduce, recycle and reuse.

### **Food products, Portland Metro Area**

A lot of the waste we create during production was ending up in the trash, the dumpster. We're talking plastic jugs and things like that. And finally we got the garbage hauler to give us a bin for recyclables, which we did not have before. That's kind of out of the scope of Energy Trust but it shows you the mentality here. We want to be responsible as far as waste is concerned, plus the business wants to be as efficient as possible.

### **Misc. manufacturing, Southern Oregon**

We just look at how we can be more efficient everywhere and that's from making our product to buying equipment to make our product more efficient. We needed a new compressor so I got a new one that's not sitting there running all the time, etc. We probably just on our compressed air in here this coming year we're going to save 25% on the cost of compressing that air.

## Employee and Customer Results

### A. Employee engagement and internal communication practices

Respondents that actively communicate with employees about environmental goals and achievements or engage them in identifying and reducing waste had embraced energy efficiency and sustainable practices as part of their corporate culture. Several expressed that one or two people initially led the charge in establishing or changing the culture and that it often was employee rather than management-driven. These organizations appeared to have broader workplace programs that included many ways to be more environmental or save energy, and often saw many suggested improvements coming from employees themselves.

Successful strategies used by companies to educate employees and motivate change include pressure from fellow employees, publishing information and results in monthly newsletters, and signage around the facility. One customer remarked that this type of education is a constant process of “continually trying to get people to that next level,” that he has to remind employees to change their habits at work and show them how it benefits them personally as well as the company.

Companies that did not have such a culture in place expressed frustration at getting employees to take simple actions to save energy, such as turning off lights, keeping thermostats low or closing doors to the outside. Many indicated that communication about results from these programs isn’t a company priority, that “employees didn’t seem to care” or “aren’t interested.” One customer suggested that, “you have to pretty much walk around with a stick and beat people to get them to be more energy conscious.” Individuals report trying to alert others in the organization about ways to save energy but give up when their efforts are rebuffed. While several of these companies had implemented efficiency projects to save energy, they were less likely to do so as part of an overall corporate strategy.

**Green Team:** When asked if they had a "green team", almost half of respondents reported their company had some type of green team. It does not appear that a company's likelihood of having a green team is related to its industry type. Instead, it would appear that company size and commitment to the environment are better predictors of having a green team. Among those with a green team, responses broke down as follows:

- **Informal team:** Most said the green team was "informal", describing it as being one or two employees that make it their "unofficial" job to serve as a leader/educator on changing habits inside the company and/or seeking out energy efficiency opportunities. Some simply said, "The green team is me!"
- **Formal team:** A few companies reported having a very formal green team—a team comprised of inter-departmental members that meet regularly and take a systematic approach to identifying energy efficiency opportunities.

**Conclusion:** A company’s ability to successfully engage employees in identifying and reducing waste is linked to its corporate culture.

## **Respondent Quotes**

### **Cold storage, Portland Metro Area**

Unfortunately I work in an environment where a lot of employees just don't give a rat's ass about energy efficiency. And unfortunately people do come to work with crappy attitudes. Some people care but others are just out for themselves and could really care less. So I look for things that take control away from people such as thermostats, lighting motion sensors, all these things. And it's because people's behavior at work is, "Well they're a big business, they can afford it". So employee engagement is very limited. I would say there are not a lot of conversations about that. I know it has to come from us, management, to share information with employees but so few seem to care. There are a few who turn the lights off and a few have asked if we're recycling and a few have said they like what we did with the lighting.

### **Plastics, Willamette Valley**

Our employees are engaged and we do inform them. We have a monthly newsletter and put all that stuff in there. And they're good at making suggestions. It's part of their job. We have this employee here and we call him the Energy Nazi. For some of our stuff he's got it so it will turn off and with the compressor we got it dialed down a whole lot less because it's so much more efficient than our old 2 compressors that we had to run at 100psi. Because this one has the controls on it, it senses when to ramp up and when not to. But what I've got him working on now, last week I gave him—I said hey, we've got this 6 passenger van to take customers out or to go to shows—what if we get a hybrid? Is there any Energy Trust savings there? And we're looking into that!

### **Transportation & aerospace, Southern Oregon**

I hate to admit this but employees in our company seem pretty much oblivious to energy efficiency issues. You pretty much have to walk around with a stick and beat people to get them to be more energy conscious. We have one shop that has the highest gas bill because of their heat. And it's a small building but they leave the roll-up doors open all the time even in the winter. I cannot get it through their heads to shut the doors! So it's sometimes kind of frustrating on my part to walk by and see the doors open and windows.

Company wide it's not a priority to communicate energy efficiency things to employees. In one of our newsletters our media guy did an article on our big air compressor, our first project. And we got a few comments back—oh that's really great and stuff. And we get good comments back when we do a lighting project—wow, this is great—I can see what I'm doing now!

### **Misc. manufacturing, Eastern Oregon**

I have 500 employees. I don't communicate to them about energy savings or energy conservation and they don't communicate to me. Obviously I work with the facilities manager to talk about savings with compressed air and lighting and heating. But communication on these issues is just with a key group of people and not the general employee base. I'll drive down the freeway and see garage doors wide open and I'll get

on my cell phone and say hey Billy Bob shut the door for crying out loud, it's cold outside. And what will have happened is somebody forgot to shut the door.

Frankly, the whole green thing doesn't impress us too much. I mean, for the industry I'm in, I'm all green baby, I'm green. But again I'll go back to things like wind power, a lot of the green things are great but they don't pencil and so I'm a little skeptical of them.

### **Wood products, Southern Oregon**

Unfortunately the mentality of most people is that energy is there and in a big plant like this—it's there, it's free. In your own home, you turn the thermostat down to 65 but when you come to work for some reason people get a different mindset. At home it's coming out of their pocket directly. They're paying that every month. Here it might be reducing their retirement but in the moment it's not impacting them directly.

So it's a complete change of philosophy you have to instill in your employees—for example—pick up a broom instead of an air hose to blow stuff down. You're continually trying to get people to that next level.

We have a company newsletter that we put out and occasionally I'll write articles and let people know what's going on. In the past I've obtained info off of Pacific Power's website to help people in their own homes with energy. One of the other things we did here was we all took a cut in pay. And now you're hitting everybody personally. So I was putting out articles to help them with energy conservation at their own homes. They like that kind of stuff. We're an employee owned company so if the stock value drops or doesn't go up, I don't make any money on my retirement. So each one of us has a stake in the game. So it may be easier for our employees to grasp that every board they waste, every bit of energy they waste is coming off their retirement. So that should be motivating. It is to me!

### **Wood products, Willamette Valley**

Our company has been very, very good about including the employees and takes their suggestions and ideas very seriously. A lot of the areas we've gotten into have been because of the employees.

### **Wood products, Oregon Coast**

Employees do ask about what we're doing. And we have an open door policy so employees can ask me or go right to the people that own the mill.

### **Misc. manufacturing, Portland Metro Area**

Our employees are engaged. It happens on a daily basis and touches everybody here—recycling, saving energy, seeing the things around the building that save energy, us talking about it, articles written about us and what not. But our goal is not to force it upon our employees to be environmentally sound and energy efficient. If you don't want to that's ok—it's your own thing.

### **Misc. manufacturing, Portland Metro Area**

We're getting to the point where employees are our last strong hold. To explain it in a sense that employees aren't going to be able to turn on and off compressors efficiently

or use less air efficiently, they're going to do what they've got to do to perform their tasks. But if you ask them to turn their desk lights or computers off at night, it's something more of individual activity and not something we control on a higher level. So that's where we're starting to head—lifestyle behavior activities. We're still early on with it but I think it's going pretty well.

### **Computers & electronics, Portland Metro Area**

In a general sense we communicate our energy goals to employees. I don't know if we go out and say to them we saved this much money because of this project—I don't think we do that. We have signs around the building reminding people to turn things off and stuff like that. Overall, employees don't seem that interested. It certainly isn't a factor in hiring or retaining employees. I think only a very small sample would care about that especially in this economy. I think most people are just happy to get a job.

### **Wood products, Central Oregon**

Our employees don't seem to make suggestions but when we bring things up that we're doing in energy efficiency areas, they certainly jump in and will say, hey this sounds like a good project and they help make it happen. And that's partly because that's what their job is and partly because they're interested in it.

### **Wastewater treatment, Southern Oregon**

I don't think energy efficiency is something that's actively on the minds of our employees.

### **Wood products, Southern Oregon**

Our employees are not too involved with it. We did have employees say the noise level was better.

### **Beverages, Central Oregon**

Very, very few of our employees think about the energy side of things. They are not engaged. That's been one of my pet peeves. An exception was that our administrative manager recently decided it's ridiculous that we're throwing stuff in a dumpster and he started a big recycle program here—can't be throwing cardboard in a dumpster. We also got the opportunity to get rid of plastic that comes wrapped around pallets of beer, we don't want it to go into landfill and there are places that will buy this and use it. So that was something that happened. But overall, our employees don't seem to think about this stuff.

We now have a general company website and I do see things pop up on that but mostly they're general—like health benefits and eating right and stuff like that. I think they just started a new part of our website called ECO that I think is targeting green. I haven't looked at it yet, just happened in last three days.

Every Wednesday the operations managers from each of our facilities have a phone meeting. I used to try to sell them on energy efficiency opportunities because I've been to all the facilities and there's multiple ones that could benefit from better lighting. But my comments weren't received that well—let's just say I got rebuffed. I got minimal response and then they just moved on with the conversation.

**Food products, Southern Oregon**

Our employees are not engaged. They don't like the sensors. They'd just as soon kick the lights on in the morning and leave them on all day long. That would be their preference. The majority seem to have the attitude that they don't pay the bills, why should they care. I know that's a little blunt but I think it's the truth. In my 15 years here, I have never had an employee ask what the company is doing in the area of energy efficiency or energy consciousness. We don't communicate it to employees through a newsletter or whatever. I've made requests in past to ask people to shut their computers off at night—350 watts running all night times 100 is 35,000 watts. That's a lot of energy running every night.

**Misc. manufacturing, Southern Oregon**

I've engaged the employees in recycling. We recycle all our cardboard and plastic wrap. We had a dumpster that I cut the cubic feet of it in half and I could probably cut it in half again. Part of it was I put a lock on it so my employees can't put their own personal stuff in it! I have a guy that picks up all our wood waste, broken pallets and stuff, and he burns those for heat for firewood. Everything's recycled. But overall, the employees don't seem too interested in what we're doing in this area. Nobody really asks about it. I just took the initiative myself to do this. Why throw it in the garage when it can be used for something else. And it cut my garbage bill almost in half.

**Paper manufacturing, Portland Metro Area**

We try to promote it every once in awhile. We put notices out in our newsletters every now and then just asking people if they have any ideas on ways to save energy or make the process run smoother. And there's some production people on the floor that have come up with some pretty good ideas.

**Cold Storage, Southern Oregon**

Our employees are involved in recycling. And they're also aware of our expenses in other areas and they make suggestions all the time for better ways to do things. It might be better ways to store stuff because we do third party warehousing, or it might be how to keep track of inventory or how to get better paper flow. But it is amazing how people can find a switch to turn a light on but they can't find the switch to turn it off! They do it at home but not at work and the simple reason is that they don't pay the bill.

**Computers & electronics, Portland Metro Area**

Some employees are engaged in energy efficiency. But this is a factory. We have 500 plus employees and most are just engaged in simply making the stuff we make.

**Transportation & aerospace, Willamette Valley**

We feel the whole being green scene is a bit clichéd and foolish because after all, we have a job to do. We have crews of 5-6 in crating, maybe 10 in shipping, maybe a couple in receiving, a couple in woodshop and about 15-20 in production area. So being green is like just don't bother me, I need to get this job done. We're just not big enough. Now because we are a refabrication facility, we concern ourselves with recycling and EPA rules, but except for that, I don't think it ever crosses employees' minds.



## **B. Customer engagement and communication practices**

Overwhelmingly, respondents indicated their customers did not ask about energy efficiency successes or policies in making purchasing decisions. Most indicated that, “customers are looking for the best price,” and “don’t care about the details of how we do it.” Most of those interviewed had minimal customer contact and said that if this is a customer concern at the sales and marketing level, it was not getting back to them.

Few respondents published a formal corporate sustainability report, but a majority reported that their companies actively incorporate their efforts into their marketing outreach or have plans to do so. Those who do communicate internal results and programs with customers see it as a useful part of their sales and marketing strategy. Typically, this communication is achieved through signage, newsletters or marketing events and activities. One company said that, “Customers that come into the building are totally amazed at all that we’re doing in the energy efficiency area and that what we do is not all about making money. It is about being responsible.”

Another company indicated this is top priority for them because they, “are a company that is about saving energy for people. Every product we ship is Energy Star qualified. And we do take effort and pride in continuing to come up with solutions that will meet the customers’ expectations in saving energy and costs for them in the long run.”

Among those who reported little outreach to customers, some simply weren’t aware of any efforts, and others felt it wasn’t of high value at their company. One interviewee reported a lack of internal interest to making this type of information public and suggested that, “if it’s never come up on the sales side, it will probably never have a chance of making it through.”

**Conclusion:** Respondents we interviewed are making efficiency decisions based on a need to deliver customers the best price or the best product, not on customer interest in energy or environmental performance. Efforts to “push” this information out to customers are coming from elsewhere in the company.

### **Respondent Quotes**

#### **Plastics, Willamette Valley**

Our customers aren't interested in how energy efficient we are and they don't choose us for that reason. They're more interested in how we can get the product out the door for them at a good price. They don't care about the details of how we do it.

#### **Wood products, Oregon Coast**

Our customers are simply looking for the best price on wood products. That's it.

#### **Wood products, Willamette Valley**

As far as I know, when it comes to energy efficiency, the only thing that interests our customers is that it's brought costs down and so they've been able to buy at a better price. I think that's part of our sales strategy. That story is shown and it's told out there.

### **Computers & electronics, Portland Metro Area**

I think our customers might ask about this in a general sense. But I don't think they get too specific with us. I couldn't tell you whether our company markets it or not to our customers. I'd be misinformed either way if I said yes or no because I don't know. I'm not part of that area of the business. I know back a few years ago when we tried to do this solar project, I suggested it could be something marketing-wise we could promote with our customers because a lot our customers are over in Europe and Asia—and obviously in Germany where we have solar projects going on and where we have customers that might have taken a closer look at us than say another vendor.

### **Wood products, Central Oregon**

I'm not involved in sales but I've certainly never had any of our salesmen inquire or let me know that our customers are concerned about energy usage or anything like that. Forty percent of what we do goes overseas and overseas customers have not inquired about our energy efficiency efforts and to my knowledge domestic customers have not inquired either.

### **Wastewater treatment, Southern Oregon**

I haven't had any customers call us to ask questions or make suggestions. We actually tried to start a 6-week educational program for anyone residing in Josephine County where they could come in one night a week and we would go through all the functions of the Public Works Department including our energy efficiency efforts. We only got 3 or 4 people that showed interest in attending so we didn't go ahead with it. One of the reasons we had considered doing it was the Public Safety department has held an educational program for 20 years and it's very well attended and successful. But with Public Works, there's not much interest.

### **Transportation & aerospace, Southern Oregon**

I don't have any real contact with customers, so I don't have an answer to that. Maybe if we had a green team here, customer input on energy efficiency would get fed back to us. But it doesn't now, if there even is any.

### **Wood products, Southern Oregon**

None of our customers are asking about this that I know of. But I don't have much contact with our customers whatsoever. Pretty much I'm the maintenance guy out in the mill. And the sales guys are across the street that actually talk to the people. I haven't had any salesperson ask me what we're doing. As far as I know, our company does not communicate what we're doing energy efficiency wise to customers.

### **Misc. manufacturing, Eastern Oregon**

Well since I'm a bean counter, I couldn't tell you because I don't typically talk to the customer. They don't let us accountants do that! But I kind of doubt that our customers are interested. First of all, our customers are dealerships and they have their own businesses, which is making money selling our product. Maybe their customers talk to them and ask those questions, I don't know. I doubt it.

**Beverages, Central Oregon**

No, as far as I know our customers don't ask about this. I have minimal customer contact. Customers don't come here where I work. We deliver products to them.

**Wood products, Southern Oregon**

I don't know. I don't believe I've ever directly talked to any of our customers or gotten requests about our energy performance. This may come through a different level of our company. But, I'd say our company just doesn't seem to be communicating this to customers. For example, we're enrolled in the Blue Sky initiative through Pacific Power where a certain percentage of our power comes through renewable resources. For me, that's another excellent marketing issue that would go along with our mission and that we could be communicating. And it falls on deaf ears when I try to get Corporate to do that. This is more of an internal problem we have. I can't even get them to do that. So I'm kind of stuck. I have taken it all the way up the flagpole and had the VP of our company talk directly with Pacific Power and try to use that because we're enrolled in it, we're doing it, why wouldn't you use it? It's to your advantage to put it on your website and put it on your business cards to show people again that you're not only friendly to the environment but you're with renewable resources. I just think that companywide we're leaving a little bit on the table by not using that. I don't know why I can't get people here to do that. Maybe I just haven't connected with the right person. Most of the customers that we sell to, our big claim to fame is our non-formaldehyde because we know most of the glue out there has formaldehyde in it. It's a known carcinogen. We know imports that come in have a lot of formaldehyde. So we put a lot of our eggs in one basket on that—to try to sell that market. Perhaps they've never had an interest from any of our customers to say are you guys energy efficient? If it's never come up on the sales side, it will probably never have a chance of making it through.

**Food products, Southern Oregon**

Our customers are not asking or interested as far as I know. We do put energy efficiency related things on our website as we do them and we tout that we're interested in saving energy, which we are.

**Misc. manufacturing, Columbia Gorge**

We work with big customers. And nothing has ever come up in any conversations or nothing has been passed on to us.

**Cold storage, Portland Metro Area**

I don't really know the answer to that. We have very few customers that come here because we're a distribution center but I'm sure at the retail store level of our company, there's more customer involvement. But I hope the individual retail stores have the signage up and are communicating about why they have half the lights off in the store. And customer feedback is important—how is the customer's experience based on we're running 50% less lights. I don't really know exactly what they're doing.

**Misc. manufacturing, Southern Oregon**

I have a few customers that are energy conscious. We do recycling with some of our customers. We trade back and forth some packaging and boxing materials. We'll have a special box for their products and when they get so many of them, they'll bring them back to us to reuse.

**Transportation & aerospace, Willamette Valley**

No, our customers are not asking. This is not really on the radar screen of our customers or even us.

**Misc. manufacturing, Portland Metro Area**

We are a company that is about saving energy for people. Every product we ship is Energy Star qualified. And we do take effort and pride in continuing to come up with solutions that will meet the customer expectations in saving energy and costs for them in the long run. Because many of our products do go into a home for many, many years. Our product lasts a lifetime in many cases. So we want to make it good and help the customer save, it's a win-win.

**Cold storage, Southern Oregon**

I can't think of a single one of our customers that have ever asked about our energy efficiency efforts. It's certainly never been an issue with a customer selecting us.

**Food products, Portland Metro Area**

I wouldn't know the answer to that. I don't really interface with our customers. I'm kind of in the background, behind the curtain. The general manager I think is the one to ask.

**Computers & electronics, Portland Metro Area**

I don't have any contact with our customers so I don't know. Our corporate environmental folks tout this as far as I know. They have a green sheet newsletter that they publish. I'm not sure how far it goes with customers.

**Misc. manufacturing, Portland Metro Area**

That's probably a better question for marketing but to my knowledge it's not an issue or concern with our customers. I've never heard that. With this green team initiative, I'm guessing part of what the company will do is start to communicate that to customers. But we haven't done that to this point.

**Food products, Willamette Valley**

I'm in maintenance so I don't really know. I don't deal with sales much but they'd be the ones to know that. But I think our company should be communicating this message to customers and I think we do some of that. Here's what I can tell you. We have a food trade show every year for our customers and it's billed as the biggest green show of its kind west of the Mississippi. In order to call it a green show, we had to have less than 10% of the waste we generated go to the landfill. So we recycled all of our cardboard and paper and used compostable forks, spoons, napkins, cups, plates and all the food was separated from the garbage and all that kind of stuff. Over 3,000 people attended

so it was a big undertaking. Our staff people in merchandising and events came up with the idea and those of us in facilities helped out. I probably shouldn't say this but it was done more as a marketing ploy rather than our commitment to the environment. I think our company also communicates a green message on the company website and 2 years ago we changed our logo to incorporate a green leaf.

#### **Misc. manufacturing, Southern Oregon**

Well, I can't really speak for marketing but I think a lot of our marketing focuses on zero landfill, go green. Take plastic banding for example, well you have to pay to put that in a landfill. And some states have banned plastic banding in landfills because it doesn't deteriorate so we've got a machine that chops it up into chips or 3/4 inch pieces and we give our customers information on who will buy that from them so they don't have to pay to get rid of it, they can chop it up on site and resell it.

#### **Misc. manufacturing, Portland Metro Area**

All the customers that come in this building are totally amazed at all that we're doing in the energy efficiency area and that what we do is not all about making money! It's about being responsible. So customers are tickled.

#### **Wastewater treatment, Portland Metro Area**

I'm looking at doing more on that. In fact, I have a meeting today to talk about it with higher management. We didn't used to tout the energy thing with our customers. But I see us heading in that direction. We joined the Energy Star program. It does many things but as a high-energy consumer, you can become a partner in that program and you take a more systematic approach to looking at energy and ways to save energy and so forth. And once you enroll in the program, they give you use of all these logos and stuff you can put on your website to show you're doing all the right things and I think we aren't doing that yet but I think we're going to. I don't think too many customers are asking questions now but we're anticipating it could come to that and we know if we do talk about it, it will resonate with people.

#### **Plastics, Portland Metro Area**

We're the in-house manufacturing company for our parent company. Ninety-nine percent (99%) of what we manufacture is for our own company. So even though they're technically our "customer", it's not a situation where we need to really communicate with them about our energy efficiency efforts—we're all together on this.

#### **Computers & electronics, Portland Metro Area**

I'm promoting with our PR person the mission statement our energy team put together. He is going to take that and wordsmith it and actually put that in our future annual reports. But I think our company could be doing more to promote energy efficiency to our customers. I'm going to talk to our PR people about it.

## Respondent Suggestions

Throughout the course of the interviews, most respondents offered comments, suggestions and even criticism about Energy Trust and how it interacts with customers and prospective customers. While the comments were all over the board, and many of their suggestions overlap with other sections, a handful of themes emerged that may offer opportunities for Energy Trust to explore and evaluate how it communicates with companies.

### **1. Increase awareness and broaden its exposure to companies.**

Many respondents brought this up. Even those that are very aware of Energy Trust and its programs feel that overall awareness is low and more visibility is needed. Many respondents suggested Energy Trust needs to advertise more. Specifically, many mentioned the TV ads they've seen for residential consumers and would like to see the same for industrial customers. However, at the same time, most understand that this may not be a cost effective approach to reach industrial customers. While many of the suggested methods offered for reaching out to customers are already being done by Energy Trust, it may suggest that current methods aren't working or could be revisited to be more effective. It is clear, however, that companies want and welcome as much information as they can get about opportunities and potential savings.

### **2. Target prospective customers more actively.**

Respondents had many suggestions for how Energy Trust should approach new customers. The key ideas were that Energy Trust should start small with a project that's bottom line focused and then build momentum. Other suggestions included targeting high-energy users. Some suggested that Energy Trust should initiate contact with customers first and be more visible on-site at companies to keep them informed of opportunities. For many respondents, managing energy efficiency projects is not their full-time job so they have little time to launch inquiries to Energy Trust; rather, they'd like to hear from Energy Trust more often.

### **3. Improve the quality of information provided to customers.**

Respondents want more information and really stressed they want hard numbers, specific examples and documents that are short and simple. They also want easy-to-obtain information relevant to their type of business or industry, and access to testimonials or examples of companies who've successfully benefited from these projects.

### **4. Other**

Many other suggestions were offered that didn't fall into any of these categories but are still worth reviewing.

### **5. Keep up the good work.**

Many respondents had very positive things to say about Energy Trust, its programs and the value and benefits offered to their business.

## **1. Increase Awareness**

### **Beverages, Columbia Gorge**

I think just getting the word out there is probably half the battle. Because it's pretty attractive once you're aware of what Energy Trust offers. Why wouldn't a company do that! Whatever means Energy Trust chooses to get that word out there, I certainly think people would respond to it.

### **Food products, Portland Metro Area**

Just letting people know that things are available. And that there are easy things that they can do that will make a big difference. And then helping people through that process.

### **Misc. manufacturing, Portland Metro Area**

I think Energy Trust needs a better way to get the message out there about how you can get these cost savings and other benefits.

### **Misc. manufacturing, Southern Oregon**

Energy Trust needs more visibility. You hear commercials for what you can do in your home but for industrial companies there's not much flow of information on Energy Trust. Maybe it's just where I'm at in the Southern Oregon area.

### **Misc. manufacturing, Portland Metro Area**

I think Energy Trust continues to be a good resource for those who know about it but I'm not sure everybody knows about it.

### **Computers & electronics, Portland Metro Area**

I am very versed on what Energy Trust offers because I've been participating in seminars and workshops put on by Energy Trust and PGE. And I've been involved with Energy Trust through IEI. But to be honest with you, I think Energy Trust could publicize its programs better. Because I don't receive regular emails with information about workshops and seminars. Also, I'm in the Portland Metro Area and Energy Trust's offices are easy for me to get to. But I imagine if I were in Medford or Eugene, that wouldn't be quite the case. So I can see for outlying areas it would be difficult. But even for those in the Portland Metro Area, maybe publicizing these workshops and seminars and activities may be an issue.

### **Misc. manufacturing, Southern Oregon**

Energy Trust needs more exposure! I think just letting people know the program exists and then being able to show them how much they're going to be able to save.

## **1a. Newsletter or Quarterly Update**

### **Food products, Southern Oregon**

It wouldn't hurt to have Energy Trust put out a little, quickie newsletter. Nothing fancy or splashy but something that describes the projects recently done by various companies. Maybe they already do this and I'm just not aware of it or maybe I blocked it out. I'm not going to seek out information on Energy Trust's website or read a blog. I want a quarterly email that says in the last quarter Energy Trust funded these projects and asks me whether I have anything in my quiver like that. I would read an email like that.

### **Misc. manufacturing, Southern Oregon**

I think Energy Trust should do some sort of quarterly or bi-yearly newsletter that would talk about different programs and ways other people have benefited. I just don't have time to seek out all the opportunities but if a newsletter came across my desk, it would be something I could thumb through and look over and if it talked about different programs and said if you have this, this or this type of equipment and would you like to save money—that would work for me. There's probably other things that we could be doing that might qualify for deductions and that might prompt us to buy new equipment or update things.

### **Cold storage, Portland Metro Area**

I wouldn't mind a flyer from Energy Trust to say we are now recognizing potential savings and support on thermal doors on the front end of the building or things that pertain to thermal on the front end. And they've got a lot of things out there—skirts and seals and doors. I think some of those would qualify. But I didn't hear about thermal doors from Energy Trust, I heard it from a vendor. I bought doors every year for 4 years from the vendor and this is the first year that we identified certain doors as being qualified.

### **Food products, Portland Metro Area**

I think Energy Trust should send out a monthly newsletter that says here's some things you should think about as a business person: Did you know your lighting could consume 60% of your bill and other factoids. I never get tired of somebody clever coming up with "did you know" type of things.

### **Wastewater treatment, Portland Metro Area**

I think some kind of quarterly update would make some sense. Now with lighting, I do think the Energy Trust has been good about announcing changes and sending me notices. But I think on some of the industrial efficiency stuff, I don't know the current state of the incentives until I talk to our PDC and they set me straight on just what's happening. I know Energy Trust has a budget and they have to try to predict what kind of demand they're going to have for their resources and they might change incentives because they're running low on money. I appreciate the need to change things. But a quarterly announcement that basically hits everything not just lighting might make some sense.



## **1b. Energy Trust Website**

### **Transportation & aerospace, Willamette Valley**

I found it hard to navigate Energy Trust's website to get the information I needed. I'm sure it's available but it wasn't something easy to find on the computer.

### **Computers & electronics, Portland Metro Area**

Energy Trust might want to improve their website to make it more user friendly. For me it's not too bad because I know what I'm looking for but I think they could improve it for people who are new to it or who are just curious about it. They may want to hire a professional person to make their website better.

### **Misc. manufacturing, Portland Metro Area**

Energy Trust could update its website. I haven't been on its website for a year but I know it was not the friendliest thing to navigate. It was kind of goofy. But having a good website is important because I think Energy Trust could just use email for sending limited information and then direct people to its website for details. Some of this stuff we may know but we all get so wrapped in running our business that we forget it. So it would be great if Energy Trust could put this on their website so we could access it easily when needed.

### **Wood products, Willamette Valley**

I have never been on the Energy Trust website so maybe that's something to push—encourage people to go on the site.

### **Wastewater treatment, Portland Metro Area**

Energy Trust changed its website a year or two ago and I thought it was for the worst. I've actually complained about it to Energy Trust. I didn't like dealing with it at first but I'm getting more experienced with it now. But when you get on there, they immediately make you say whether you're government or business or residential or whatever. So you click on that and go to the section where you're supposed to find relevant information. But before if I wanted to know something about solar, I could just click on solar as soon as I got on the website. So for me it became more cumbersome but I can see for someone that's a first time user and they don't know anything maybe it helps them.

## **1c. Seminars/Workshops**

### **Wastewater treatment, Southern Oregon**

I need more information, that's the big one. Maybe if Energy Trust could set-up a workshop where they could come to Southern Oregon just so everybody is up to speed on what's offered. I just don't think about calling Energy Trust. Energy Trust is not on my radar screen—it hasn't popped into my brain to call them.

### **Computers & electronics, Portland Metro Area**

I think seminars are a good idea. A seminar should be a half day, 2-4 hours, because people will give up that amount of time to go to a workshop. And I find at the workshops, other individuals will ask questions that I haven't even thought of and while they're asking I'm thinking oh yeah what about that. So I think in the group workshop setting, more information comes out and a lot of sharing, conversing, discussing, answering questions—from the other attendees. So for me that's even better than having Energy Trust come out to my site and talk to me. When that happens, I might not even ask all the questions because I don't know what to ask.

### **Cold storage, Southern Oregon**

I don't go to many seminars. I've been to one in last 5 years—sponsored by NEEA, it was helpful. But in general, I find seminars to be pretty dumbed-down. They're real, real basic and not that helpful.

### **Computers & electronics, Portland Metro Area**

Yesterday I attended the Strategic Energy Management Informational breakfast at Energy Trust's new offices downtown. I started writing notes but I was also trying to listen and some people were asking questions so I didn't write everything down. So I need to contact Energy Trust today to ask if they could send me that presentation or that information or I might even go on their website to see if it's there. But I think it's a little bit of a communication problem—I didn't get all the information and I imagine for those that didn't attend the seminar, they don't even know about the latest information coming out next year. I understand that we're trying to reduce paper so I can see why there wasn't a handout. But I wish they would provide the presentation via email or a link to their website so I can look at it again.

## **1d. Target Recipients**

### **Wood products, Southern Oregon**

Energy Trust should send its communications to the person who's in charge of the company's electrical usage—that's the first place I would start and then who's in charge of their maintenance. If people start looking at the money they're spending and they know there's projects out there that can help them save, it may entice them to do something.

### **Beverages, Central Oregon**

Energy Trust needs to get in front of people and they need to go after the people running the facilities. They should send their communications to these people and not to corporate.

### **Transportation & aerospace, Willamette Valley**

It's important for Energy Trust to know who to route the information to. If Energy Trust sends information to our CEO, he'll consider it junk mail and it goes in the circular file. It needs to be sent to me. I do this stuff for a living and I'm the guy to contact. Send it to me by email or snail mail. I will read it.

## **1e. Ads and Power Bill Inserts**

### **Plastics, Portland Metro Area**

I think Energy Trust needs to figure out a cool, clever way of reaching their industrial audience and generating some momentum. I'd love to see a TV ad or something that shows Energy Trust is being successful in getting in touch with this audience. A lot of people just don't know about Energy Trust. A lot of people watch TV and if they saw something on the tube that appealed to them, it would be cool to see it. Maybe this isn't the best way to reach out to corporations but I still think it might be worth consideration.

### **Plastics, Willamette Valley**

You know you don't see any Energy Trust ads for businesses, just consumers. If you're just cruising the TV you don't see any of that stuff. I think more advertising would help.

### **Cold storage, Southern Oregon**

I don't know how expensive TV commercials are but if you get someone like the governor to just do a little blurb somewhere or a news article or something. I know there is a division of Energy Trust that does TV ads.

It has to make me wonder how many people really know about ET and what's available. I suspect that a lot of people just pay their power bill and don't pay any attention to that little EEC heading or ECC heading. I think some sort of advertising to say it's here, it's available, we're here to help you.

The best first way for Energy Trust to reach people is through the power bill. It should be a message to say we're here to help you. Put something in the power bill or it could even be printed on the power bill itself. Or maybe then people would get confused—is it really PP&L or is it Energy Trust. But if it's inserted in the bill as a separate flyer it would work.

### **Chemicals, Willamette Valley**

The most important thing Energy Trust needs to do to get more people to do energy efficiency projects is to do more advertising so that people know they're out there.

### **Misc. manufacturing, Portland Metro Area**

I think Energy Trust should include information in the power bill. A flyer or pamphlet. Because everybody gets one and they get 12 a year. So that's going to be Energy Trust's best bet in my opinion. It's the perfect way to do it because you have to send the letter out anyway. Might as well stuff it a little fuller with some information that actually can help. You have 12 times opportunities a year and forever.

## **1f. Emails vs. Phone Calls**

### **Misc. manufacturing, Southern Oregon**

Emails are best way to reach me. And if there's something in the email that looks interesting and I think it could work for us, then I can email back and say I need more information. I'm a very busy person so phone calls and on-site visits aren't the best for me.

### **Food products, Portland Metro Area**

Email is the best way for Energy Trust to reach me. And it should be me they email because I'll make sure the appropriate person hears about it so they can act on it.

### **Misc. manufacturing, Portland Metro Area**

To send an email to my company, it will never get to me. I have spam filters on and Energy Trust will get weeded out.

### **Transportation & aerospace, Willamette Valley**

I get 30-40 emails a day and I delete 70-80% of them routinely. I just don't have time for them.

### **Wood products, Willamette Valley**

If I got an email that caught my eye, I might look at it. But I have mixed emotions about that. There's so much junk out there and so many scams going on, some of those things I'm hesitant to open up.

## **1g. Phone Calls**

### **Misc. manufacturing, Portland Metro Area**

To call me, well it was very lucky that you got me for this interview. Usually I'm not at my desk or the directory is slow and people don't wait, so calling usually just doesn't work.

### **Food products, Portland Metro Area**

Phone calls aren't the best because we're just so overworked here. And I think that's probably the case for a lot of businesses.

## **2. Target Customers More Actively**

### **Beverages, Central Oregon**

It is so important for Energy Trust's initial approach be something that is bottom line focused. After that, Energy Trust can move to projects that aren't as beneficial to the bottom line. By then, you have their attention. You've made the customer a hero, you've put money to their bottom line, you've got them leaning in. If you walk into a place and start dumping too much information on people, you're going to overwhelm them and they're going to back away. They're going to feel stupid. From our company, you'll get the "we sell beer and don't know much about this other stuff". I suggest Energy Trust start with one great project, that will be really, really good. Then when you go back to

the company, you say when I was here last time, I noticed something else that will also be good for you. Approach is everything. You need a battle plan when you start working with huge companies and we are a huge company.

### **Food products, Portland Metro Area**

Once we cleared the first hurdles working with Energy Trust, it's been tremendously successful and I feel that we're moving constantly—we've got momentum. We're working on stuff right now with Energy Trust and Cascade Energy and we've got people that are in contact with us and say we're going to do this next week and why don't we meet on this next week—it feels like there's momentum not just a lot of lip service so I think if other people can experience that it would be good.

### **Wood products, Southern Oregon**

I think Energy Trust needs to start small with people. Get them engaged. And I think once they do the first project, the next one is going to be a lot easier and the next one and so forth. But somehow Energy Trust needs to get its foot in the door and say let's just look at one small project for you and see how it pencils out and see what you think.

### **Misc. manufacturing, Portland Metro Area**

If people understand there's an organization that is solely focused on making improvements and providing incentives, all it takes is a small taste of success for them. Then every time a project comes up they're going to think maybe I can find out if Energy Trust is doing something. So that's where I think it's so important to be in front of people and making them aware of what Energy Trust's primary goals are and how they are doing it. Now that I'm aware of Energy Trust, I'm latching onto to it to leverage whatever I can. So even though I don't call Energy Trust, I don't spend time every year or every month with them but every moment when I see an opportunity I know how to find out what's available and how to get a hold of somebody if I need it.

## **2a. Target High-Energy Users**

### **Cold storage, Portland Metro Area**

Energy Trust must have access to who the big energy consumers are. For example, my facility is almost 1 million square feet. And I would be in that classification of a high-end user of electricity. Energy Trust should be saying to people like me hey, anything in any of these categories such as energy efficiency doors. For example, we're waiting for depreciations on different doors that were put in place 9 years ago that depreciate out in 10 that I already know I can do a more energy efficient door. I consider myself to be very aware of energy efficiency opportunities but I just found out that some doors that I've been buying over last 2-3 years could have fallen into the Energy Trust category, which would have allowed me to buy another 20-30% of the doors.

### **Wood products, Southern Oregon**

Energy Trust knows every large consumer in the state of Oregon—they know who they are! And it wouldn't be hard to call or email the right person at those companies. Energy Trust could say, hey we won't bother you anymore if that's what you want but if

you'd like to get some updates and info about what's going on in Oregon, we'd love to send it to you. I think most people would say, yeah I might be interested in it. So of 1500 businesses that you contact or send an email, if 15 more take advantage of it that's a pretty good percent.

## **2b. Lack of Time to Seek Opportunities**

### **Wood products, Oregon Coast**

I get lost in work all the time and I just don't think about energy efficiency projects until the subject arises. So I think communication is the key. Email works great for me—just make me aware of what's going on. Just stay in touch with our company! Make us aware of what's going on. If I'm made aware all the time, on a continual basis, I'd be more apt to take ideas to the management group.

### **Misc. manufacturing, Columbia Gorge**

I don't have the time to get on Energy Trust's website and look for things. But if something was emailed to me that appealed to me, then I might look at it further. That's my only suggestion—education of the customer of what's available through Energy Trust.

### **Misc. manufacturing, Southern Oregon**

I'm just so busy and we're a small company and I'm hands on with my business and I just don't have time to read everything or to do the necessary research on things that are not directly affecting me at the time.

### **Food products, Southern Oregon**

Well, I'm different from a lot of people. I do so many things in a day. I don't have time to go out and do research or go to Portland for some kind of convention type of thing or to do webinars. It's not my thing—it's not cost effective. I just need somebody to come in and see me and say this is what we've got. They need to come to me. And I mean in-person. It's more efficient and you get to read the person. If I were working for Energy Trust that's what I would do.

### **Misc. manufacturing, Portland Metro Area**

I think one of the things that ends up happening is that Energy Trust is looking for the customer to make the proposal to Energy Trust and I think it should be the other way around.

### **Food products, Portland Metro Area**

It's up to Energy Trust to beat the bushes for additional customers. And I think they should regularly contact past customers like us. And say, hey, how are you guys doing, anything going on, are you thinking about doing this, etc. If there's anything that's changed at Energy Trust maybe they could communicate that to us so we know if there's anything we can or should take advantage of. I'm thinking they should contact us every 6 months. I don't think Energy Trust or Cascade Energy have contacted me since

we completed our last project. But I don't want to seem critical because it could be just because I'm so busy and maybe I forgot!

## **2c. In-Person Visits**

### **Misc. manufacturing, Southern Oregon**

Sometimes an in-person visit can work. It's just kind of hit and miss when I'm available. My schedule changes daily.

### **Misc. manufacturing, Portland Metro Area**

We've had in-person visits before. But usually when that happens, it's a surprise attack and I'm busy! We don't like to be solicited in that way.

### **Food products, Portland Metro Area**

Maybe Energy Trust just needs to start going around to all the businesses. Knocking on doors saying hey, here's our engineering team, what do you have going in here—what can we help you with? Maybe that's the way to attack businesses.

### **Transportation & aerospace, Willamette Valley**

I think an in-person visit would be very valuable. But it would have to be planned and scheduled so that it included more than just me who's already two-thirds of the way there with energy efficiency. It would need to include the shakers and movers at our company, the people that have authority and decision-making capacity beyond this is a really good idea.

## **2d. Ask Employees to Challenge Their Employer**

### **Plastics, Portland Metro Area**

Maybe Energy Trust should reach out to employees through advertising and suggest they go to their employer and ask what they're doing for energy efficiency efforts—put them on the hot seat. Some people might not be comfortable doing that. But why not say, hey what's your employer doing for energy reduction, where do you work and have you thought about energy reduction at work like you do at home because it's no different. Your employer has to pay the energy bill and less money goes to your pocket.

## **3. Improve the Quality of Information Provided**

### **3a. Hard Numbers**

#### **Misc. manufacturing, Portland Metro Area**

One of the things I think is missing from Energy Trust is hard numbers about the savings you can get with basic things such as changing air compressors, VFDs, motors, lighting, using a solar panel, and running stuff in off hours vs. peak hours. I mean it's not enough to say that you can save money—you have to have something tangible for people. We need numbers, not paragraphs of info. Numbers are mathematical, you

can't argue with. It's proven. Actually it's very basic to do this. Doug at Energy Trust could whip out something like this in no time—I mean in like an hour. Energy Trust has all the data and results—just delete the customer's name and say, in this instance this is what happened, cost to install, cost to payback, and here's what they're saving year to year or month to month. For example it could say, here's an incandescent light bulb, here's a fluorescent, here's LED, here's how much the cost is to install, initial cost to install, this is the payout, this is when it's paid off, and this is your cost savings that you now have after that. To say you could save \$6,000 by changing your lights—that's a hard number that excites people.

### **3b. Categorize Ideas By "Like" Industry**

#### **Food products, Willamette Valley**

It would really be nice if the examples Energy Trust provided could be categorized by type of industry. For me, that would mean by foodservice warehouse or distribution warehouse. For example, let's say Energy Trust said we had 10 companies that put in LED lights in the freezer or new freezer doors. Energy Trust wouldn't have to list company names or product brand names. Just a categorized list of things people have turned in and gotten an incentive for. That way I can look through there and say, Oh, I didn't even think about that. It may boost me or somebody else to say wow, I can get better doors.

### **3c. List of Examples**

#### **Wood products, Willamette Valley**

It would be good if Energy Trust could list people who have done these projects and show it to other companies to get them motivated. What the savings were and did it really work.

### **3d. Limit to 5-6 Topics and Keep It Simple**

#### **Transportation & aerospace, Willamette Valley**

Energy efficiency is a large subject. Obviously there are a million details. But the single biggest thing Energy Trust could do to help me is provide a simple document that focuses on just 5-6 different areas: what kind of refunds are available for making things more efficient, how is it going to be more efficient, what's the general investment and return, why should I care and can it be done. And present that information on a page or two and not in a book! It should be written so that the average person is able to grasp it and then if more information is needed, provide how to get that information. Also, avoid all the legalistic terms and don't get too technical. A document like that would be of value. Because a CEO has lots of other things to do but he could hit the highlights pretty quick on something like that, get the idea and then decide whether he's going to go forward with it. That's not really available from Energy Trust. I have to produce that and a lot of what I have to do when I produce that kind of information is fly by the seat of my pants—I don't have guys I can send out to spend 2-3 weeks doing the research. It is



true that I personally care about my grandkids and the future of the planet but otherwise, it's not on my radar screen. This is business and I need business reasons.

### **3e. Low Hanging Fruit vs. Smaller Projects**

#### **Cold storage, Portland Metro Area**

Most people know what the low-hanging fruit big projects are but there are a lot of little projects that people aren't aware of like VFD on this motor. We need to know more about those.

### **3f. Timing of Letting Me Know**

#### **Cold storage, Portland Metro Area**

It would be great if Energy Trust threw out something to me prior to my capital expenditure process each year that said these are the areas, if you meet the criteria, that we would be interested in doing an engineering study or supporting or looking at—dock doors, dock lights, lighting projects, refrigeration, HVAC. And here's the scope of work.

### **3g. Referrals/Word-of-Mouth**

#### **Plastics, Portland Metro Area**

I think Energy Trust should use referrals and word of mouth more. They are so powerful. I could give Energy Trust a referral. They could give my name and suggest other companies call me. There's a half dozen huge corporations within five miles of our company that I honestly don't know if they're involved in energy efficiency efforts or part of the IEI. But there's a lot of opportunity out there if they're not.

### **3h. Simplify Forms**

#### **Wastewater treatment, Portland Metro Area**

It may be my imagination but I've filled out a lot of Energy Trust forms and it seems like the forms have gotten more legalese, there's more fine print to read. When I first started doing this I didn't bother to have our in-house legal counsel look at the forms but now I do. It seems like they've beefed up the forms with a lot of legal stuff since I started.

## **4. Other**

### **4a. Energy Trust Restrictions**

#### **Misc. manufacturing, Portland Metro Area**

I wish Energy Trust could be a little more experimental at times and not always take the conservative approach. We're not out to discourage Energy Trust—it's good for all of us. But when we do things that are not exactly to their formulas or the models, they could try to learn it, try to understand it, and believe it. We've been working on an energy

project with HVAC monitoring and controls and we made some determinations that we could use a programmable thermostat to monitor and control that system in a more efficient way. But the way we were going to go about it didn't fit the Energy Trust formula exactly so it was difficult to get buy-in on the Energy Trust side. Energy Trust has these formulas that they can plug in standard numbers and usages, and with our project they had had trouble making it fit and quantifying it so they could prove they were entering into an agreeable contract. So we ended up not getting the incentives. But we're going ahead with it regardless.

#### **Wood products, Central Oregon**

There are rules about certain projects that qualify for Energy Trust and others that don't and I find that a little restrictive. But I guess it's the way it has to be.

#### **Misc. manufacturing, Eastern Oregon**

Any prudent businessperson has to look at whether the Energy Trust recommendations make sense for you. For example, when we looked at the air compressors, one of the things Energy Trust proposed didn't really suit our needs and I asked for another particular item and they said oh yeah, we're familiar with that but that's way too expensive, it won't qualify for the discounts. Well our corporate said that's still what we need whether we get a discount or not. That's the best thing for our business because we know our business. Sometimes if it doesn't fit the Energy Trust scheme that doesn't mean it's not the better thing for us. So we'd rather spend more money and get something that works for our system. Sometimes there's a practicality that we know about because we're in the industry and that the energy engineers don't know.

### **4b. Keeping Up With Changes**

#### **Wastewater treatment, Portland Metro Area**

Maybe this is something that can't be helped but the Energy Trust incentives change all a lot and so you really have to keep up. And with the lighting especially, seems like I'm constantly getting emails where they're changing the game. And with the BETC gone, I know Energy Trust is looking at ways to change their incentives to pick up some of the slack and I appreciate that. But it's just another reason why the incentives are such a dynamic landscape and it's quite a challenge to stay abreast of them.

### **4c. Increase Incentives**

#### **Paper manufacturing, Portland Metro Area**

Give us more money back! I'd like Energy Trust to increase the incentives.

### **4d. Keep Trade Allies Informed**

#### **Misc. manufacturing, Portland Metro Area**

I think it's important for Energy Trust to stay close with local contractors and keep them informed of what they offer.

#### **4e. Copy Residential Model**

##### **Food products, Portland Metro Area**

Why can't Energy Trust's program for homeowners be replicated for businesses—where you analyze everything they have and say ok, here are 20 suggestions for you guys and if you choose to do, here are partners we work with and so on. I mean the model Energy Trust uses for residential is so straightforward, so thorough and they give you—I mean even on the website, it's so easy to follow you can do this and that—if you do insulation it's 30 cents a foot and here's what you'll get as far as a check, very cut and dry and it made those decisions very easy.

#### **5. Positive Comments About Energy Trust**

##### **Wood products, Willamette Valley**

I don't think Energy Trust could do anything differently. They've been doing an excellent job. They're very easy to work with and very personable and helpful so I say just keep on doing what they've been doing. It's a good group. It was a well thought out idea and it's evolved very well.

##### **Wastewater treatment, Portland Metro Area**

For the most part I've had a really good working relationship with the Energy Trust. The people I've worked with have been uniformly good and I really want to emphasize that. I see Energy Trust as absolutely key to what we're trying to accomplish.

##### **Plastics, Willamette Valley**

Energy Trust has met all our needs that we've asked for. They've been really great.

##### **Wood products, Central Oregon**

Overall the projects we've done with Energy Trust have been real easy and the way they're set up makes sense. It's easy to understand. So I don't really have any complaints or suggestions on how to improve. They work for us and they're easy to work with.

##### **Computers & electronics, Portland Metro Area**

Energy Trust comes up with some really nice short-term programs about 3-4 times a year. I don't believe we've taken advantage of but I think it's a nice thing for them to do.

## Terminology

**This section includes input on how respondents describe their business.**

Although most respondents wouldn't disagree they are an industrial business, it is not the term they use most frequently in describing their business. The term most often used was manufacturer. Those not manufacturing products tended to describe themselves as a distributor or simply by what they do: "We lease space".

Although some described themselves as being a "small" company, categorizing companies by a size descriptor did not seem that relevant or desirable.

### Respondent Quotes

#### **Misc. manufacturing, Portland Metro Area**

We're a manufacturer. I don't know how we'd be ranked—small or medium. I know we're not large. I guess since we're under 100 employees, that would be considered small.

#### **Computers & electronics, Portland Metro Area**

We're a manufacturer—we build our own product.

#### **Plastics, Willamette Valley**

We refer to ourselves as a manufacturer. We're small—well I don't want to say small—but our sales are about \$17-18 million a year.

#### **Wood products, Central Oregon**

We're definitely a manufacturing company. We make products. I guess the term small would be appropriate for us. I've worked at other manufacturing companies in Central Oregon that have several hundred employees. We only have 50 so we're on the smaller end of things.

#### **Transportation & aerospace, Southern Oregon**

We refer to ourselves as an aircraft manufacturer. For worldwide size, we're probably small but for where we're located we're a large employer.

#### **Wood products, Southern Oregon**

We're not a very large company. It's kind of hard to describe in terms of size. We have more than 10 people but less than 3,000. There's always somebody bigger and always somebody smaller so how do you put a number on it.

#### **Misc. manufacturing, Columbia Gorge**

We're a custom manufacturer.

#### **Computers & electronics, Portland Metro Area**

We're an industrial manufacturer.

#### **IV. Appendix**

**This appendix includes the following materials:**

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

**Energy Trust of Oregon  
Industrial Market Research Discussion Guide**

1. **Introduction and warm-up**
2. **Decision-making criteria, processes and priority of energy and energy saving**
  - a. **Decision-making criteria and processes**
    - Describe how energy decisions are made in your company.
    - Specifically, what are the criteria for energy efficiency projects?
    - Who's the decision-maker? Whose voice carries more weight—the technical/user or the financial executive? Who has veto power?
  - b. **Strategic position and priority of energy and energy saving**
    - Describe your company's position on energy and energy saving.
    - How important is energy saving at your company—is it a priority?
    - If the company is a local site with headquarters located elsewhere, ask respondent about local level energy support/policy vs. headquarter level.
3. **Experience and results of energy efficiency projects done to-date**
  - How would you describe the results of your EE projects: Have they been successful? What have the benefits been? Probe for financial, energy and non-energy benefits and relative significance of each. Probe for how results are measured.
  - How would you rate your company overall in terms of implementing energy efficiency projects? Probe for whether they perceive themselves to have "done a lot", "all they can" or "not much", etc.
  - When it comes to saving money through EE programs, what's more motivating in your company—energy efficiency or reducing energy waste?
  - Are you considering other EE projects? Have you considered installing renewable resources, like solar electric or solar water heating?
4. **Barriers to participation in energy efficiency programs**

**Note:** This section will begin with an open-ended question to allow respondents the opportunity to identify barriers in their own words and in their own order of importance. As respondents identify barriers, follow-up questions will be asked per the list below. If respondent does not voluntarily mention a barrier listed below, Brenda will ask about its relative significance.

  - a. **What factors, if any, inhibit your company from participation in energy efficiency programs? Any others?**
  - b. **Specific barriers and related follow-up questions:**
    1. **Lack of available capital to invest**
      - How likely would your company be to borrow money to do an energy efficiency project? Would increased availability of low interest loans increase the likelihood?
      - For projects that move forward, does your company typically self-capitalize, or is it borrowing the money on its own line of credit?

- Has your company ever worked with an Energy Services Company (ESCO) or leased equipment? If yes, what was your experience with this? If no, would your company ever consider working with an ESCO?
- 2. Inability of projects to meet the company's financial payback criteria**
    - Does your company have a hurdle rate/minimum payback period for energy projects? How does that compare with investment criteria for other projects? Have you ever moved forward with an efficiency project that exceeded your hurdle rate and what were the other benefits of that project that made the difference?
    - Do you use a lifecycle cost analysis for purchases you make? For what types of purchases would you complete this analysis?
  - 3. Lack of awareness of opportunities to save**
  - 4. Lack of technical expertise to design and complete projects**
  - 5. Lack of certainty that promised savings will be achieved**
  - 6. Lack of a clear decision-making path to proceed with EE projects**
- c. Other follow-up questions:** Some follow-up questions may apply to more than one barrier and will be asked when appropriate:
- When your company cuts its operating costs by reducing energy waste, do you have that money available for other projects or does it roll into a general fund?
  - If you have a budget call to make and you have an energy efficiency project as well as other projects in the queue—how do you decide?
- 5. Message testing for communication tools**
    - a. In your opinion, what's the most compelling reason for your company to pursue energy efficiency programs? Any others?
    - b. Specifically, how persuasive are each of the following messages in encouraging you to initiate energy efficiency projects at your company:
      - Benefits beyond saving money: Money savings are just the beginning—saving energy makes my business run better, more comfortable and increases worker productivity. When I save energy, I'm saving money and boosting my business at the same time.
      - Energy efficiency is a competitive edge for my business. Also, I can win points with my customers if I demonstrate that my company is using energy wisely and not wasting it. Using energy wisely is a good indicator of a well-run business.
      - Energy Trust pays me to save money.
      - I'm paying for Energy Trust services and incentives on my power bill and it's important to take advantage of it.
      - Energy Trust has technical expertise that can help me save energy and implement projects with existing staff.
      - Energy Trust makes it easy to save energy by providing free technical expertise that's worth thousands of dollars.
      - Renewable energy, like solar and biomass, can deliver rate stability for my business.

**6. Employee engagement and internal communication practices**

- How does your company communicate its energy goals and achievements to employees?
- How interested do employees seem?
- Does your company actively engage employees in identifying and reducing energy waste? If yes, how? If not, why?
- Do you have something like an energy team or a green team?

**7. Customer engagement and communication practices (pull/push)**

- To what extent do your customers request info about energy or environmental performance? How do you anticipate this changing in the future?
- Do you publish a corporate sustainability report or have some other way you proactively provide this info to customers and the public? Is energy efficiency included?

**8. Terms used to describe business:** When you describe your business, what do you call yourself? Manufacturing, industrial, small, heavy, large, assembly, distribution, others?

**9. Wrap-up**

- Do you have any 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



**Industrial Market Research  
Sample Pre-Letter Sent to Respondents**

12/2/2011

Respondent Name  
Respondent Title  
Company Name  
Company Address

Dear [Name of Respondent]:

Energy Trust would like your opinion on how we can best meet your energy efficiency needs. 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 503-459-4074, or [kim.crossman@energytrust.org](mailto:kim.crossman@energytrust.org). Thank you for your cooperation.

Sincerely,

Kim Crossman  
Industry & Agriculture Sector Lead

## Non-Completed Interviews

Energy Trust mailed pre-letters to 97 potential respondents. The goal was to complete 35 interviews, which was achieved. However, an effort was made to contact all 97 potential respondents and the following recaps the results of the non-completes.

- 1. Inaccurate contact information:** Of the 97 potential respondents, 26 were eliminated due to inaccurate contact information: phone number no longer in service, respondent no longer works for company and/or pre-letter was returned to Energy Trust. This represents about 27% of the list, which is a fairly high percentage and may indicate a need to update customer contact information.
- 2. Respondent declined interview:** Only 2 respondents declined to participate. One declined by sending an email to Kim Crossman and the other declined when contacted by Forrest Marketing. Both respondents were very gracious but said they were too busy to participate.
- 3. Other reasons for non-completes:** One respondent was eliminated because his company participated in the Commercial Sector focus group. Another respondent was eliminated because after being contacted by Forrest Marketing, the information he provided was deemed insufficient to be considered a completed interview.
- 4. Didn't return call:** The remaining non-completes simply did not return calls from Forrest Marketing within the timeframe of the study. However, it's important to note that once the goal of 35 interviews was achieved, efforts were no longer continued to reach these respondents.