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Final Report

Assessment of Energy Trust of Oregon's Contracting and Delivery Models

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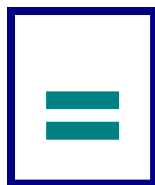


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ASSESSMENT OF ENERGY TRUST OF OREGON’S CONTRACTING AND DELIVERY MODELS



EXECUTIVE SUMMARY

In December 2006, Energy Trust of Oregon, Inc. (Energy Trust) contracted with Research Into Action, Inc. to conduct an assessment of the program delivery methods used for energy efficiency and renewable energy generation programs. The Research Into Action team conducted interviews with 47 people from January through March 2007. We also reviewed evaluations of Energy Trust programs conducted between 2003 and 2007, and analyzed information on program management and delivery costs collected by Energy Trust from a sample of energy efficiency program administrators.

Energy Trust had a variety of questions that they wanted addressed. Key among these was to assess the strengths and weakness of the Program Management Contractor (PMC) model used by Energy Trust to deliver its energy efficiency programs. We examined this model with interview contacts from a variety of perspectives: the model itself, administrative issues, experience with Energy Trust programs between 2002 and 2007, and alternative models. The 47 people we spoke with included: 18 Energy Trust staff; 5 PMCs; 9 program delivery contractors, trade allies, or allied technical analysis consultants; 7 stakeholder staff of the Oregon Public Utility Commission and the Northwest Power Planning Council; and 8 administrators of energy efficiency programs at other organizations outside of Oregon.

FINDINGS

The project began with Energy Trust staff indicating to the project team that Energy Trust primarily uses a PMC model for delivering energy efficiency programs and an internal model for delivering renewable energy programs. The PMC model, as described by Energy Trust, is one in which a prime contractor for program implementation and delivery contracts with Energy Trust and then engages subcontractors, as necessary or as defined by the contract, to support the PMC implementation services. The internal model used for renewable energy programs has Energy Trust staff conducting some implementation work and also contracting outside for services.

The results of this investigation reveal three models of program implementation in use across the United States: a *PMC model*, also called a turnkey contract, where the contractor is responsible for management, implementation, delivery, and for contracting with subcontractors; a *mixed model*, where the organization parcels out various components of program delivery and implementation, and manages the contractors; and the *internal model*, where internal staff are responsible for implementation and delivery, with minimal use of contractors (typically to provide highly-specified services, such as consulting engineers with expertise in a specific industry). Based on this research, Energy Trust appears to use the PMC and the mixed model, with no current evidence of application of the internal model.



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Across the country, the PMC model is primarily used for residential programs, where turnkey services have been found to be both readily available from contractors and more cost-efficient than mixed or internal models. At Energy Trust, the PMC model has been used for residential and nonresidential programs, as well as for pilot programs. The most complete application of the PMC model by Energy Trust is that for the contract with the Northwest Energy Efficiency Alliance (NEEA), where Energy Trust has only an advisory or partner role in program design. All other PMC programs operated by Energy Trust leave a major portion of the program design role in-house.

Most energy efficiency and renewable energy program administrators use a mixed model, with competitive procurement to hire third-party contractors to assist in implementing programs. The number of contractors used varies, as do their specific roles and responsibilities. Several use an internal model for large commercial and industrial customers, and one we spoke with uses an internal model for all sectors. In the internal models, very limited use of contractors is made and usually solely to provide support to internal staff for specialized areas.

The way the mixed model is organized in each organization typically evolves based on the market needs of the program, as well as the internal capability of the organization and the availability of contractors to carry out the different program functions. The presence of a variety of firms that offer services for residential programs and the lack of a similar variety for nonresidential programs contributes to the fact that the mixed models are common for nonresidential programs and often use local firms to provide the services needed to implement them.

All contacts were asked about their perceptions of the difference between the costs of using different types of delivery models. Typically, Energy Trust staff, stakeholders, and representatives of organizations in other regions all perceived the model they used or were familiar with as having the lowest program management and delivery costs. An analysis of costs and savings data collected by Energy Trust from several organizations suggests that program management and delivery costs of different models are not substantively different. However, the lack of a sufficient number of cases at a comparable level of detail makes it very difficult to draw firm conclusions.

The experiences of those involved with Energy Trust programs, as well as that of administrators of other energy efficiency programs, indicate that communication and coordination are the common challenges of a PMC model, in comparison to a mixed or an internal model. Aligning the contractors' efforts to the organization's goals is typically managed (though imperfectly) through the contracting process, while keeping the programs simple for trade allies and customers is a joint responsibility of the contractors and the administrator. However, communication is a major challenge with all models.

The degree of control the administrative organization desires for program design, day-to-day management, and customer service determines what roles are contracted and whether a PMC is used. While PMC models are widely used, Energy Trust and its stakeholders were generally



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unfamiliar with the varied approaches that result from a mixed model, and they were not aware that these approaches result from similar concerns for competitive procurement, limited staff, and bureaucracy.

CONCLUSIONS

Our team concluded that Energy Trust's use of the PMC model for energy efficiency program delivery has been appropriate, but not problem free; there have been communication problems and difficulty gaining PMC alignment with Energy Trust goals. These challenges should continue to be addressed.

Despite the wide variety of ways to use contractors, Energy Trust stakeholders have the perception that Energy Trust has developed a model that tends to use contractors in one way. This perception, which is shared by some of Energy Trust staff, reduces Energy Trust's ability to identify the optimum strategy for each market and sector. The strength of this approach is that it conveys to stakeholders that Energy Trust is being responsive to policy, legislative, and regulatory concerns to minimize the bureaucracy and staffing of Energy Trust. Given the potential for market change, Energy Trust would benefit by expanding the perception of stakeholders regarding its menu of options for program delivery and how a range of management approaches directly addresses stakeholder concerns.

Energy Trust management is aware of many future opportunities: potential increased expectations for savings delivery, potentially expanding markets, and a likely need to respond to the urgency of climate change. Energy Trust needs to have the flexibility to choose the best design for each program so that these opportunities can be met. Such program designs might use PMCs, but they might also use a combination of internal staff and contractor support in order to be most effective in the market. The renewable energy programs currently operated by Energy Trust demonstrate this type of market-based approach that will help it continue to be effective if and when the market conditions change. In all cases, the competitive procurement process already well in place will be important to ensure that cost efficiency is achieved.

RECOMMENDATIONS

To meet the needs of the future, we recommend that Energy Trust consider the following.

- 1. Discuss with stakeholders that the key component of their program approach is competitive procurement** (the PMC model for energy efficiency programs and the mixed model used for renewable energy programs). Competitive procurement is what ensures that Energy Trust is getting cost-efficient services and can be used in a variety of ways to obtain contractor services.
- 2. Discuss with stakeholders that the ultimate goal of Energy Trust is to develop energy efficiency and renewable energy generation capability in Oregon.** The PMC model does that well in some cases, but may not be the best choice in all instances. There



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is a need for Energy Trust to examine the market conditions for each program area and to ensure that the program delivery model used is optimum for developing the Oregon energy market.

- 3. Large industrial programs are generally operated by other organizations with a mixed or internal model.** The Production Efficiency (PE) program thus provides a good opportunity for Energy Trust to explore the appropriate delivery model. Begin by clearly determining the costs and benefits of each type of model for PE. Also, estimate the costs and benefits of a PMC, as compared to directly contracting with the technical firms that can provide support services, quality assurance, project development, and sales services. Key in this is considering the intangible costs and benefits, such as long-term relationships with customers and the relationships the PMC has established. A tool that could be very effective is a SWOT (strengths, weaknesses, opportunities, and threats) analysis.
- 4. Prior to re-bidding any program, incorporate into the program design and planning process a SWOT analysis of what the program might look like if implemented using an internal, mixed, or PMC model.** As part of this review, explore the type of control that is needed for program design, day-to-day management, customer relations, and quality assurance, and whether contract mechanisms can address these sufficiently. Incorporate those ideas in the RFP to ensure that the program design continues to respond to the market.



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1

INTRODUCTION

In December 2006, Energy Trust of Oregon, Inc. (Energy Trust) contracted with Research Into Action, Inc. to conduct an assessment of Energy Trust delivery mechanisms. This document reports the findings from that investigation. This introductory chapter provides the background for the research, discusses the methodology, and describes the contents of the report.

BACKGROUND

Energy Trust was formed as a result of Senate Bill 1149 of the 1999 Oregon Legislative Session (also known as the *Restructuring Bill*). The bill set in motion the development of a public purpose fund to support energy efficiency efforts for residential, commercial, and industrial customers of the two investor-owned electric utilities in the state: Portland General Electric (PGE) and Pacific Power (PacifiCorp). These utilities collect a 3% public purpose charge from their customers for the fund.

The law authorized the Oregon Public Utility Commission (OPUC) to direct some of these funds to a non-governmental entity for investment in cost-effective energy conservation, helping to pay the above-market costs of renewable energy resources and encouraging energy market transformation in Oregon. Energy Trust was organized for that purpose and in November 2001 entered into an agreement with the OPUC. Energy Trust began official operation in March 2002. A decoupling agreement between the OPUC and NW Natural Gas (02-634, September 12, 2002) led to the transfer of energy efficiency programs for gas customers to Energy Trust, and gas savings efforts began in 2003.

In December 2006, with more than four years of experience delivering energy savings and renewable energy generation, and with an increasing market for Energy Trust services, Energy Trust sought an assessment of its delivery mechanisms to determine how well its approach was working, and to assess whether Energy Trust was adequately positioned and organized to meet its growing market needs, as well as future challenges.

RESEARCH QUESTIONS

The project was initiated through a series of conversations between members of the Research Into Action assessment team and staff at Energy Trust. These discussions led to the identification of a primary research question, as well as secondary or supporting issues (all outlined in Appendix A). The primary research question focused on the organizational decisions that Energy Trust faces in 2007; the secondary questions raised issues and concerns to be addressed to help inform the answers to this primary query.



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Primary Research Question

The primary research question is multifaceted:

- ➔ Has Energy Trust of Oregon or the efficiency or renewables markets changed, or will they possibly change or need to change?
- ➔ What are the strengths and weaknesses of the existing delivery structures in light of the current market and potential future changes?
- ➔ Is Energy Trust well-positioned and structured to meet future challenges, or is there a need for a different type of delivery mechanism for any specific program or for Energy Trust generally?
 - Is there one solution (mode) for all programs, or are there many solutions (modes)?
 - If change is recommended, what should be the sequence and timing for making changes to program strategies?

The research team developed a methodology for addressing this research question.

Methodology

This project was designed to provide an objective and systematic assessment of Energy Trust's delivery model – one grounded in information gathered from those with knowledge of delivery models for energy efficiency and renewable energy programs. These individuals included stakeholders in Oregon (such as staff of the OPUC and the Northwest Power Planning Council), program contractors and trade allies, and administrators of other energy efficiency programs across the nation. We also reviewed Energy Trust evaluations to understand how customers and trade allies have responded to its delivery mechanisms over the past five years.

In addition, we reviewed an internal study of program management costs and a checklist on model selection included in the Management Audit conducted by TecMarket Works.¹

We attempted to interview all of the parties recommended by Energy Trust's Evaluation Manager. In calling, we found that most contacts were willing and able to allocate time to talk to us. One trade ally and one Energy Trust contractor never returned our phone calls, and one stakeholder deferred to a co-worker (also on the list) to speak for both of them. Table 1 displays the sample plan and number of completed interviews.

¹ Hall, Nick, Johna Roth, Carmen Best, and Rick Morgan. *A Management Audit of Energy Trust of Oregon*. Energy Trust of Oregon: Portland, Ore. January 2005.



Table 1: Sampling Plan

GROUPS	POPULATION	PLANNED SAMPLE	COMPLETED SAMPLE
Energy Trust Staff	20	15	18
Energy Trust Stakeholders	>10	7	5
Program Management Contractors (PMCs)	6	5	5
Program Delivery Contractors (PDCs)	6	6	5
Trade Allies and Allied Technical Analysis Consultants (ATACs)	~47	5	4
Utility Stakeholders	3	2	2
Other Organizations	>5	8	8
TOTAL		48	47

Interviews with Energy Trust staff began in late December 2006, in order to scope the project. Once a list of all potential interview contacts and questions had been developed, the remaining interviews were conducted between February 12 and March 22, 2007. The interviews took between 20 minutes and 1½ hours. Energy Trust staff were asked two questions to focus on the key themes of concern to them: the different delivery models being used by Energy Trust and their expectations for the study. Other contacts were asked a more diverse set of questions, structured around the research issues outlined in Appendix A. Copies of the interview guides for each of the different groups are provided in Appendix B, and a list of contacts interviewed is provided in Appendix C.

Analysis

The data for this study are all qualitative, other than the internal cost study done by Energy Trust. The interviews were coded using a qualitative software tool *NVivo7*.² The coding process allowed the analyst to associate without restriction different comments in the interview with themes, so one comment might be associated with several pertinent themes, facilitating the analysis process by bringing these comments into review for each.

In reporting the results, the reader should note that we have combined the responses of utility stakeholders with those from other stakeholders, and the responses of PDCs and ATACs with those of other trade allies. This was done both in the questions asked and in the analysis phase, because their areas of concern are similar and because we wanted to protect the anonymity of members of each of these groups.

² Qualitative Software Research International, <http://www.qsrinternational.com>.



A FEW COMMENTS ABOUT TERMS

As energy efficiency programs have moved from implementation solely by utilities to implementation by public benefits organizations, a lexicon has evolved for describing the roles of the process. The organization that administers these energy efficiency programs is often called the *administrator*; this could be a utility, a public utilities commission, an agency, or a non-profit organization. The organization that implements the program in the field with customers is usually called the *implementer*; this can be the administrator or it can be contractors to the administrator. We use those terms here.

REPORT ORGANIZATION

This report has five chapters following this introductory chapter. Chapter 2 discusses perceptions and views about the PMC model of program implementation, Chapter 3 discusses views on administrative issues associated with operating efficiency programs, and Chapter 4 presents views on contacts' experiences with program implementation, and is followed in Chapter 5 by views on non-PMC program models. Finally, Chapter 6 presents our conclusions and recommendations relative to the primary research questions.



2

THE PROGRAM MANAGEMENT CONTRACTOR (PMC) MODEL

This section presents results from discussions with different contacts on the program management contractor (PMC) approach to program implementation. The issues explored were those found in Questions 2, 3, and 6 from the *Secondary/Supporting Research Questions* in Appendix A. Information from the *Other Organizations* survey (found in Appendix B) is also included, relative to these organizations' approaches to implementing programs.

INTRODUCTION

Energy Trust is the administrator for a portion of the public benefits funds in Oregon. It implements most of its energy efficiency programs using a PMC. As Energy Trust has defined this approach, a competitive solicitation is offered to invite firms to bid to provide specific program implementation services to Energy Trust. The contractors respond to a request for proposals (RFP) that provides a broad outline of the program to be implemented. Upon selection, the contractor is asked to finalize the program design with Energy Trust prior to its implementation. Later RFPs have included less program design work and have focused primarily on implementation.

Energy Trust began using the PMC approach for a variety of reasons. The most important were to:

- Ensure that the programs be operational as quickly as possible; and
- Address concerns on the part of stakeholders that the administrative burden of Energy Trust be minimized, while assuring a competitive procurement process.

Energy Trust has additional objectives beyond just electric energy efficiency; they are also seeking natural gas savings, market transformation, and renewable energy objectives. Energy Trust staff have found these other objectives more difficult to integrate and incorporate in the PMC contracts.

PERCEPTIONS OF THE PMC MODEL

The various contacts have a range of perceptions about the PMC model.

Stakeholders

Stakeholders generally have confidence in the model because they see it working and they see their goals of competitive procurement and limited administration for Energy Trust being fulfilled. They see the PMC model as a simple mechanism and a way to access capability from



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other parts of the country. Also, the PMC model permits Energy Trust to carefully specify what type of program they want to run and to get that program implemented using a competitive process. The comments from one stakeholder also reflects the sentiments of others:

- ➔ *“I think when you sort of step back and ask the question of, “Using this model is the Trust meeting its energy savings goal?” And the answer to that has been, “Yes.” And if I look at it and say, “Are they meeting or beating the benchmark metrics in relationship to administrative costs for programs that were established by the Oregon PUC?” it’s a resounding yes. In fact, they’re probably 40% under the benchmark metrics for administrative cost.”*

Stakeholders have noticed some of the challenges with the PMC model: for example, poor communications among Energy Trust, PMCs, PDCs, and trade allies, as well as difficult transitions when PMCs change due to the competitive procurement process (sometimes leading to a new PMC). But these issues seem of little concern to most stakeholders. In general, they see the PMC process as one that brings in outside capability and expertise without a lot of on-the-job training required.

Energy Trust Staff

Energy Trust staff share many of the same perceptions of the PMC model as stakeholders. In particular, they believe that the PMC model meets the expectations of the stakeholders relative to program management, delivery costs, and competitive procurement. They also noted that it was very important to meet the stakeholders’ expectations and conditions. They also thought that the PMC model was useful when Energy Trust was getting started and programs had to get into the field rapidly. Energy Trust staff also shared stakeholders’ perception that PMCs were able to bring staff from other locales to Oregon, and that the PMC model was therefore scaleable, with the ability to ramp up and down as needed:

- ➔ *“A good thing about the PMC model is that it gives the Trust access to expertise that they don’t have in-house, and taking that expertise in-house would increase the size of the organization. The PMCs also have experience and decades of relationships built up. The Trust would not be able to hire some of them, even if it wanted, because they are used to being independent.”*

Energy Trust staff, however, are concerned about communication difficulties: in particular, the lack of an Energy Trust connection to trade allies and customers, as well as the feeling that trade allies and customers may be sensing the same absence of communication with Energy Trust. Energy Trust has also experienced communication problems affecting achievement of some of their goals for natural gas savings, coordination with market transformation initiatives of the Northwest Energy Efficiency Alliance (NEEA), and coordination between energy efficiency and renewable energy programs.



These communication concerns became particularly obvious when Energy Trust's industrial program (Production Efficiency – PE) had committed more funds than were available for a specific year. The problem occurred quite suddenly, from the perspective of Energy Trust, and could only be addressed by reducing funds available across all programs for a period of time. As discussed in Chapter 4, this led to a great deal of stress for trade allies and customers, some of which continues today.

Energy Trust staff identified a lack of communication between Energy Trust and the PMCs as the root of many of their problems. The process for integrating PMC funding commitments and using that in forecasting was not well established, so Energy Trust was not able to anticipate the problem. Nor was there a way to manage the incentive dollars, a problem now addressed with a reservation system:

- ➔ *“We have had trouble getting contractors to communicate back to us as to their status, for the purpose of forecasting. The contract is now for the calendar year, but was originally a program-specific contract year; some of the contractors do not pay much attention to budgeting and planning in the way we need them to.”*

Other concerns have arisen in managing the programs. For instance, Energy Trust staff noted that it had been difficult to meet with the PMCs to do planning: in one case, it took two months to schedule meetings with some of the PMCs. Energy Trust staff have also found limited communication across the programs by the PMCs. For example, referrals to the renewable energy programs from PMCs for energy efficiency programs are rare, and NEEA has had difficulty gaining support to coordinate their relationship-focused efforts with the commercial and industrial sector PMCs.

The PMC contracts have been limited to two years, with an option for a third year, after which, they are re-bid. This has sometimes resulted in new contractors, which temporarily breaks the continuity of the program with customers and trade allies. It is difficult for Energy Trust staff to know whether these changes are a problem for customers and trade allies, as the contractor, not Energy Trust, has the day-to-day contacts with these actors, and Energy Trust has no direct way to know what is occurring in those relationships:

- ➔ *“The PMC should (document customer contact), but they have no incentive to. Their incentive is to bring in cheap projects, not build up long-term relationships.”*
- ➔ *“Large industrial customers have expressed the desire to have more direct contact with the sector manager. They want to think they are being heard by the decision-makers, where the buck stops.”*
- ➔ *“There was one example in which the Trust wanted a specific message delivered to a customer class. The PMC changed the message in their delivery. This could have been an issue with this particular PMC, but it is more likely with a PMC model than with internal program delivery.”*



The sources of these communication and coordination problems are difficult to tease out. Energy Trust staff note that it could be that some PMCs approach the business in different ways. There appear to be less communication issues with some PMCs than with others. Some Energy Trust managers have had less difficulty with communication than others, and yet several believe this is a flaw in the PMC model: the incentive to get savings leads to a singular focus on specific types of projects and limits their ability to see other opportunities as important.

PMCs

The PMCs tend to be the most positive about the PMC model, generally, and they reveal a more nuanced view of what a PMC could do. PMCs note that they spend a lot of time working out issues with Energy Trust staff. They typically perceive the value of the PMC model as one *“that stays away from the utility model where everything was complicated.”* This perception – that a PMC is providing something different from a utility program – is common among the PMCs. They see themselves as flexible and able to respond quickly to changing conditions in the marketplace.

The more nuanced view of a PMC approach, provided by the PMCs, is that many of their client utilities and public benefits organizations act more as contract managers rather than program managers. Energy Trust is more involved in program design, which leads to more communication requirements. Another commented that the approach has changed over the last five years, with more coordination and communication between contractors and other organizations now required than at the outset.

At the same time, Energy Trust has become more responsive and involved because they have increased their internal staff and capabilities. Two of the PMCs specifically noted that increased Energy Trust staff had improved Energy Trust’s communication and coordination:

- ➔ *“Now the Trust has increased its staffing, and has better data tracking and better communications about what is expected from the PMCs and when.”*

Contracts were also mentioned as a way Energy Trust affects the relationship between the PMCs and itself. One PMC noted that Energy Trust changed the way it manages the PMCs by adding performance-based incentives, based primarily on energy savings. From the PMC point-of-view, this changed the relationship between Energy Trust and the PMC:

- ➔ *“So, it’s not a disaster, it’s not a dramatic change – it is a change whereby the PMCs are actually incentivized to push savings through a pipeline as much as they can in order to get the performance compensation.”*

The PMCs generally look at their relationship with Energy Trust as positive and compare it as similar to other contractual arrangements they have with other organizations and utilities:

- ➔ *“These are just quirks along the way. Other models, you get a different set of problems.”*



Trade Allies and PDCs

Trade allies and the PDCs don't see much difference between the PMC model and the previous utility model. They don't see the PMC approach as particularly good or particularly bad. Some like it more than others, and some are concerned about the additional overhead burden that may occur with a PMC. Since they see people who have worked for utilities now working for the PMCs or Energy Trust, they don't perceive a significant difference. In fact, they often perceive Energy Trust as just another government organization:

- ➔ *“Government has the tendency to overkill – terms and conditions that no one reads. It’s phenomenal. Nobody cares about all this. Saving energy and money, lowering operating costs – that’s all they care about.”*

The trade allies, in particular, are typically local and regional businesses. They see the PMC firms as large firms seeking profit. In a similar vein, trade allies wonder why Energy Trust is located downtown in a high-rise office building:

- ➔ *“No advantage personally to having Lockheed or SAIC there; if that whole group worked for the ETO directly, it would be the same to me. What’s the difference? Profit for Lockheed. If there’s no cost advantage, why do it? I wonder – all the folks in existing buildings have to answer to Lockheed.”*

Changing contractors and program managers has been a challenge for trade allies and PDCs. When the industrial PMC was purchased by another company, the PDCs waited months for their new contracts. Three of four did not have contracts after more than a year (January 2006 to March 2007). One noted that they have seen several program managers at Energy Trust, and they were happy that it seemed Energy Trust *“was now getting the right people with the right skills that trust the contractors,”* largely because the new program manager was actually engaged and actively communicating with the trade allies and PDCs.

Communication is an area where PDCs and trade allies feel Energy Trust could do a much better job. As noted above, the trade allies and PDCs do not perceive the Energy Trust PMC model as much different from previous approaches; they have experienced some of the same people and some of the same communication challenges before:

- ➔ *“There could be better communication between PMCs and ETO Program Managers. More communication on a regular basis is needed.”*
- ➔ *“Maintain an open line of communication/mutual communication on development and implementation of these programs... The contractors are the ones in front of the end-user; they are the face to the public. Develop a model of ideas/suggestions/rebates whatever....but make sure you keep all the parties involved in the entire process.”*



Other Organizations

Other organizations have more nuanced views of PMCs. They think of the use of PMCs, not as a uniform approach, as Energy Trust does, but rather as a toolkit of possible uses for third-party contractors to help implement their programs. In some cases, they hire a PMC or a “turn-key” contractor who delivers a whole program; in other cases, they hire several contractors to do a variety of different pieces of a program. In one case, an organization began with the use of third-parties for some programs, but found that the contractor did not deliver as well as the organization thought they could do with their own staff. Their experience points to an issue that other organizations also are concerned about when they hire third parties: who does the third-party contractor represent?

- ➔ *“The PMC had a hard time not representing their own business. They have an affiliate that’s an ESCO, which created at least the appearance of a conflict for delivering a C&I [commercial and industrial] program. The question is: what hat are they wearing? The primary issue is that they were representing themselves, not our organization – the model encourages it, whether or not it would always happen.”*

One solution to making sure that the customers don’t perceive that there is a third party involved is by having the contractor staff wear uniforms and logos for the energy organization. This also may set in the minds of contractor staff members that the energy organization is the lead:

- ➔ *“So, we hope that it remains kind of seamless. We want them dressed in our logo, where they wear our shirts, or jackets, whatever; they go out with our IDs on. For the most part, they’re representing us.”*

One of the organizations that conducts much of its administrative services in-house, but uses contractors for field work and customer contacts, noted that they were considering using third parties for administrative services, such as data-tracking and rebate processing, because changes were difficult for their own administrative services to implement. However, the contact also noted that it may just be a thought that “*the grass is greener on the other side,*” rather than a better solution.

One of the contacts noted that third parties are particularly good for “*getting lots of savings fast,*” but not necessarily good for having a sustainable presence in the market. He thought that their current regulatory model on annual cycles led him to use contractors. However, with global warming and the long-term need for sustainable energy efficiency programs, there might now be a need for a different approach.

Another issue concerns sectors. As noted above, there is a need to demonstrate a connection to the energy organization when using contractors. Yet for small commercial and residential sectors, it may be easier to use third parties than for larger customers:



- *“With residential and small C&I, you can contract out most of the work and maintain minimal internal staff. With large customers, you need more internal staff, including quality engineers, because of the complexity of the jobs.”*

The contact noted that to address this, they have internal staff oversee projects, use external technical experts for actual design, and hire external engineers to do a detailed evaluation of a random sample of projects. This results in *“two sets of eyes”* on the projects. This approach uses both external and internal resources and provides a way to manage the quality of the work and manage the risk, although it may be more costly.

At the same time, one organization that recently increased its capability after ten years of not doing much energy efficiency investment found that they needed to use a great deal of external technical ability because they did not have it in-house. They found *“some very strong firms”* available to work with their customers on large C&I projects. However, this led to multiple contractors rather than a single PMC.

One contact noted that for years they had resistance from internal staff over how to address lighting in residential new construction. The staff would say the *“you just can’t interest builders in these things,”* then, when it was a simple matter of having to get the savings from electrical lighting, or writing residential lighting off as *“done,”* suddenly the staff became more motivated and found ways to reach the builders. So, the way the problem is stated is key.

At another organization, the issue is different. They have been using contractors for residential program implementation, but with natural gas prices increasing, they are wondering if the PMC approach is working very well. They now see natural gas energy efficiency as a long-term market and, as another contact noted, a long-term market may not best be served by contractor implementation. What these organizations are concerned about with contractors is that they will say: *“This is a contract and we’ll fulfill it, and then we’ll move on.”*

Long-term sustainability, customer relations, and technical expertise are the themes that emerge from discussions with these organizations. In the case of one of the other organizations, new commercial construction has been found to be particularly well suited to PMCs, because the process of working with an owner and their design team takes months and years, and requires technical skills, as well as relationship skills, as it is *“a customer-specific, not off-the-shelf solution.”* The energy organization just has to know that the process is happening and track progress.

SUMMARY

The perceptions of the PMC model from the perspective of Energy Trust staff, stakeholders, PMCs, trade allies, and other organizations are not consistent. Energy Trust staff and stakeholders tend to have a similar view: using PMCs is what enables Energy Trust to have competitive procurement, low program management and delivery costs, and to use the market.



Trade allies tend to see little difference between previous programs run by utilities or those now run by PMCs. They see similar faces in each of the organizations and therefore see no difference; they mainly just want a consistent process – one that does not change.

Other organizations typically don't think about using PMCs or internal staff. They think about how to use third-party contractors to do either more or less of a program. In some cases, they think of PMCs or turn-key contractors as appropriate and, in other cases, multiple contractors for different components of a program. None of the other organizations uses a single delivery model for implementation of their programs; all use a variety of models that combine internal staff skills with competitively-procured services from third parties.



3

ADMINISTRATIVE ISSUES

This section presents results from discussions with different contacts on the administrative aspects of different delivery mechanisms. The issues explored were those found in Questions 2, 3, 4, and 5 from the *Secondary/Supporting Research Questions* in Appendix A. Information from the *Other Organizations* survey (found in Appendix B) is also included, relative to these organizations' approaches to implementing programs.

INTRODUCTION

When programs are administered and implemented, there are activities and associated costs in addition to the cost of the incentives for the delivered savings. These activities can be implemented by the administrator or the implementer, but affect the total cost of program delivery. Some of these activities cut across multiple programs and are managed by the administrator, some are program-specific, and some are managed by either the administrator or the implementer.

Administrative costs are one component of program management and delivery; other components of program management and delivery costs include management, marketing, and communication. The specific items that comprise administrative costs are clearly defined for Energy Trust and are not necessarily defined in a similar manner for other organizations. To enable some comparison, an internal analysis at Energy Trust (shown in Figure 1) combined all program management and delivery costs attributable to Energy Trust and compared those to program management and delivery costs for the PMCs. The analysis shows that in 2006, Energy Trust allocated 57% of total costs for incentives, 28% for PMC program management, and 15% for internal program management. Thus, 43% of total program costs were for program management and delivery.

A comparison with four other public benefits organizations could not be done at the same level of detail, but all program management and delivery costs could be compared to incentive costs. These results are shown in Figure 2. One organization, Energy Trust, uses a PMC model; a second relies largely on internal staff for program implementation. And the other two organizations use mixed contracting arrangements in which some services are provided by contractors and some by internal staff, depending on the program. It is important to note that since there are only four organizations represented here, it is not possible to draw any generalizations about the different types of administrative structures. It does appear, however, that the program management costs' to incentive costs' proportions are quite similar and any differences cannot be assigned to a specific type of method used for delivery.



Figure 1: Energy Trust Costs

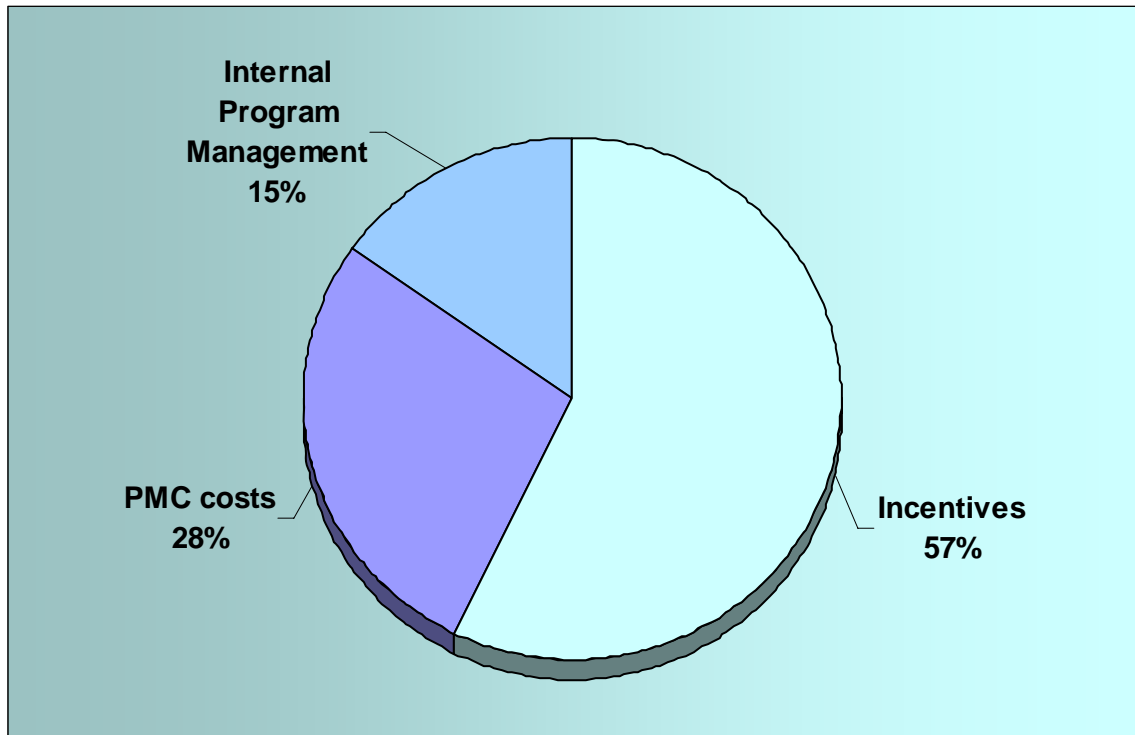
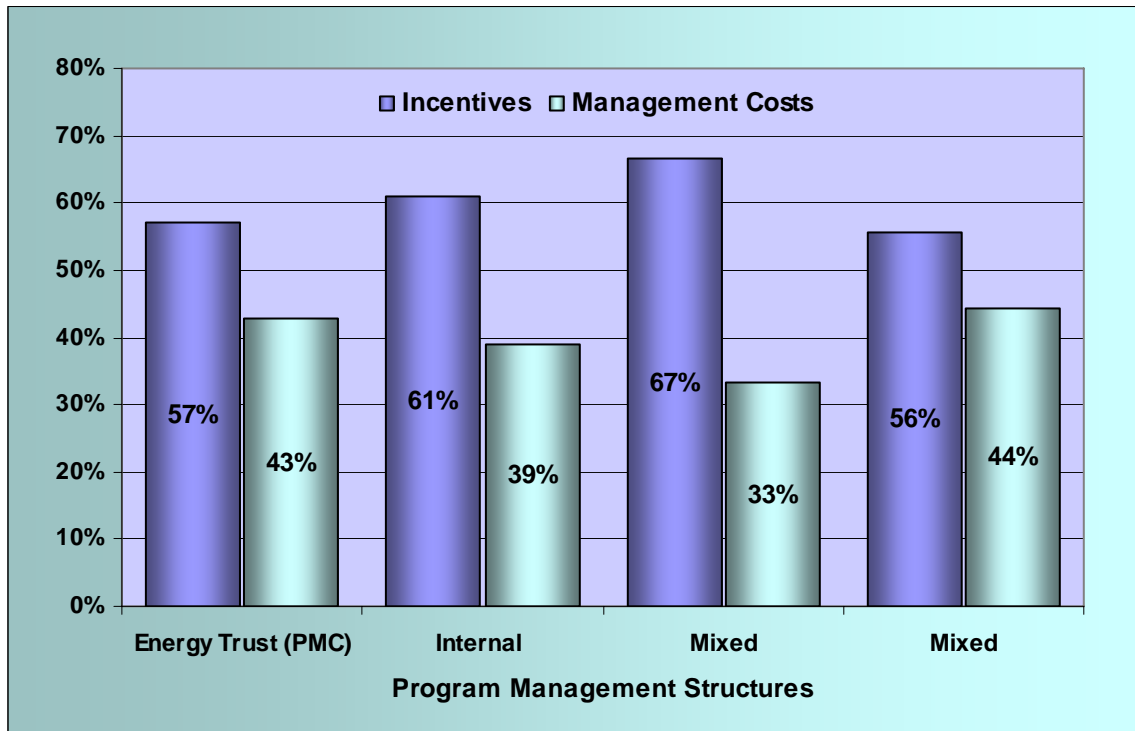
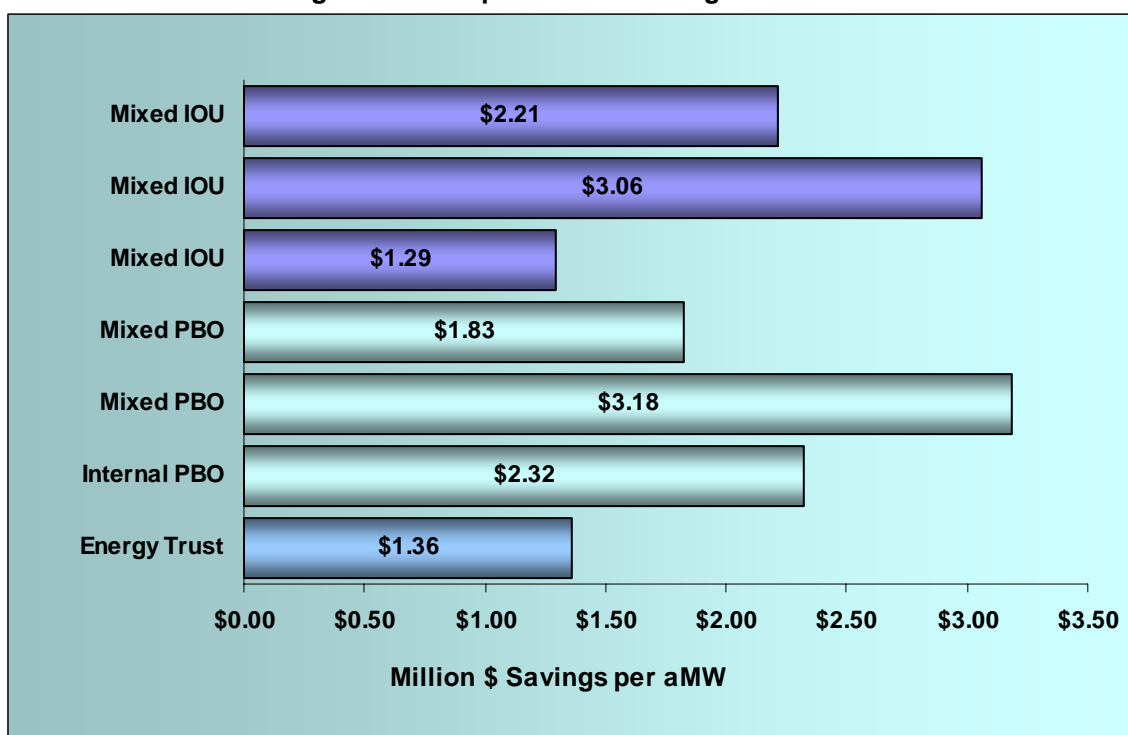


Figure 2: Comparison of Incentives and Costs by Program Management Structure



Another way of looking at program management and delivery costs is to normalize the costs based on savings obtained. Figure 3 shows the cost per average megawatt (aMW) of the electric savings obtained for Energy Trust, based on their total expenditures – plus those for the three public benefit organizations (PBOs) and three investor-owned utilities (IOUs) running mixed-program delivery models. This figure suggests that Energy Trust has nearly the lowest cost per aMW of any of these organizations. However, this low cost largely reflects the low cost of energy (true for all three organizations with average cost of savings of less than \$2 million/aMW) relative to the other organizations (all four of which are located in the Northeast). The low cost of energy keeps the cost of savings low due to the lower cost-effectiveness threshold, and thus an inability to justify investment in higher-cost measures.

Figure 3: Cost per aMW of Savings Delivered



Though comparisons can be made, making direct comparisons between organizations is very difficult due to the different ways that they can track and report their costs. It is even more difficult to obtain a sufficient number of cases to draw reliable conclusions about the costs of different types of delivery models, since organizations do not tend to use single delivery models, but prefer instead to use mixed models as needs suggest. Therefore, to provide additional information on how to think about administrative issues, our team examined perceptions of the differences between the PMC model and other approaches to program administration and implementation in our conversations with stakeholders, Energy Trust staff, trade allies, PDCs, PMCs, and other organizations.



PERCEPTIONS OF ADMINISTRATIVE ISSUES

The different contacts revealed a range of views on the differences in administrative issues for in-house and PMC delivery models.

Stakeholders

Stakeholders had an overriding expectation that Energy Trust would minimize its administrative costs. Some had the perception that in-house implementation would be more expensive than PMC and others thought that PMC implementation would be the most expensive. One had the perception that Energy Trust *“could be 40% below the benchmarks for administrative costs.”* Others were looking for someone to do the research and tell them.

Of substantial importance to stakeholders was the number of staff members employed by Energy Trust. In particular, stakeholders believed that expectations of the legislature, regulators, and large customers requires the staff to be limited:

- ➔ *“I think the general public perception is that bureaucracies tend to be bloated... The perception that they are lean and mean is important, even though they may have ancillary contractors.”*

Yet, none of the stakeholders referenced a specific number, percent, or document. It was primarily a matter of perception. One stakeholder commented that while only observing Energy Trust for about a half year, this person had learned of the sensitivity of the administrative cost issues through a conversation that he had internally about Energy Trust:

- ➔ *“As we were looking at budgets, even knowing that they [Energy Trust] were looking at the head count and looking at the delivery model caused some conversation.”*

Stakeholders perceived the PMC model as a good way to address the need for limited staffing. They saw contracting as having the benefit of being competitive and fair, as a way to *“get the market going,”* and to get the best implementer. One noted that this seemed missing in the implementation of energy efficiency programs by utilities.

The other area of administration commented on by stakeholders was marketing. Although only two commented, one noted that the Energy Trust brand was important for any PMC, especially in a re-bid situation, and the other wondered if the brand was now well known enough so that Energy Trust could use less mass marketing.

Stakeholders, even those on the Board of Energy Trust, generally reported that the current model met their expectations for administration and they continue to see low staffing, limited bureaucracy, and low administrative costs as an important issues.



Energy Trust Staff

Administrative issues are of great concern to Energy Trust staff. As the administrators for the portfolio, they are directly concerned with the administrative activities of the programs. And because of this focus and their knowledge of stakeholders' concerns, Energy Trust is constantly seeking to balance the needs for administrative services and the costs of those services relative to the direct expenses for the program.

Energy Trust staff, like stakeholders, are uncertain of the relative administrative costs portion of program management costs for in-house delivery of programs, as compared to PMC delivery of programs. Some staff are convinced it would cost more to implement the programs internally, and others are convinced that some programs could be implemented less expensively in-house.

The internal analysis that resulted in the figures shown above also examined the differences by program and sector, and found that the program management and delivery costs were lower for the industrial sector (30% of total program costs) than for the residential (43%) or commercial (47%) sectors. Energy Trust staff attributed the differences to the number of transactions involved in installing energy efficiency measures: with the fewest transactions occurring in the industrial sector and the most transactions in the residential sector. The renewable programs, which are run using internal staff, with some support contractors, were not included in the data collected by Energy Trust for the cost analysis, so there is no direct comparison as to how Energy Trust operates a program using a mixed or internal model versus with a PMC. However, staff perception is that the renewables programs have low program management and delivery costs.

Staff respect the skills of the PMC administering the PE program, yet believe they could easily assume the role because the PMC involvement is modest relative to the program, transactions are limited, and some of the industrial customers have explicitly indicated an interest in direct contact with Energy Trust. However, the technical skills of the PMC might be difficult to replace with internal staff and, therefore, they are uncertain what to do.

The drivers for program management and delivery costs that concern Energy Trust are data management, marketing, staff size and human resources (especially if more programs were run by internal staff), and the contracting process.

Data Management

Data management has been a major concern for Energy Trust staff and was the category with the second most comments from this group. Data are important for tracking progress, reporting, planning, forecasting, and evaluation. At the same time, there were a variety of perceptions about data management, perhaps depending on the position one has in the organization. Some felt that the data is mainly needed for evaluation and that it increases the cost of this process. Others saw it as part of program management and thought that as long as the program managers know what was going on, that is good. Others saw it as the main job of Energy Trust:



- *“Data is the beast that’s going to strangle this organization someday. There are data demands from many sources, and different types of data. We are a data-producing organization. We don’t talk about how businesses use energy, or how architects design, we talk about data. And that makes sense, because it’s our key success criterion.”*

The root of the data management challenge begins with the fact that each of the PMCs has their own data systems, from which information is then transferred into the Energy Trust system. The data systems are expensive and complicated. The current system was, until recently, slow and difficult for PMCs to use and, as a result, some of the PMCs just did not enter information into the Energy Trust database. Additionally, there were many errors and too many data fields, and the system became cumbersome. Some PMCs were reliable and good at tracking and providing data, while others were not, and Energy Trust staff found it difficult to get the PMCs to change. Contract language only goes so far; although, Energy Trust requires contractors to use its database, some PMCs are reluctant to do so.

During 2006, staff undertook a major effort to improve the data systems. Energy Trust hired new people with different skills and substantially reduced the number of data fields that need to be maintained. The situation appears to be improving; however, staff noted that data integrity problems might not have occurred or continued to persist were internal staff charged with entering the data.

Staff Size

Energy Trust staff are clear that the policy perspective of stakeholders is for it to have a limited staff. One staff member commented that some Board members initially stated the entire organization should be no more than ten people. Over time, this has changed, as the Board realized that programs need to be designed, tracked, managed, and evaluated, and that relationships with stakeholders need staff to hold them together. Thus, Energy Trust has grown to over 45 FTE (Full Time Equivalent) positions.

Energy Trust staff made statements that indicate they believe that the PMC model provides a way to get access to qualified and capable personnel quickly and with few human resource risks or costs to the organization. Energy Trust staff members commented that when Energy Trust began, it would have been very difficult to get qualified personnel to work for Energy Trust and operate programs. Because the PMCs have been active and have hired and trained employees, more Energy Trust staff members now believe that finding staff would not be difficult if programs were operated internally. However, there is the perception that Energy Trust may have lower salary levels than PMCs and, therefore, Energy Trust would have difficulty attracting experienced people. Balancing this perspective is the number of Energy Trust staff members who left consulting careers to work at Energy Trust. These include the executive director, at least two directors, and several other staff members.



Marketing

Marketing has been shared by Energy Trust and the PMCs. Some Energy Trust staff members perceive that marketing tends to take more effort with PMCs – for example, sending materials back and forth for approvals and reviews – a view shared by the PMCs. Other staff members noted that some PMCs are very sophisticated, which alleviates Energy Trust of the need to work on some marketing tasks; this is especially true for the residential programs. There are activities several feel could be done internally that might improve the branding – design in particular – but that is currently not the system in place. There are thus two points of view within Energy Trust: those that feel the PMCs are doing an excellent job see this as a benefit of the PMC model; those who feel the process is time-consuming and results in products that are inconsistent with Energy Trust standards would like to modify the approach so that Energy Trust has more involvement in the design process.

The most significant marketing activities are the call centers and the Web site, which are managed by Energy Trust, although one PMC also manages a separate call center. The PMCs develop their program materials, and Energy Trust manages the process of getting it onto the Web site. There is a central call center that routes calls to the PMCs. This has some inefficiency, and it takes about one day a week for a staff person to address coordination issues and ensure that information is being routed correctly.

Contracting Process

The contracting process is one aspect of administrative activities that Energy Trust staff believe would be much different if they did not use a PMC model. The process of contracting with a PMC takes a long time; for example, it typically takes eight months from RFP design to contract signing, and this process is currently repeated every two to three years, as the contract terms are typically for two years, with an option for a third:

- ➔ *“The initial two-year contract no longer mentions energy goals – that is defined on an annual basis, which is very involved and time-consuming. The process means that every two to three years, an RFP must be written and issued, followed by interviewing candidates, selecting a winner, developing an umbrella contract agreement, amending the contract in January to make it coincide with Energy Trust’s annual cycle, and then amending it the following January.”*

There are other challenges with contractors, as one staff member said:

- ➔ *“You have more say-so with your own employees. It’s extra work getting the PMCs to understand what we want. Sometimes they refuse requests – for example, one large firm refused to change their billing. Smaller firms are more flexible.”*

Thus, the size of the PMC firm, the length of the contract, and many other factors affect how difficult and protracted the contracting process becomes. Given that Energy Trust has worked



with the PMC model for the delivery of many programs, and has set certain structures and legal requirements in place, it is not clear what really would change in the contracting process if delivery shifted to more internal management, while retaining some contractors for technical support. Energy Trust has three full-time equivalent staff in their legal department. The legal requirements that necessitate this number of FTE might be reduced if the approach to contractors were different, yet if these requirements were retained, then the need for three FTE might remain or even increase in a different model.

Summary

Energy Trust staff perceive their current delivery approach as effective and efficient. They have concerns about some of the administrative activities and about which programs are best served by a PMC versus internal staff.

PMCs

Not surprisingly, the PMCs believe that they can do even more administrative activities than they do now, and some see duplication across Energy Trust and the PMCs. A concern for some PMCs has been the number of times the forms have had to change. They report that the forms may have improved, but they are getting more complicated. This is all part of the process of Energy Trust being very involved in program management, as opposed to primarily contract management; contract management is the type of management that PMCs are used to.

The PMCs report mixed views on the data management process, some finding it more burdensome than at other organizations they work for, and others reporting the burden to be about the same. One said it was burdensome, “*but at least they use the data,*” while another said, “*They could use the data more; I need more from them.*”

- ➔ *“The Energy Trust has a hard time using data for more than estimating savings and cutting a check – they aren’t using it to look upstream, for planning, for such things as estimating incremental costs – a program management perspective. But this is probably typical. Most other organizations also don’t look at data from a program management perspective.”*

Another commented on the types of challenges they have had with the database in the past.

- ➔ *“For a while, the Energy Trust data system had the same data entry panel for a new home as for a clothes washer. A home requires much more detail than a clothes washer, so for clothes washers what should have taken 60-90 seconds per transaction was taking 7-12 minutes.”*

One of the PMCs called Energy Trust contracting “fair and equitable.” Another contractor noted that there have been changes by moving to a performance incentive, which is the only source of profit for the PMCs. The cost-plus-fee with a performance incentive makes it very difficult to be



innovative and responsive to new ideas; in contrast, a time and materials contract might be better for innovation and new ideas. There are lots of contract changes, some that result from changes at Energy Trust. The good news is that these changes can keep the contract responsive to the market conditions; the bad news is that these changes increase the uncertainty for the PMC. On the other hand, another contact noted that Energy Trust's contracting process is much quicker than contracting in most organizations.

The PMCs generally seem satisfied with the administrative processes.

Trade Allies

The trade allies and PDCs have limited experience with administrative issues. One of the PDCs noted that the data management issues have been challenging because the system did not work well. In particular, the trade ally thought that the data-tracking system had affected the tracking of progress for the programs, resulting in Energy Trust running out of money and having to stop all work. This situation caused problems for the trade allies and the PDCs, and is discussed in more detail in the next chapter on the program implementation experience.

Two other trade allies commented on marketing activities, one indicating that the current level of marketing is not effectively reaching many customers:

→ *“They are not getting out and reaching out to enough end-users in the marketplace. Not enough people know about them.”*

Another commented that the website is still too complicated and not simple enough, feeling it should be *“at an 8th grade level. Terms like ‘participant’ mean nothing to customers who want to participate.”*

The issue of marketing seems to be the most important administrative issue for trade allies and PDCs, and one that, if addressed by Energy Trust, would likely increase Energy Trust's program management and delivery costs.

Other Organizations

The other organizations tend to see their own approach as the most cost-efficient compared to that of other entities. None of the contacts indicated they had any specific data, but tended to refer to specific details they had noticed: the salaries paid to PMC staff compared to internal staff; the likelihood of duplicative systems when using PMCs; the overhead requirements of PMCs; the need to have full-time staff in-house; and the challenges of hiring staff, etc. In most cases, the solution each organization currently uses was believed by it to be tested by experience and found to be the most effective.

Whether a public benefits organization or an Investor Owned Utility (IOU), the contacts at other organizations all indicated they were under pressure to keep their staff numbers and administrative costs low. One of the public benefits organizations has a 7% cap on



administrative costs. One of the IOUs noted that their staff costs are just 9% of total costs and that they “go out to bid every two to three years to reduce costs by forcing vendors to be competitive.”

Some organizations noted that the decision to use contractors or internal staff is based on the type of program being delivered. The organization using internal staff felt that they had poor control over the technical quality and customer relations with the PMC they had hired for one program, and thus were reluctant to do so again. The remaining organizations used mixed methods. Two noted that markets with high demand should be implemented by internal staff, while markets with limited demand should be implemented by contractors. However, one of these organizations uses internal staff to implement renewable energy programs, despite the low market demand, largely because they find they need to coordinate closely with existing market actors who respond best when communicating directly to the administrator rather than a PMC. By basing the use of staff on market demand, the contact was suggesting their costs were kept at a minimum because they only needed to pay for capability when it was required by a customer.

Another contact noted that for programs with a strong market transformation component, the program management and delivery costs are focused on marketing and circuit riders to connect with and train trade allies. This type of program, with a need for infrastructure development, uses contractors better than internal staff and that keeps the costs lower.

Some of the organizations using mixed approaches noted that the type of salary structure they have tends to make it hard for them to compete with the PMC-type of contractor or local contractors to hire qualified people. However, one of these organizations also noted that the PMCs sometimes underpay, and they had recently seen a PMC have difficulty hiring capable staff because they were not competitive.

All of the organizations use competitive processes to hire contractors, whether they are a turnkey, PMC, marketing support, or technical support contractor. One noted that they prefer multiple contractors in a program because:

- ➔ *“It’s important to split up tasks among many contractors to create some competition among them, and allow our organization to have more control.”*

Another noted that they would always use a competitive process to help identify companies that can implement programs. Their experience is that with limited staff assigned to administer the energy efficiency programs, they don’t have the ability to hire staff internally. Their experience is that local vendors take a long time to find appropriate staff to deliver the programs and that it could take their own organization up to six months to become operational.

- ➔ *“I guess my preference, again, is through an RFP process to find the most reliable, qualified third-party provider that comes with many folks praising them for their work, so that we had – you know, we’ve talked to other folks who have used their services.”*



Asked about length of contracts, most noted that for long-term contracts they use two- or three-year contracts. One administrator noted they are considering including an option to extend contracts up to five years, but have not done so yet. As one noted above, re-bidding contracts every two to three years helps to encourage vendors to stay competitive.

Data management systems evoked a substantial response from the other organizations; however, the experience was quite varied. Two contacts noted that data management has to be internal, while another noted that they have gone both ways – having external data management, as well as internal – and were currently moving towards internal because they “*felt vulnerable*” with their data systems outside the organization, and the need to have the information for program management, financial reports, and evaluation. Two contacts noted that when you have PMCs, they need to manage the data collection and provide consistent and similar information to the administration organization that can be easily rolled up for accomplishments reports. One organization that does some internal implementation for large C&I programs uses an internal database for them that can be accessed directly by the account managers and others involved in the programs – about 150 people. They felt that this database was very important for program implementation. In summary, while evoking much comment, there was no consistent view on the preferred administration approaches for program implementation.

SUMMARY

Administrative issues are of substantial concern to Energy Trust staff and, while they are of some concern to stakeholders and other organizations operating efficiency and renewable programs, they are of much less concern to trade allies, PDCs, and PMCs. The sense one gets from these conversations is that there is no consensus about how to handle administrative issues, other than the value of using competitive solicitations for procuring contractor services and the need to monitor processes – such as data management – to make sure they are a service the administrator needs.

Administrative issues however, do create barriers to participation for trade allies, customers, PDCs, and PMCs, but there is no pattern that suggests that Energy Trust has found the best or the worst solutions to administrative issues. What does appear true, based on the cost data collected by Energy Trust staff to compare organizations, is that Energy Trust is comparable to other organizations and that each of these organizations have found ways to manage their costs so that there are no apparent differences in performance.





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4

PROGRAM IMPLEMENTATION EXPERIENCES

This section presents results from discussions with different contacts on their implementation experiences with Energy Trust programs. The issues explored were those found in Questions 4, 6, 8, and 9 from the *Secondary/Supporting Research Questions* in Appendix A. Information from the *Other Organizations* survey (found in Appendix B) is also included, relative to these organizations' experiences running similar types of programs.

INTRODUCTION

Energy Trust has been operating programs since March 2002, and currently offers over 15, including:

- ➔ **Renewable Energy:** Biopower, Solar Electric, Wind, Solar Water Heating, Utility Scale Wind, and an Open Solicitation for Renewable Resources.
- ➔ **Residential:** Home Energy Solutions for any home, Home Performance with ENERGY STAR[®], ENERGY STAR[®] New Homes, and incentives for clothes washers.
- ➔ **Commercial and Industrial:** Multifamily buildings, Business Efficiency for existing buildings, New Building Efficiency for new construction, and Production Efficiency.

Most of the energy efficiency programs are operated by PMCs hired for two years, with an option for a third. There have been some contractor changes over the five years. Renewable programs are currently run by internal staff with some contractor support. The solar water heating program initially was operated by the efficiency PMCs for each of the markets (new and existing homes, and commercial buildings, industrial), but as few installations occurred, the solar hot water program was brought in-house and is currently operated internally with support from technical contractors.

A review of the process and impact evaluations conducted since 2003 for Energy Trust and the 2006 Survey of Trade Allies reveals a moderate to high level of satisfaction among customers and trade allies with every program.³ There is some indication in the Trade Ally Survey that satisfaction of Trade Allies is higher for the renewable energy programs, as compared to the energy efficiency programs run by PMCs, and it would be useful to examine this in more depth in future surveys.

³ Sipe, Brien and Phil Degens. *2006 Energy Trust Trade Ally Survey*. Energy Trust of Oregon, Inc.: Portland, Ore. May 8, 2006.



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There has been no broad-scale survey of customers by Energy Trust, nor were standardized satisfaction question results available prior to 2006.⁴ The evaluations demonstrate that satisfaction among participants is moderate to high. However, awareness of Energy Trust appears to be at a somewhat low level, as suggested by a recent evaluation of the Home Energy Savings Program that found that just 24% of the nonparticipating residential customers surveyed were aware of Energy Trust,⁵ a finding that the trade allies in this research also echoed. Certainly, it would be good to have a more concrete understanding of both satisfaction and awareness over time.

The evaluations provide a clue as to the public experience of Energy Trust programs, and the interviews conducted for this study with program staff, stakeholders, PMCs, trade allies, and PDCs also provide some insights. The discussion here is focused on the contracting and delivery model and therefore does not provide a full assessment of the public experience of Energy Trust programs, as it is primarily grounded in the perceptions of the delivery process by a limited set of market actors.

PERCEPTIONS OF ENERGY TRUST PROGRAM IMPLEMENTATION

The contacts revealed a relatively consistent set of views about the implementation of Energy Trust programs.

Stakeholders

Stakeholders gave very limited comments on the experience of delivering Energy Trust programs. They primarily observe from afar, review the quarterly and annual reports, and sometimes become engaged with the programs on behalf of their constituency. As a consequence, very few of them had much to say about program implementation.

One contact noted that changing contractors required a learning process on the interconnections between organizations by the new contractors. This clearly would not be an issue if the programs were operated by internal staff. However, there was no sense that this meant internal staff was preferable, but was just a statement of fact:

- ➔ *“Changes in the PMC can be hard, get to know one PMC, you have to get to know a whole new company – new staff, new philosophy... this can be a challenge. Programs run in-house are less likely to experience a wholesale change.”*

⁴ Energy Trust developed standardized satisfaction questions in 2005, but results were not available until evaluations were completed in 2006.

⁵ Itron, Inc. 2003-2004 Home Energy Savings Program Residential Impact Evaluation. Energy Trust of Oregon, Inc.: Portland, Ore. December 2006. p. 208.



Some stakeholders noted that program complexity seems to continue, and another noted that because of the need to scale back project funding in 2005 and 2006, the market still seems to have the perception that there is not enough money for projects.

Their comments were limited and, in general, the stakeholders see the savings being obtained as a good indicator of program success; therefore, they are supportive of the programs as they are currently implemented.

Energy Trust Staff

The Energy Trust staff had a great deal to say about their experiences with the program delivery models used by Energy Trust. In general, they feel the PMCs have done an excellent job, both in terms of achieving electric energy savings and in working with trade allies to stimulate the market's ability to provide energy efficiency services. Issues of concern to Energy Trust staff include communication, achieving goals, and engaging with customers.

Communication

The Energy Trust staff have found communication with PMCs to be a challenge. As noted in previous discussions, it does somewhat depend on the PMC, as some PMCs communicate better than others. Yet it is also true that the combination of a contractual relationship between PMCs and Energy Trust, the difficulty of knowing exactly what is needed at the time of contract development, and the lack of common office space between the PMCs and Energy Trust conspire to increase the challenge of communicating well.

The reporting cycle for each PMC was initially aligned with their contract, yet Energy Trust needed annual data on the calendar year. To get the information delivered to meet Energy Trust's schedule required a contract change. Energy Trust staff experience suggested to them that contractors tend to focus on their contract requirements and do not really pay attention to the planning and budgeting needs of their clients. Most of the PMCs' offices are in other building locations than those of Energy Trust and two PMCs noted that this was a drawback to communications.

What is most difficult for Energy Trust is knowing, with confidence, the status of each program and making sure that there are no lost opportunities when a contractor visits a customer. This requires that the PMCs inform Energy Trust and other PMCs about their activities and existing opportunities. As with other issues that concern Energy Trust staff, communications can be integrated into a contract – stating dates for delivery of information, clarifying exactly what information is needed, etc. – but if a PMC or Energy Trust program manager does not have the interest and commitment to communicate, it cannot be assured by a contract.



Achieving Goals

Achieving goals ties directly to communication. In addition to the ten-year electric savings goals, Energy Trust has market transformation and natural gas savings goals. One of the issues for achieving the electric savings goals is how to motivate PMCs so that they obtain comprehensive projects and don't "cream-skim."⁶ Energy Trust staff think that the residential program contracts are well enough structured to avoid cream-skimming, but they are less certain about the commercial and industrial program contracts, which may still lead to substantial instances of this occurring.

The market transformation goals are achieved when the PMCs coordinate with NEEA programs, but the NEEA programs don't ensure immediate savings, since they are relationship-based and take a long time to develop. PMCs don't seem to respond to these programs as consistently as Energy Trust staff would like, because the savings rarely accrue to the PMC in the same calendar year as their efforts.

The staff operating the renewable programs provide referrals to PMCs, but they have seen few referrals come to them *from* the PMCs. Thus, attaining renewable goals would be furthered with more coordination. Another concern has been how to get the PMCs who do get referrals to seriously consider the opportunities that may require a more customized approach. As with market transformation, staff noted that renewable benefits do not currently accrue to the PMCs, so they gain little benefit from the referral.

Gas savings have taken time to integrate into the contracts with PMCs, but now that gas efficiency is part of the PMC contracts, Energy Trust staff hope that gas savings will be obtained. At the same time, there has been a slow increase in gas savings. There is a possibility that the PMCs don't really understand the gas market, as their experience is primarily with electric measures.

➔ *"We needed to ramp up the gas ... it has been hard to get the contractors' attention to gas because they all have the focus on electric, and they have trouble figuring out how to be innovative in gas. The levelized costs are going up, and the volume [of gas savings] is not going up."*

The challenges for gas stem largely from the limited number of measures that can be treated. So while some of these challenges are not tied to the delivery model, it is clear that using PMCs requires that all goals be integrated into the contracts; and because more of the PMCs' funding

⁶ Cream-skimming refers to the practice of installing the lowest-cost and highest payback measures without at the same time addressing higher cost measures with longer paybacks, which would be a more comprehensive approach. This makes it difficult to provide measures cost-effectively to the building at a later date, resulting in lost opportunities.



for commercial programs is on the electric side; most of the profits are dependent on success in electric savings – not gas.

Engaging with Customers

The PMC delivery model presents a challenge for Energy Trust to engage with customers:

- ➔ *“The PMCs are closer to delivery, and to the customer, than Energy Trust is, so there is an extra layer – the Trust is removed from customers and from the people actually delivering the program.”*

Energy Trust has had some customers, especially large ones, comment that they wanted to be directly in contact with Energy Trust staff, to know who is making the final decision. However, most of the comments from staff indicate that, other than for some large customers, Energy Trust staff are satisfied that the PMCs are the ones working with participants.

Certainly, the program evaluations don't point to any specific major problems, even with large customers. As an example, in the PE program's first-year process evaluation, 54% of participants volunteered that interactions with the PMC were going well. And the second-year progress evaluation for PE showed that 100% of the participants rated their interactions with the PMC as a “4” or “5” on a scale of one-to-five (where “1” is not at all satisfied and “5” is very satisfied).⁷ Similar types of findings for participants can be found across other programs as well.

Yet it is clear that for Energy Trust staff, there is a sense of disconnectedness with customers. As some of the trade allies point out, if Energy Trust staff were to go into the field more with the PMCs and the PDCs, or to meet with the trade allies, they might find a way to overcome this challenge.

There is also a combined problem of achieving goals and being engaged with customers. This was brought to light in 2005, when the financial commitments for the industrial programs exceeded available funds for all programs. As a result, the trade allies and PDCs were instructed to slow down engagement with customers:

- ➔ *“In the previous year we had tight funding, and so there was some reluctance by the PDCs to pursue customers. Now they have money, but there is not a single project lined up for 2008. Some are on the horizon, but it takes a while to bring these large contracts to fruition. I wonder whether we will have enough for 2008.”*

⁷ Research Into Action, Inc. *Production Efficiency Program End-Of-First-Year Progress Evaluation*. Energy Trust of Oregon, Inc.: Portland, Oreg. June 2004.

Research Into Action, Inc. *Production Efficiency Program: Process Evaluation and Impact Evaluability Assessment*. Energy Trust of Oregon, Inc.: Portland, Oreg. December 2005.



Keeping PMCs, trade allies, and PDCs engaged with customers requires that there be a clear process for knowing what is pending early enough to plan ahead, so that everyone is working for the same outcome.

Summary

Energy Trust staff members currently have confidence in the programs they are operating. They have some concerns about how to motivate PMCs to share the goals of Energy Trust. Contracts have been modified in ways that now address most of these concerns, but some linger, and it is uncertain how they can be readily addressed with the PMC model.

PMCs

The PMCs express the viewpoint that they have been able to develop the market and have been able to reach customers and get them engaged in the programs. They see their role as delivering energy efficiency. One of the important aspects of the programs has been stability, both of the funding and of the delivery process. Some PMCs also note that the communication process has not been optimum, but their perspective is that Energy Trust did not communicate with them or did not encourage communication:

- ➔ *“While they’re only two blocks down the street from us physically, it took a long time for us to figure out an effective way of communicating.”*

Having the staff with the right skills and with an interest in communication and coordination has improved the relationships between some PMCs and Energy Trust. There is also a bit of a coordination problem for PMCs when they get similar requests from different Energy Trust groups:

- ➔ *“The Energy Trust has a marketing group, an evaluation group, a management group, and an IT group. And oftentimes they’re all interested in the same piece of data, but they ask for it very differently. So I think that there’s a bit of a lack of direction often in what data is actually needed and useful to all of the folks. I think in the past, we’ve found that we’ve collected a lot of data that nobody’s ever touched. And I also think on the flip side, there have been some things that we weren’t collecting and that some people would love to have.”*

On the other hand, those PMCs that think they are coordinating and communicating well note that Energy Trust has been quite responsive. Two reported that changes they had suggested had been adopted by Energy Trust:

- ➔ *“The Trust has gotten better about encouraging such things [coordination] recently.”*
- ➔ *“The Trust has an open-door policy throughout the organization. They don’t always use the suggestions, and sometimes it’s not clear what the linkage is between time spent giving comments and things that happen as a result.”*



Another noted that coordination with other PMCs has been a challenge – for example, getting definitions about what projects qualify as new buildings and existing buildings, and what to do with multifamily projects. In both cases, more than one program could serve at least part of a building, yet customers need a clear signal as to which program to apply to, and PMCs need a clear sense of what savings can be counted toward their contract goals.

Simplicity of programs has been an objective for the PMCs, and that goal has been more difficult to achieve fully over time. There is a perception on the part of the PMCs that Energy Trust has become more bureaucratic:

- ➔ *“Lawyers get involved, and there are a lot of lawyer-scenarios that get entered into the Terms and Conditions.”*
- ➔ *“The Trust’s adjustments to deemed savings have been difficult to deal with – the deemed savings are in the contract, and then they change them, and change the measure mix – things that we’re already delivering in the marketplace.”*
- ➔ *“When we first started this program, we developed our forms in a couple of weeks and had them out on the street. And knowing, at the time, we were probably cutting corners, and would regret some of the things we didn’t do, but it also set the bar pretty high. And as I said, it’s become more bureaucratic since that time – it’s certainly increased for a lot of things.”*

In terms of satisfaction with Energy Trust, nearly every PMC commented that they were quite satisfied – some even said that Energy Trust was among the best clients they had, due to their flexibility and commitment. From the PMC perspective, the challenges of the PMC model are similar to the challenges they experience whenever they provide program implementation services. They had no specific issues relative to Energy Trust, just a host of challenges, because there are many programs and many contractors involved.

Trade Allies and PDCs

Trade allies and PDCs have generally had good experiences with Energy Trust’s PMCs and with Energy Trust itself. Communication and coordination, and inconsistency in funding, have caused some concern for trade allies and PDCs.

The PDCs and trade allies have found some Energy Trust staff to be distant, while others are quite approachable. This makes a difference. As already noted above, several trade allies comment that more communication will occur if Energy Trust staff go into the field more often:

- ➔ *“The Energy Trust staff should regularly meet with PMCs, PDCs, ATACs, and customers in the field to know what is going on and to be in touch with what people are feeling and thinking. This should be part of their regular roles and responsibilities. In the past, very little of this has occurred.”*



A trade ally commented that Energy Trust could ask trade allies, as well as PMCs, to be involved in the program design process, to get their input more:

- ➔ *“Much of it starts behind the scenes – the CAC develops all the details and then the contractors get involved at the end.”*

One trade ally noted that some of the PMCs don’t communicate as well with the trade allies as do others. Another commented that Energy Trust needs to work with the trade allies and PMCs on how to work with customers in a strategic way, so that customers can think about their energy efficiency plans for the future, not just for the immediate project.

Coordination is an issue for some trade allies, especially coordination with the Oregon Department of Energy (ODOE). One trade ally noted that the PMCs should do more to provide the documentation customers need for their applications to ODOE, and Energy Trust should work with ODOE to ensure that the requirements are more similar and that the same information can be used for both applications.

An issue that was mentioned by several trade allies was that of inconsistent funding:

- ➔ *“Maintaining stability in incentives and program availability. On again, off again, stinks! Industrial customers want you there for them – they want a stable relationship. They want to make sure that 2006 does not happen again.”*
- ➔ *“With a fixed budget, one needs to dial up or down, without shutting down the marketplace – vendors were going in different directions. Now Energy Trust has the experience that they did not have in place. But that was a past concern (lack of experience).”*

Trade allies seem to have confidence that this is something that Energy Trust has learned enough about that it will not happen again, but the message is clear that stable and consistent funding is very important for trade allies and customers.

What concerns trade allies – as an outcome of not being able to do much marketing during the slow funding period – is maintaining a steady stream of projects. The easy large projects are already coming in, but there is a need to make sure there are enough resources in place to develop the relationships that will result in large projects, as they may be challenging to find in the future:

- ➔ *“Yes, Energy Trust is effective in delivering programs (more effective than others). But clouds are on the horizon. There is a slow, steady slide downhill. The time to find projects has diminished. And it takes a long time to get a large project (>\$500K) with high savings (e.g., 19 MWh), but it takes time to develop relationships with people in the plant, etc.”*



Of particular concern for the PDCs was the slow contract development and signing period during 2006, which left three of the four PDCs without a contract for ten months. Without a budget and contract, the PDCs were uncertain what to do.

Another concern for trade allies about the future is the anticipation that more commercial projects are likely in the future as more trade allies participate. Currently, there is already a slower review process than the trade allies would like, but it is manageable. However, with more projects, there will need to be more than one person at the PMC reviewing project proposals.

Trade allies generally are satisfied with the programs as delivered, although communication could be improved, and certainly stability of funding needs to be maintained.

Other Organizations

The other energy efficiency administrators we spoke with had limited ability to comment on the program experiences of Energy Trust. We asked them about the issue areas where they face challenges and what they have found effective. Communication and coordination to achieve goals and how to engage with customers were the key issues addressed.

Communication is an issue whenever contractors are involved:

→ *“Besides everything else, it’s hard to know how you create incentives for those cross-program things.”*

One of the contacts suggested that Energy Trust insist that all the PMCs be in the same building. But there were no clear solutions to the problem. As one noted, when you have *“subcontracts, you put them into kind of narrow straits sometimes and you hurt your ability to do things in a more integrated way.”*

On the issue of coordination to achieve goals, two contacts noted that they set their goals with the contractors each year and find that keeps all on target. Another noted that they look for ways to treat each sector differently, and while the core of each program stays the same, the end-uses treated and the measures offered do change.

While some of the contacts noted that customer service is best achieved by the administrative organization, another noted that it is always reasonable to put into a contract that any complaint with a customer or trade ally be resolved within a defined period of time. What is apparent from the comments of these other organizations is that contract terms drive the success of achieving the goals, of communication and coordination, and of engaging with customers.

The other organizations struggle with similar issues to those dealt with by Energy Trust, and they use the contract as the tool for seeking to address the challenges.



SUMMARY

The experiences of stakeholders, Energy Trust staff, PMCs, and trade allies with the programs administered by Energy Trust have generally been positive. Communication and coordination are challenges that occur, particularly when contractors are used to delivering programs as PMCs. This occurs because the PMC has a large role in deciding how to address the market and how to communicate and coordinate with it. In addition, the PMC becomes the entity responsible for providing information to the program administrator on market progress and customer experiences.

Aligning contractors' activities with savings goals is generally a contractual issue, while ensuring that programs are stable requires the administrator be able to accurately forecast and budget. Finally, keeping the programs simple and approachable for trade allies and customers appears to be very important and something that is a joint responsibility of the administrator and the PMCs.



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5

NON-PMC MODELS

This section presents results from discussions with different contacts on how other types of models for program delivery work. The issues explored were those found in Questions 2, 4, 5, 6, and 7 from the *Secondary/Supporting Research Questions* in Appendix A.

INTRODUCTION

As discussed in Chapter 2, Energy Trust and stakeholders share a very concrete view of what a PMC delivery model should look like. The view of others is more nuanced, as other organizations typically use third-party contractors in some role for their program delivery; therefore, these other energy efficiency organizations see Energy Trust as holding more to a single approach than is commonly practiced. Trade allies and PDCs, with their more local experience, are primarily able to compare Energy Trust to the utility programs of the recent past.

As a consequence, the non-PMC models discussed in this report are typically internal implementation, utility implementation, or some form of mixed use of contractors and internal staff (which some term a *hybrid* or *mixed approach*). Due to the more limited experience all contacts in Oregon have had with non-PMC models of program delivery, the largest share of comments in this chapter come from interviews with other organizations. Because other organization use mixed models for their renewables programs, these are discussed in the *Other Organizations* section as well.

PERCEPTIONS OF NON-PMC DELIVERY MODELS

Stakeholders

As discussed earlier, stakeholders believe there is a great deal of suspicion about Energy Trust and, therefore, the competitive approach used to hire PMCs resonates well with those that are concerned. One contact suggested no changes should be made for another year or two. Stakeholders also noted that the use of Energy Trust for program delivery was an intentional decision to alter the way that utilities delivered programs. Since utilities largely used internal staff, using PMCs is politically preferable.

There is a belief among stakeholders that if Energy Trust writes good contracts that are sufficiently long to create stable programs, and then adaptively manages the PMCs, all will be well. There is some concern that there will soon be substantial competition from California for contractors, and that this will affect Energy Trust's ability to find contractors willing to work in Oregon; therefore, internal program management might become necessary, although this does not seem to be true yet.



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The only programs that seem to make sense for Energy Trust to manage internally at this time are pilot programs or small programs, such as the renewable energy programs. One contact suggested that if Energy Trust wants to consider more internal management, they should do so on a pilot test basis and document the difference in costs and other factors.

Stakeholders have limited knowledge of models other than the PMC model and tend to expect Energy Trust to move very slowly, if at all, to change their current approach to program delivery.

Energy Trust Staff

As in other areas, Energy Trust staff members are aware of the stakeholders' concerns and thus are hesitant to consider other models. The experience with the renewables program has shown that in certain situations, internal staff working on a program can be more effective than a PMC. However, there is also a strong suspicion by Energy Trust staff that renewables are in a different state of development for both the market and the technologies. In addition, the renewables program is not strictly internal; the program has several technical contractors.

With limited experience of other models, Energy Trust staff wonder if an internal delivery model could solve many of the difficulties they experience with the PMC model. But the initial estimates of the effort to run the larger programs seem to be more than the organization could handle and more than the current staff believes they would like to manage.

The disadvantages of re-bidding contracts every two to three years and the potential risk of the resulting instability to a program concern some Energy Trust staff members. Yet, they recognize that the new contractor could be much better than a previous PMC and that this process provides clear advantages. However, the current situation suggests that there are fewer potential PMCs willing to bid, as the number of responses is not as great as in the first rounds. Making the contract longer, and with additional funding, could help entice potential PMCs to bid and reduce Energy Trust's administrative burden.

Energy Trust staff tends to see two options for program delivery: the PMC model they currently use, or an internal model where the majority of services are provided by internal staff. They recognize that this internal model is not acceptable to the stakeholders, but they would like to find ways to address the communication and coordination challenges of the PMC model and to have the resources they need to deliver programs, while still addressing the concerns of their stakeholders.

PMCs

The PMCs are used to working as contractors to implement programs. They like Energy Trust's approach, although the contract terms with other organizations are often three-year, rather than two years with an option for a third. Five-year contracts are rare in the program implementation world, although some PMCs would like to see Energy Trust move in that direction. A three-year contract seems most common.



One of the PMCs noted that in other contracting situations, they find that they have less ability to bring ideas forward to the administrative organization. With Energy Trust, the PMC role encourages them to be more involved in program design, not just in fulfilling a contract. In situations where the contractor has just a specific piece of the program, it is more difficult to provide input and often it is not welcomed by the administrative organization.

Thus, the manner in which Energy Trust has organized their programs gives the PMCs more responsibility to oversee program design and implementation. Not surprisingly, this is a positive aspect of Energy Trust's PMC role and one not typically replicated in other administrative organizations.

PMCs have experienced a variety of different contracting approaches. Other organizations typically use multiple contractors to deliver programs, rather than a single PMC. This type of model gives the energy organization more control over various features of the delivery process, while the PMC approach used by Energy Trust shifts most of the control to the contractor. PMCs like having more responsibility and control, so they find the PMC approach very rewarding.

Trade Allies and PDCs

The trade allies and PDCs mainly use the utility programs as their basis of comparison. One noted that having a third party was good: even with all of the difficulties, "*we would not want to give it back to the utilities.*" Most other comments from trade allies and PDCs concerned how to improve the current model: more communication; more Energy Trust staff meetings with trade allies, PDCs, PMCs, ATACs, and customers; more emphasis on making the programs simpler; and more marketing to increase awareness of the programs.

Some of the trade allies were quite concerned about program changes. One noted that he "*would not have set it up as it was, but now that it is, I would not change it.*" As with the issue of stability of funding, stability of contractors is very important to trade allies. Changing contractors can cause instability, and that is what they would like to avoid. Their tendency would be to keep a stable relationship with existing PMCs, rather than recruit new PMCs.

The trade allies' limited experience with other models did not provide much insight; however, their concern about stability suggests that any changes, whether the result of a re-bid process or shifting to a different delivery model, should be done with caution and with their involvement, if possible.

Other Organizations

The other organizations we spoke with included IOUs and public benefits organizations. In all cases except for one, a substantial amount of their energy efficiency services are offered through contractors, with some services offered by internal staff. Two IOU contacts thought that utility administrators would likely have higher program management and delivery costs than would



public benefits organization or PMCs. One also noted that because their core business is not delivering energy efficiency, they use contractors where they need those capabilities.

Deciding what programs should be managed by contractors or should have multiple contractors working with internal staff is not as clear-cut as one might wish. One component is to know whether there are firms – either local or national – that can provide the types of services desired. There appear to be several PMC-type firms that deliver residential programs and, given the high labor requirements, many of the administrative organizations use contractors for their residential sector, although at least one does it by using multiple contractors. Table 2 shows how the different organizations we spoke with organize their programs' implementation.

Table 2: Delivery Models Used by Administrators

ORGANIZATION	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	RENEWABLES
Energy Trust of Oregon	PMC	PMC	PMC	M
PBO – Internal	I	I	I	NA
PBO – Mixed	M	M	M	I
PBO – Mixed	PMC	M	M	M
IOU – Mixed	PMC	Small: PMC Large: I	I	NA
IOU – Mixed	PMC	M	I	NA
IOU – Mixed	PMC	PMC	M	NA

Legend: I=internal, limited use of contractors, M=mixed some use of contractors, PMC=contractors manage entire program area, NA=not offered.

One of the IOUs using internal staff, with contractor support for large C&I customers, noted that the key reason to do so concerned the nature of the relationship and the desire for long-term savings.

➔ *“The key is comprehensiveness – but customers won’t consider every opportunity at once – it’s too expensive. You need a phased approach; if you set the hurdle too high, demanding comprehensiveness from the get go, you end up excluding many customers. So you build up a relationship with a customer and work with them over a number of years to achieve comprehensiveness... The key with the large customers is the long-term relationships that would not endure with outside contractor program delivery. What would be lost would be the long-term relationships and the long-term savings – the ability to chip away at opportunities over time. The customers know we’ll always be here.”*

For mixed models, the administrator typically controls the program design and some or all of the day-to-day management and customer aspects of the program. In some cases, the administrator knows a great deal about each specific project that is being undertaken by the contractors they



hire to do the fieldwork. In other cases, especially residential and small and medium commercial programs, this is less likely to be the case. In other situations, the administrator lets the contractors manage the program on a day-to-day basis. The decision on the degree of day-to-day involvement depends on how much connection the administrator wants with the customers and in directly doing customer service.

One of the administrators operating a program internally noted that they try to look for routine functions when deciding what can be contracted. Another, also operating programs internally, noted that the most technical aspects typically need an outside expert, so those are contracted out.

The administrator using a mixed approach in the residential sector noted that it was important to see the implementation contractors not as PMCs, but as people hired *“to develop the market, to organize technical assistance, quality control and incentives, but not to install the measures themselves.”* These functions are much like the role the PMCs at Energy Trust play. For this person, the PMC concept gave too much program control to the contractors.

On how to decide whether to use PMCs, another contact commented that the immediate costs of hiring a PMC are usually higher than using in-house staff for an IOU, but over time that is not necessarily true. The market may be transformed and then there will be no need for the staff; the ability to change staffing over time often leads to the use of PMCs.

Another issue concerns whether PMCs have the necessary skills. With natural gas prices increasing, one of the administrators using PMCs noted that their PMCs don't have the ability to target gas savings projects, so this may have to be done internally.

The other organizations offer a variety of ways to think about choosing delivery models. Factors that are important include availability of PMCs to do the work, availability of local contractors to do the work, type of staff needed to make customer contacts, need for knowledge of day-to-day interactions, technical requirements of the work, and confidence in the quality of work being performed.

Other Organizations – Renewable Energy Programs

As shown in Table 2, above, in addition to Energy Trust, two organizations offer renewable energy and energy efficiency programs. One other contact we spoke with (not noted in Table 2) only offers a renewable energy program, and an additional contact provides consultation services to renewable energy programs. All of the organizations offering renewable energy programs do so using internal staff with support from contractors for various types of technical services. As one contact commented on why they use internal staff to run the renewable energy programs:

- *“I don't think that anyone has figured out how to do it really well. And so I think that we're in the forefront of trying to figure that out, and designing the program; and we need to be responsive and to be continually improving it. Whereas something that's a*



more mature technology ... it may be something where you might want to outsource this. I don't know, because we don't have that choice, but I could see, I think, a lot of it does have to do with the maturity of the technology.”

The organization providing consulting services noted that only one of the 20 states that have programs uses a PMC-type of model – New Jersey – all other states use internal staff with consulting service support.

The administrators with renewable energy and energy efficiency programs also noted that they had to design their program to meet the needs of the market. In one case, existing renewable energy market actors were adamant that they be included in the program design process and a committee was established that includes the administrator, renewable energy installers, and designers. Also, the programs vary greatly: for instance, NYSERDA has a focus on training and education of installers, while California has a focus on reducing incentives over time and is shifting to multifamily and new buildings in response to a cost analysis they did of their efforts.

➔ *“California did a cost-trend of their solar program and found that it makes more sense to put money into a multifamily and affordable housing than it does to put it on single-family homes. ... So they've put a lot of money now into multifamily affordable housing and they've put a lot of money into new construction, working with homebuilders, rather than a just a come-and-get-it intensive for existing homeowners.”*

This development of programs that are responsive to the local market is a characteristic of the renewable energy programs and something that these contacts saw as most easily achieved using internal staff to design and develop the programs.

SUMMARY

The non-PMC models largely fall into two camps: internal program delivery or use of contractors for specific functions. In the case of internal program delivery, some use of technical specialists will be needed to augment internal capability. In the case of approaches that use contractors for specific functions, the administrator chose varying levels of control of the program design, day-to-day management, and customer service functions. Renewable energy programs tend to primarily choose a more internal model for implementation, largely because of the need to respond to the specific market conditions of the locale.

In their comments, Energy Trust and stakeholders indicated limited experience with these other types of models, and they tend to see the options as either PMC or internal staff. With the combination of internal staff and support contractors, there are many other options.



6

CONCLUSIONS AND RECOMMENDATIONS

This chapter presents our conclusions and recommendations for Energy Trust, based on the assessment research presented in this report.

CONCLUSIONS

The Research Into Action team conducted interviews with 47 people between January and March 2007. We also reviewed evaluations of Energy Trust's programs conducted between 2003 and 2007, and analyzed information on program management and delivery costs collected by Energy Trust from a sample of energy efficiency program administrators.

Energy Trust asked that we conduct this research to address some primary research questions, as well as secondary issues. The secondary questions were discussed in previous sections; in this section we focus on the primary questions posed by Energy Trust.

1. Have Energy Trust of Oregon or the efficiency market changed, or will they possibly change or need to change?

There is no clear sense that the energy efficiency market in Oregon has changed as yet. Trade allies, especially in the commercial and industrial sector, noted that it may take more time to gain larger projects in the near future, but there is no sense that the large projects have disappeared. Trade allies, Energy Trust staff, and the PMCs are also aware that the unstable funding in 2005-2006 resulted in a need to slow down; this had a significant affect on the market, and trade allies and PMCs are just beginning to have confidence that they can go to customers again.

There were no similar comments or concerns about the residential market and it appears that the level of opportunity in this sector is considered to be ongoing for the near future.

On the other hand, Energy Trust staff and some stakeholders did comment that there are opportunities, such as: a potential to expand territory; a potential for long-term funding in Oregon; and that offered by the need to achieve gas savings greater than the amount being obtained so far.

2. What are the strengths and weaknesses of the existing delivery structures in light of the current market and potential future changes?

There are many ways to use contractors, and Energy Trust has developed a contracting and program delivery model that tends to use them in one way, rather than seeking to



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identify the optimum strategy for each market and sector. This approach has conveyed to stakeholders that Energy Trust is responsive to policy, legislative, and regulatory concerns to minimize its bureaucracy and internal staffing. However, the perception that there is one way to deliver services may work against Energy Trust if it wishes to implement approaches other than a PMC model for energy efficiency programs in the future.

Energy Trust stakeholders have accepted the PMC approach as a way to keep Energy Trust staff at a minimum and as a way to develop the market for energy efficiency companies in Oregon. The PMC model is effective at conveying that message; it uses competitive procurement and the contracts are long enough for program stability, but short enough to ensure that contractors stay competitive. The approach typically encourages the PMC to hire and train locally, but it is scaleable when a consulting firm is the PMC and can bring in additional resources when needed.

However, the PMC model has its own bureaucratic requirements, such as: lawyers for the contracting process, an expanded Information Technology Department to coordinate with the multiple data systems used by the PMCs, program managers for each program (as the program management issues for each program are unique), and probable duplication of services across PMCs and Energy Trust (especially of data systems). The human resource requirements are kept low when most of the staffing is by PMCs, rather than by Energy Trust. Additionally, while national PMCs hire staff locally to support their efforts in the field, their national character can be viewed negatively by local trade allies. Additionally, communication and alignment of PMCs to Energy Trust goals has proved challenging.

There are now Energy Trust program managers for each program. This is a reflection of the fact that there are unique issues for each sector and each program area. These differences are what make the use of a single general approach for all programs somewhat problematic. The experience of the renewables program is a case in point and an example of how program delivery models can reflect the market. In our investigation, the two other energy efficiency administrators implementing renewable energy programs have developed a delivery model that is unique to their immediate market. This has been done by having internal program design and management, with support from technical contractors – in one case, the limited use of external contractors, and in another, (following an approach more similar to Energy Trust), having clearly defined support roles in order to minimize internal staff involvement.

The one factor that must always be incorporated when contractors are used is competitive procurement. Stakeholders demand it, and it is the common theme for how contractors are managed across all of the administrators that were interviewed.



3. Is Energy Trust well-positioned and structured to meet future challenges, or is there a need for a different type of delivery mechanism for any specific program or for Energy Trust generally? If change is recommended, what type of change and in what sequence and timing?

The research team believes that Energy Trust would be better able to respond to market change if stakeholders were aware of the potential range of program delivery strategies that are market- and sector-driven. This would mean that stakeholders were aware that each program should be developed to address the specific conditions facing the market for that program.

Energy Trust has just such an example in the renewable energy programs. These programs have different designs to address the market as it was structured when the programs were initially developed. These conditions may change in the future and, if so, the internal program designers can seek to modify the delivery process to respond to those changes. PMCs, because their work is contract-driven, are less likely to redesign programs primarily to respond to the market.

One program that many organizations operate internally – which Energy Trust operates with a PMC – is the PE program. The PMC primarily provides support capability and substantial stability to the program, which is an important benefit. However, since communication with large customers and with large technical services firms such as the PDCs is very important and has been at risk at times with the PMC model, review of this program delivery method might lead to a change. Shifting to more internal control would provide better connection to customers and would be consistent with the manner in which most other energy efficiency administrators we spoke with manage their large commercial and industrial programs. The specific structure of a revised delivery model could include slightly more internal capability to oversee the various projects, contracting with technical experts for customer sales and project development, and for quality assurance of the project development and implementation work. Competitive procurement would be very important in selecting these contractors.

The concerns of stakeholders that there is no wholesale change in the delivery model at Energy Trust should be respected. In-depth analysis of markets should be undertaken prior to re-bidding contracts and the RFPs structured to address the needs of the market. Energy Trust's program design and planning capability already is informed by feedback from evaluation and market research efforts, yet an addition would be to undertake a *strengths – weaknesses – opportunities – and threats* (SWOT) analysis, specifically looking at the delivery model.

Other than changing the delivery model, there may be changes that could be attainable through the competitive procurement process, if they are identified through the program research and design process.



RECOMMENDATIONS

- 1. Discuss with stakeholders that the key component of their program approach is competitive procurement** (the PMC model for energy efficiency programs and the mixed model used for renewable energy programs). Competitive procurement is what ensures that Energy Trust is getting cost-efficient services and can be used in a variety of ways to obtain contractor services.
- 2. Discuss with stakeholders that the ultimate goal of Energy Trust is to develop energy efficiency and renewable energy generation capability in Oregon.** The PMC model does that well in some cases, but may not be the best choice in all instances. There is a need for Energy Trust to examine the market conditions for each program area and to ensure that the program delivery model used is optimum for developing the Oregon energy market.
- 3. Large industrial programs are generally operated by other organizations with a mixed or internal model.** The Production Efficiency (PE) program thus provides a good opportunity for Energy Trust to explore the appropriate delivery model. Begin by clearly determining the costs and benefits of each type of model for PE. Also, estimate the costs and benefits of a PMC, as compared to directly contracting with the technical firms that can provide support services, quality assurance, project development, and sales services. Key in this is considering the intangible costs and benefits, such as long-term relationships with customers and the relationships the PMC has established. A tool that could be very effective is a SWOT (strengths, weaknesses, opportunities, and threats) analysis.
- 4. Prior to re-bidding any program, incorporate into the program design and planning process a SWOT analysis of what the program might look like if implemented using an internal, mixed, or PMC model.** As part of this review, explore the type of control that is needed for program design, day-to-day management, customer relations, and quality assurance, and whether contract mechanisms can address these sufficiently. Incorporate those ideas in the RFP to ensure that the program design continues to respond to the market.





APPENDICES

APPENDIX A: RESEARCH QUESTIONS

APPENDIX B: DATA COLLECTION INSTRUMENTS

APPENDIX C: LIST OF CONTACTS



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ASSESSMENT OF ENERGY TRUST OF OREGON'S CONTRACTING AND DELIVERY MODELS

APPENDICES



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RESEARCH QUESTIONS

PRIMARY RESEARCH QUESTION

1. Have Energy Trust of Oregon or the efficiency market changed, or will they possibly change or need to change. What are the strengths and weaknesses of the existing delivery structures in light of the current market and potential future changes? Is Energy Trust well-positioned and structured to meet future challenges, or is there a need for a different type of delivery mechanism for any specific program or for Energy Trust generally?
 - a. Is there one solution (mode) for all programs, or are there many solutions (modes)?
 - b. If change is recommended, what should be the sequence and timing for making changes to program strategies?

SECONDARY/SUPPORTING RESEARCH QUESTIONS

2. What are the various program implementation strategies used by utilities and other public benefits organizations? How does contracting mode vary by sector, program type, technology, scale, program maturity, type of institution managing the funding, and other factors?
3. How efficient and effective are program delivery approaches used by Energy Trust?
4. Are there potential modifications that could improve the current approaches – such as longer contracts, more staff (at the PMC and/or Energy Trust), and other things internally? How would a modified PMC approach compare with in-house delivery?
5. What would be the difference in administrative costs to conduct the programs in-house? And how will this be perceived by Energy Trust’s stakeholders?
6. What are the strengths and weaknesses of the PMC model? How are they affected by the contract structure? The PMC’s business model? Do they lead to unexpected outcomes? (Focus on specific measures, vertical markets, trade ally groups, development of in-house or outsourcing of resources.)
7. What are the strengths and weaknesses of the in-house models?
8. How do customers/trade allies view the program implementation process? What has been customers/trade allies experience with Energy Trust and how do they see it developing in future? What are the perceived barriers and opportunities? Do the perceived barriers and opportunities vary by mode of contracting, by program, or by type/size of customer/trade



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ally and vertical market? Is there a need/benefit for Energy Trust to work more closely with its customers or trade allies?

9. Role of M&E requirements in how databases are structured, managed, and measures are selected/promoted, etc.



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DATA COLLECTION INSTRUMENTS

QUESTIONS FOR ENERGY TRUST STAFF

NAME: _____

POSITION: _____

1. What are the issues that are worrying you about the delivery mechanism?
2. What do you expect to get from this project?

Note: Probing needs to clarify how important customer service, equity, and other issues are – if they don't come up.



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QUESTIONS FOR STAKEHOLDERS

DATE: _____

NAME: _____

UTILITY/ORGANIZATION: _____

POSITION: _____

1. Energy Trust seeks to implement programs that are *efficiently* and *effectively* delivered to customers:
 - Efficiently means the programs are low cost and provide reliable energy savings and renewable energy generation
 - Effectively means the programs are easy to understand, learn about, and participate in and they address customer needs and they deliver comprehensive savings and generation in a partnership with market actors that strengthens and grows the market.

Do you agree that these are important goals for Energy Trust?

2. How important do you feel it is for Energy Trust to be perceived as having a limited staff?

What is the basis for that?

3. How important do you feel that it is for Energy Trust to use a competitive process to select contractors to work on Energy Trust programs?

What is the basis for that?

4. Programs can be delivered in at least three ways: (1) turnkey by Program Management Contractors (PMCs); (2) in-house by the organization; or (3) by varying combinations of the two. What is your understanding of how frequently these program delivery approaches are used by Energy Trust, and why?

5. For what purposes and under what conditions do you believe that program delivery by a PMC, in-house delivery, or some hybrid approach will be more efficient?

Or more effective?



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6. What are your expectations for how costs compare between the PMC and in-house programs? [*PROBE: (higher, lower, about the same) program management, salaries, technical services, data management, customer representatives*]
7. How difficult do you think it would be to hire the appropriate staff for in-house program delivery at Energy Trust?
8. Energy Trust uses PMCs to deliver most of their efficiency programs and internal staff to deliver most of their renewable programs. What do you see as the disadvantages and advantages of using a PMC, in-house staff, or come hybrid of these approaches?
9. If it were up to you, given the current conditions in Oregon, would you recommend continuing to primarily use the PMC approach or to have more programs where the Energy Trust staff implements the programs?

What is the basis for that?

Is there anything you would do to improve the model that you recommend?
10. Other than what we've talked about so far, what suggestions do you have for Energy Trust on how to improve the way their programs are delivered?



QUESTIONS FOR PROGRAM MANAGEMENT CONTRACTORS (PMCS)

DATE: _____

NAME: _____

UTILITY/ORGANIZATION: _____

POSITION: _____

1. Energy Trust seeks to implement programs that are *efficiently* and *effectively* delivered to customers:
 - Efficiently means the programs are low cost and provide reliable energy savings and renewable energy generation
 - Effectively means the programs are easy to understand, learn about, and participate in and they address customer needs and they deliver comprehensive savings and generation in a partnership with market actors that strengthens and grows the market.

How does the current program model at Energy Trust facilitate or hinder efficient and effective program delivery?

Are there one or two specific changes to the model that you would like to see to provide more efficient and effective delivery?

2. Energy Trust uses PMCs to deliver many of their programs. How does Energy Trust compare with other organizations for whom you deliver programs in terms of:
 - Length of contract
 - Expectations for provision of data
 - Willingness to listen to your suggestions
 - Level of bureaucracy
 - Ability to learn from past mistakes
 - Flexibility in making changes to your existing contract (e.g., due to changes in budget, scope of work, unforeseen circumstances, etc.)

3. What has been your experience in working on Energy Trust Programs?

4. What are current challenges, barriers, and opportunities to implementing the program?
Why do you say that?



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5. Do you feel that you have the right level of contact with Energy Trust?
Does Energy Trust have the right level of resources to support your work (marketing, design, management, database, etc.)?
Anything Energy Trust can do?
6. What do you see as the challenges and opportunities to working in Oregon in future?
Is the program structure conducive to meeting these challenges?
7. How well do you think Energy Trust has been able to expand the market capability using their approach to program implementation?
8. If it were up to you, given the current conditions and future challenges in Oregon, what would you recommend to improve the current approach to program delivery?
Why do you say that?
9. Other than what we've talked about so far, what suggestions do you have for Energy Trust on how to improve the way their programs are delivered?



QUESTIONS FOR TRADE ALLIES

DATE: _____

NAME: _____

UTILITY/ORGANIZATION: _____

POSITION: _____

1. Energy Trust seeks to implement programs that are *efficiently* and *effectively* delivered to customers:
 - Efficiently means the programs are low cost and provide reliable energy savings and renewable energy generation
 - Effectively means the programs are easy to understand, learn about, and participate in and they address customer needs and they deliver comprehensive savings and generation in a partnership with market actors that strengthens and grows the market.

Do you feel that the current program approach is successfully being both efficient and effective?

2. How is the current process of working with Energy Trust's programs going?
3. What are challenges and opportunities you are experiencing working with the program?
Why do you say that?
4. Looking toward the future, what are the likely challenges and opportunities of working in Oregon in the future?

Is the program structure conducive to meeting these challenges?
5. How well do you think Energy Trust has done in expanding the market capability (renewables or efficiency) through the program?
6. Do you feel that you have the right level of contact with Energy Trust to get your job done effectively?
7. Does Energy Trust provide the right level of resources for you to get your job done (marketing, management, database support, etc.)?

Anything Energy Trust can do better?



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8. *[For the Commercial And Residential, Not Solar Contacts]* Energy Trust uses program management contractors PMCs to deliver many of their programs; this is different from the way the utilities implemented programs. What do you think of this approach?

What could Energy Trust do to make its PMCs more efficient and effective?

Is there something that the PMCs could do?

9. *[For Solar Contacts]* Energy Trust staff implements the solar and wind programs. What do you think of this approach?

What could Energy Trust do to make this program more efficient and effective?

10. Other than what we've talked about so far, what suggestions do you have for Energy Trust on how to improve the way their programs are delivered?



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QUESTIONS FOR OTHER ORGANIZATIONS

DATE: _____

NAME: _____

UTILITY/ORGANIZATION: _____

POSITION: _____

1. Energy Trust seeks to implement programs that are *efficiently* and *effectively* delivered to customers:
 - Efficiently means the programs are low cost and provide reliable energy savings and renewable energy generation
 - Effectively means the programs are easy to understand, learn about, and participate in and they address customer needs and they deliver comprehensive savings and generation in a partnership with market actors that strengthens and grows the market.

How does your organization think about these two issues?

2. Programs can be delivered in at least three ways: (1) turnkey by Program Management Contractors (PMCs); (2) in-house by the organization; or (3) by varying combinations of the two. We want to ask you about the different ways you deliver programs and the reasons you choose those approaches. For what purposes and under what conditions is program delivery by:
 - a PMC,
 - in-house delivery, or
 - a hybrid approach

more effective?

[POSSIBLE PROBES:

- *Getting programs started*
- *Getting lots of savings fast*
- *Developing a sustainable market over the long term*
- *Maintaining long-term customer relationships*
- *Large customer management, sales, and marketing and service*
- *Small customer management, sales, and marketing and service*
- *Urban vs. Rural*
- *Low-income customers*



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- *Load management vs. Efficiency vs. Renewables (small scale, mass market (e.g. Pv on every rooftop) utility scale*
 - *Gas vs. Electric*
 - *Carbon accounting white tags*
 - *Adapting to a rapid increase in resources, or a rapid decrease*
 - *Adapting to changes in the market*
 - *Data management*
 - *Avoiding cream skimming (comprehensive energy savings)*
 - *Introducing new and unfamiliar technologies*
 - *Customer service*
 - *Overcoming customer barriers to mature technologies*
 - *Meeting multiple objectives such as resource acquisition & market transformation*
 - *Minimizing bureaucracy and maximizing resources for projects]*
3. There are several factors that can be used to decide the best model for program delivery. For each of the following factors do you consider them important when you decide what model to use? [*DETERMINE: Yes, No, and Comments*]
- Whether there are program delivery contractors willing to compete to offer services in your service territory?
 - Whether there is an established delivery infrastructure with market actors who can deliver the products and services?
 - Whether the barriers to using the products and services are primarily customer-based or market structure based?
 - Whether program participation could harm customers or market actor businesses?
 - Whether it is important to change the technologies that use energy or the structure of the market?
 - Whether you can define the products or services to be provided by a program for the market?
4. What are your thoughts on how costs compare between the PMC and in-house programs? [*PROBE: program management, salaries, technical services, data management, customer representatives*]
- How difficult do you think it would be to hire the appropriate staff for in-house program delivery?



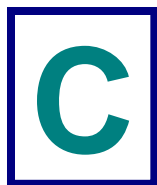
5. Given a PMC model, what factors are important in ensuring that it is optimally efficient and effective?

[POSSIBLE PROBES:

- *Length of contract*
- *Way of setting goals*
- *Performance incentives*
- *Mechanisms for minimizing cream skimming*
- *Role for the organization that contracts with the pmc*
- *Support from the contracting organization for the pmc*
- *Structure for data management*
- *Type of reporting on customer contact*
- *Characteristics to look for to find a pmc that is likely to be successful*
- *Program tracking*
- *Reporting and documentations*
- *Management of customer relations*
- *Ease of administrations*
- *Roles and responsibilities]*

6. If a hybrid approach is taken, which aspects of program delivery are best done by the PMC and which are best done in-house? *[PROBES: data management, marketing, sales, customer service, technical services, etc.] [For other organizations ask specifically to address this for their organization.]*
7. *[All Groups]* Other than what we've talked about so far, what suggestions do you have for Energy Trust on how to improve the way their programs are delivered?





LIST OF CONTACTS

ENERGY TRUST STAFF

- ➔ Margie Harris
- ➔ Phil Degens
- ➔ Fred Gordon
- ➔ Steve Lacey
- ➔ Elaine Prause
- ➔ Greg Stiles
- ➔ Dianne Ferrington – Residential Retrofit
- ➔ Tara Crookshank – Contracts
- ➔ Patti Presnail – Budgets-Finances
- ➔ Linda Rudawitz – IT
- ➔ Kendall Youngblood – New Homes
- ➔ Spencer Morsefelder
- ➔ Sue Meyer-Sample
- ➔ Jan Shaffer
- ➔ Kacia Brockman
- ➔ Adam Serchuck



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STAKEHOLDERS

- ➔ Don Jones
- ➔ Steve Bicker
- ➔ Lori Koho and Lisa Schwartz – Oregon Public Utility Commission (OPUC)
- ➔ Tom Eckman – Northwest Power Planning Council (NPPC)
- ➔ Michael Early – Industrial Customers of Northwest Utilities (ICNU)
- ➔ Jeff Bissonnette – Clean Energy Coalition
- ➔ Suzanne Dillard – Oregon Department of Energy (ODOE)

PROGRAM DEVELOPMENT CONTRACTORS (PDCS)

- ➔ Bill Darden – Harris Group
- ➔ Rob Morton – Cascade Energy Engineering
- ➔ Jim Cox – PGE Services
- ➔ Buzz Thielman – RHT Energy Solutions
- ➔ Steven Scott – Strategic Energy Group
- ➔ Bill Kitto – CH2M Hill

PROGRAM MANAGEMENT CONTRACTORS (PMCS)

- ➔ Aaron Wines – Lockheed-Martin
- ➔ Tom Giffen – Science Applications International Corporation (SAIC)
- ➔ Margie Gardner and Jeff Harris – Northwest Energy Efficiency Alliance (NEEA)
- ➔ Phil Welker and Lisa Rehbach – Portland Energy Conservation, Inc. (PECI)
- ➔ Paul Berkowitz – Conservation Services Group (CSG)



TRADE ALLIES

- ➔ Jon Miller – Oregon Solar Energy Industries Association (OSEIA)
- ➔ Stan Price – Northwest Energy Efficiency Council (NEEC)
- ➔ Gil Amestoy
- ➔ Mike Yablonsky
- ➔ Jeff Branch

OTHER ORGANIZATIONS

- ➔ Kathy Kuntz – Wisconsin Focus
- ➔ Judy Mathewson – WE Energies
- ➔ Mark Sinclair and Lise Dondy – Clean Energy Group
- ➔ Blair Hamilton – Efficiency Vermont
- ➔ Rick Gerardi, Brian Henderson, Jeff Peterson – New York State Energy Research and Development Authority (NYSERDA)
- ➔ Tim Stout – National Grid
- ➔ Rick Leuthauser – Mid-American Energy





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