



# INDUSTRIAL ENERGY IMPROVEMENT

## Cohort 1, Year 2 Report

Prepared for:  
Energy Trust of Oregon



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## MEMO

**Date:** April 20, 2012  
**To:** Board of Directors  
**From:** Philipp Degens, Evaluation Manager  
Kim Crossman, Sr. Industrial Sector Manager  
**Subject:** Staff Response to the Process Evaluation of the Industrial Energy Improvement Cohort 1, Year 2 Report

The first participants in the Industrial Energy Improvement (IEI) Pilot continue to maintain their energy efficiency processes and savings a year after the engagement with IEI ended. These findings bode well for the subsequent three cohorts and support the decision to integrate this service offering into the Production Efficiency (PE) program.

Many of the evaluation recommendations have been adopted, or are being addressed by the PE program. IEI Maintenance services have also been added to the PE program to provide additional support to IEI participants after their first year of the engagement has ended. The IEI's marketing of strategic energy management (SEM) and the process of engaging with customers has widened to include Corporate SEM (One-on-one engagement with individual corporations), and is being tested in the Small Industrial SEM Pilot that is being implemented in 2012. The Corporate SEM offering has been taken up by some large customers outside the Willamette Valley, as there has not yet been sufficient demand to warrant launching regionally focused cohorts. SEM offerings have also developed outside the PE program, with SEM services being offered to commercial building owners through the Existing Buildings program and to wastewater treatment plants through the Oregon Association of Clean Water Agencies.

## Table of Contents

Introduction .....	2
Evaluation Objectives and Approach .....	3
Findings from One-Year Interviews.....	5
Overview .....	5
Have savings been maintained .....	5
Change in operations since the conclusion of IEI.....	6
Additional activities since the conclusion of IEI .....	6
Continuation of IEI Practices .....	9
Interviews with Program Delivery Contractors.....	11
Participation in Energy Trust Incentive Programs.....	12
Collaboration with Energy Trust after conclusion of IEI .....	12
Additional support that firms would have like to see from SEG and Energy Trust.....	13
Suggestions for IEI.....	13
Advice to future IEI participants.....	14
Miscellaneous.....	15
Conclusions and Recommendations .....	17
Conclusions .....	17
Recommendations .....	18
Appendix 1: Cohort 1, Year 2 Interview Guide.....	20

## Introduction

Energy Trust of Oregon (Energy Trust) is operating an Industrial Energy Improvement (IEI) pilot program within its Production Efficiency (PE) Program. The IEI is being implemented by Strategic Energy Group (SEG) under Energy Trust oversight. The IEI seeks to reduce participant site energy intensity and production costs by applying continuous improvement practices. Under the IEI, energy is treated as a variable and manageable (as opposed to fixed) cost for industry. It is assumed that energy intensity can be reduced by five to ten percent with little capital investment and that continuous improvement practices applied to energy can have other benefits for productivity, safety, and environmental impact.

The IEI assists participant firms by putting in place a structured energy program which includes establishing accountability for tracking energy and engaging employees to reduce energy use through the “Plan, Do, Check, Act” cycle. The IEI services are delivered to participants in a group environment. Monthly trainings are held over the course of a year in various formats, consisting of six, day-long in person workshops, four, two-hour Webinars, and two individual, on site meetings. The workshops are held at the Energy Trust offices and IEI participant firm locations on a rotating basis.

This report summarizes the findings from interviews with participants conducted approximately one year after completing the IEI workshop series. The intent is to understand the extent to which participants are maintaining the energy savings achieved during the IEI process, indentifying new areas of energy savings, and discuss the challenges and successes they’ve encountered.

### **Program Goals and Objectives**

The goal of the IEI program is to put into operation a process of continuous energy management improvements which enables energy savings and reductions in energy intensity. Energy savings come from operational and maintenance (O&M) improvements, incremental increases in capital energy efficiency projects (i.e., more lighting efficiency), additional capital projects that would not otherwise have been considered (i.e., process changes, consideration of energy efficiency in all capital efforts), and improved persistence for O&M and capital projects. Through the pilot, Energy Trust will learn the level of commitment it can expect from industrial firms in continuous improvement energy management programs.

## Evaluation Objectives and Approach

Navigant Consulting was selected to conduct an evaluation of the IEI pilot to gain feedback from participants on their IEI participation. The evaluation objectives for the IEI pilot are to:

- Determine what motivated the firms to participate;
- Determine what expectations the firms had from the initiative and what goals they hoped to achieve;
- Assess how the initiative can be improved;
- Determine what elements of the IEI pilot the firms found the most valuable;
- Determine whether there are differences in the types of the organizations participating;
- Determine whether there are industry or organizational differences that drive success;
- Determine what classifications of individual participated from each organization;
- Determine whether IEI has the data collection processes in place to provide the basis to assess if the initiative is progressing towards and reaching its goals; and
- Recommend best methods for mainstreaming the pilot into the PE Program.

The evaluation activities were conducted over a year with two separate reports developed to document the findings. The first report, Industrial Energy Improvement Cohort 1, Year 1 Report, dated August 24, 2010 included findings from a review of pilot materials, interviews with the program manager and program implementer, and interviews with pilot participants.

This second report contains findings from interviews with participant conducted one year after the first interview. The objectives of was to assess the near-term and long-term outcomes of the IEI, including:

- Challenges and progress
- Whether their expectations are being met
- Long term energy efficiency plans/strategies/outlook
- Status of the energy teams
- Facility economic and production status
- Determine a good time to check back on the facilities progress in the future

These second interviews were conducted in May of 2011. The evaluation team was able to complete interviews with seven of the ten participants; two of the three that did not respond to the request for interviews were not interviewed for the first set of interviews either. The seven individuals interviewed in May 2011 were the same individuals interviewed in May 2011. All were the IEI energy champions, though at one firm, three individuals, including the energy champion, were interviewed.

Three program delivery contractors (PDCs) for the Production Efficiency program were interviewed in an attempt to find out about key IEI practices of the three participants who were not able to be reached. Questions relating to the integration of the IEI into the PDCs overall responsibilities for the PE program and IEI customer characteristics were also asked. Lastly, the program manager for the IEI maintenance program was consulted about the persistence of IEI practices with those participating firms.

## Findings from One-Year Interviews

This section summarizes the findings from the one-year participant interviews for each of the key research areas. Key conclusions and recommendations from Navigant Consulting are in the next section, “Conclusions and Recommendations”.

### *Overview*

Ten firms participated in Cohort 1 of the IEI. Navigant Consulting was able to complete follow up interviews one year after the completion of the IEI with seven of these firms. The remaining three firms did not respond to requests for interviews.

Three PDCs were also interviewed; one of which is the PDC for the three participant firms not interviewed. The IEI maintenance program manager was also consulted for some participant information.

### *Have savings been maintained*

Six of the seven companies confirmed maintaining energy savings while the seventh has edged up just a bit because of a change in their operations. One firm indicated that they were able to capture additional savings equal to what they realized during the course of the IEI, attributing much of this new savings to employee engagement activities.

*“We captured the original savings and an additional 5%.”*

One firm indicated that savings derived from capital projects were maintained, but savings from operations were not; however, savings were augmented by additional capital projects after the conclusion of the program.

*“A good portion of IEI were capital improvement so, yeah, we are maintaining savings. But from an operations standpoint, probably not so much. The company is not structured to support that; the staff is very lean.”*

Five firms anticipated additional savings even after the conclusion of the IEI program due to completion of projects still in the works by the end of the program. Two firms indicated simply maintaining savings. One firm admitted that energy savings were not given the same level of importance after the conclusion of the IEI program but all changes incurred during the program were being maintained.

*“We haven’t given energy saving the same level of importance. Otherwise, we are maintaining changes.”*

*“We have no concerns about backsliding. We have been able to maintain everything we did.”*

### ***Change in operations since the conclusion of IEI***

Generally participants report that their level of operations/production have been the same since completing the IEI as it was over the course of the IEI.

One notable exception is a participant who reported that their production has increased and that several new departments were added to their facility. This energy team meets with the new department to show them the internal web resource on energy and to understand their operational needs, such as lighting and compressed air, so they can establish operating schedules that minimize energy use. This is also the only firm that has reported capturing significant additional savings since completing the IEI.

One participant reports that a small growth in office space was likely offset by a shift in some production to another site. Only one participant reported significant decreases in production caused by the recession.

### ***Additional activities since the conclusion of IEI***

Five firms explicitly revealed that they were engaged in ongoing projects that had started during the program but were not completed until after the conclusion of the program. All seven companies reported having competed additional projects since the end of the IEI formal program and five have plans for future projects. The specific projects are discussed below.



### **Operation and maintenance activities**

Six firms indicated that they had initiated and completed additional projects focusing on operations after the conclusion of the IEI program, including:

- Altering equipment operation:
  - operating heating, ventilation, and air conditioning (HVAC) equipment 8-10 hour a day instead of 24/7;
  - programming a big motor to shut off automatically;
  - changing system set points; and
  - change start up times to take advantage of off peak rates;
- Promoting behavioral changes:
  - Performing night audits to encourage employees to shut off lights and computers; and
  - Running an awareness campaign;
- Installing monitoring tools on equipment;
- Introducing a recycling program; and
- Lowering cubicle walls.

Three firms expressed future plans for additional energy efficiency activities, including:

- Changing data center operation to be more efficient;
- Developing an automated, real time system to analyze equipment;
- Applying operational energy efficiency measures to other pump stations; and
- Changing operations and maintenance (O&M) policies to conform to LEED certification.

### **Capital projects**

All seven firms reported completing new capital projects after the conclusion of the IEI program, including:

- Lighting upgrades;
- Lighting controls installations;
- Equipment replacements;
  - Four HVAC units;
  - 100 hp motor;
  - Air compressor;
  - Vacuum pump;

- Leaky check valve;
- Other old equipment; and
- Installing a variable frequency drive (VFD) to run a 40 horsepower dust collector.

Four firms expressed plans for future capital projects, including:

- Lighting upgrades;
  - Lighting controls installation;
- Equipment replacements;
  - Switching out old pump station equipment; and
  - HVAC equipment upgrade.

Only one firm explicitly admitted they had no future capital project plans due to the downturned economy.

*“We are not planning any capital projects. We’ve cut back on all expenditures.”*

#### Certification

Two firms are pursuing energy certification as a result of participation in IEI: one firm is pursuing LEED silver recognition and the other is taking part in the Energy Star Challenge.

*“As part of the upgrades, the landlord agreed to work with us on LEED certification.”*

*“We signed up for the Energy Star challenge a year ago and to meet challenge needed to save about 2% more.”*

#### Other areas of IEI influence

Multiple firms revealed that experience in the IEI program made them aware of opportunities and helped them establish a process for addressing energy. One participant is preparing to combine three of their facilities into a single plant and, because of the IEI, is planning the transition with energy in mind.

*“We will have the PDC guide us in getting the best equipment for the new combined facility which we wouldn’t have done before the IEI.”*

*“The IEI provided me with contacts and a structure on how to model the energy program.”*

*“Going through the IEI program helped form the team structure for us to have sustaining employee engagement activities. The fact that we have representatives from all operations meeting every two weeks to talk about how they use energy is definitely from IEI and that team is still a good thing.”*

**Continuation of IEI Practices**

Table 1 below summarizes for each firm what practices established in the IEI program continue to be employed; these include using an energy team, tracking energy consumption via IEI’s monitoring, tracking, and reporting (MT&R) software, and continuing to undertake energy saving projects. MT&R use and the state of each firm’s energy team are discussed in further detail below.

**Table 1. IEI Cohort 1 Summary of Participant’s Continuation of IEI Practices**

Site #	Business Type	Energy Team In Place	MT&R Use	Projects Completed Post IEI
1	Cement terminal	Most of it – haven’t met in awhile	Yes – updates monthly, but also uses another system	<ul style="list-style-type: none"> <li>• Installed amp meter on bucket elevator</li> <li>• Programmed big motor to shut off</li> <li>• Changed air receiver program from 24/7 to when needed</li> <li>• VFD installed on 40 hp dust collector</li> <li>• Dust collector system replaced with more modern system</li> </ul>
2	Manufacturing with offices	Yes – but haven’t met in over a year	Yes – uses monthly, also uses PGE tracking	<ul style="list-style-type: none"> <li>• Changed set points</li> <li>• Made other changes in control system</li> </ul>
3	Manufacturing	Yes – meets quarterly	Yes – updates quarterly	<ul style="list-style-type: none"> <li>• Alternated operation start times to take advantage of off peak rates</li> <li>• Installed new air compressor</li> <li>• Upgraded lighting</li> </ul>
4 <sup>1</sup>	Manufacturing	Yes – meets quarterly	No	<ul style="list-style-type: none"> <li>• Information not available</li> </ul>

<sup>1</sup> Information on site 4 is from the SEG IEI maintenance program manager.

Site #	Business Type	Energy Team In Place	MT&R Use	Projects Completed Post IEI
5	Manufacturing with offices	Yes – meets biweekly	No – uses PGE version	<ul style="list-style-type: none"> <li>Employee awareness campaign</li> <li>Operational changes to new additions</li> <li>Replaced vacuum pump</li> <li>Replaced 50 hp generators</li> <li>Upgraded lighting controls</li> </ul>
6	Water distribution	Yes – meets monthly	Yes – but not as much as should	<ul style="list-style-type: none"> <li>Operates pump station equipment more efficiently</li> <li>Takes advantage of off peak rates</li> <li>Employee awareness campaign</li> <li>Replaced 100 hp motor</li> <li>Replaced leaky check valve</li> <li>Upgraded lighting</li> <li>Installed lighting controls in 27 offices</li> </ul>
7	Manufacturing	No	Yes – updates monthly, Energy Trust gives them money for it	<ul style="list-style-type: none"> <li>Motion sensors installed</li> <li>Upgrading lighting</li> </ul>
8	Manufacturing	Yes	Yes – every couple of months, also uses PGE software	<ul style="list-style-type: none"> <li>Uses HVAC 8-10 hr/day instead of 24/7</li> <li>Started recycling</li> <li>Lowered cub walls</li> <li>Upgraded lighting</li> <li>Replaced four HVAC units</li> </ul>

#### MT&R Use

Six of the firms indicated using IEI’s MT&R; three firms update it every month and three firms update it quarterly or every couple of months. Only one firm is not using IEI’s MT&R at all. Three firms also indicated using Portland General Electric system more regularly in addition to IEI’s MT&R. A few firms indicated frustration with IEI’s MT&R usability and graphics and preferred using other systems more regularly. One participant who is pursuing Energy Star certification noted that the MT&R is not compatible because Energy Star wants reporting on a different basis.

#### Energy Team

Six firms indicated that the energy team was still in place. Of the three firms that indicated their meeting frequency, one firm reported their energy team meets

biweekly, one monthly, and one quarterly. Three firms indicated that the energy team was still in place although did not explain how often it met. The energy team was expanded to include water and other sustainability issues for one participant (now the green team). One firm admitted that while the energy team was technically in place, it had not met in over a year and that instead, energy considerations had been combined with operations management meetings. One firm admitted that the energy team was no longer in place.

*"It's not totally abandoned but we are not having specific meetings for energy. It is combined with operations management."*

*"Honestly, an energy team was not a very effective method of doing the energy program here. We don't have the infrastructure in place. Staff doesn't have time to dedicate to energy and management doesn't make it a priority."*

*"The energy team still meets bi-weekly and continues to promote employees to do the little things to save energy. We attribute some of our new savings to this awareness/engagement, keeping it in peoples' fore mind."*

### ***Interviews with Program Delivery Contractors***

The PDCs report that, while the IEI participant firms frequently transfer the best practices learned in the IEI to their sister facilities; this has not helped them to engage these other locations in more capital projects. This is because these other facilities are most often located outside of the Energy Trust territory.

The PDCs also reported some confusion about their role with their assigned customers who participated in the IEI cohort 1. Because of the pilot nature of cohort 1, the responsibilities were not clearly defined between SEG and the PDC. Since that time, the PDCs have been incorporated into the IEI process as workshop speakers and facilitators during some of the exercises, which has helped the two parties to form a collaborative relationship. However, the PDCs report that this has occurred primarily through trial and error rather than a formal process, and written guidelines describing the roles and responsibilities of each party relative to the IEI would be welcome.

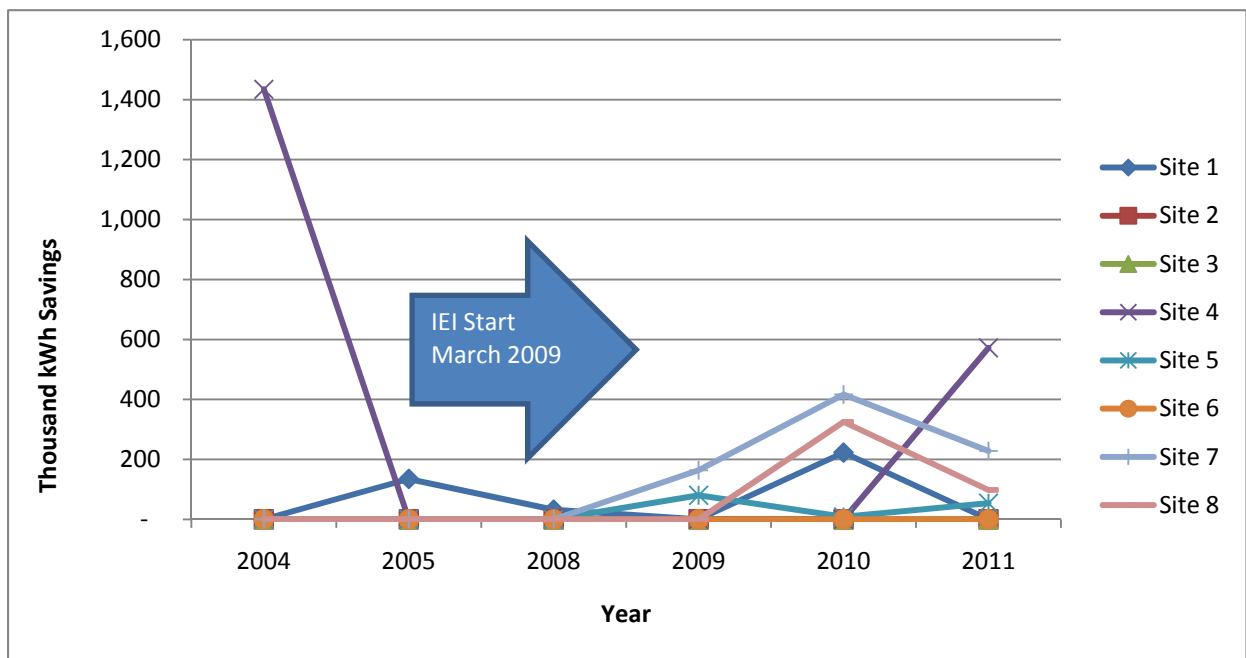
When asked whether their assigned IEI participants are somehow different than their customers who have not undertaken the IEI, the PDCs indicate the IEI participants have a corporate culture that recognizes the opportunities around efficiency. Those most successful in the IEI also demonstrate a corporate readiness to commit resources

to the initiative. Upper management support and willingness to commit resources and hold the teams accountable to meeting their objectives is a key characteristic that distinguish the most successful IEI participants from the rest.

***Participation in Energy Trust Incentive Programs***

All participants reported undertaking at least one capital project since the start of their IEI participation. Though not all of the participant sites submitted a rebate application for their capital projects, Figure 1 illustrates that the Energy Trust Production Efficiency Program realized an uptick in activity by the facilities participating in the IEI. Prior to 2009, only two sites (sites one and four) had received Energy Trust incentives for capital projects. Since 2009, five of eight<sup>2</sup> IEI participant sites received Energy Trust incentives for over 2.1 million kWh in energy savings.

**Figure 1. Cohort 1 Participation in Energy Trust Rebate Programs**



***Collaboration with Energy Trust after conclusion of IEI***

Six firms worked with Energy Trust after the conclusion of the IEI program mostly to secure incentives for capital projects: three firms worked with Energy Trust in lighting upgrades, one firm also worked with Energy Trust in a mechanical upgrade, and two additional firms reported working with Energy Trust for incentives without specifying

<sup>2</sup> Though only seven sites were interviewed for this report, the previous IEI report interviewed and reported on the progress of eight firms. This eighth firm is reported here for continuity.

details. Two firms also worked with PDC in selecting equipment for new facilities – one, a new pump station and the other, a new combined manufacturing plant.

*“We want to continue with IEI on a maintenance program to help maintain momentum.”*

Three firms expressed desire to continue work with Energy Trust in the maintenance program and another firm explicitly expressed plans to work with Energy Trust in regards to future mechanical and lighting upgrades.

*“We’d like to look at other buildings and possibly do lighting upgrades...and we will definitely work with Energy Trust. Anything of that nature we will definitely work with them.”*

#### ***Additional support that firms would have like to see from SEG and Energy Trust***

Only four firms commented on support from the SEG and Energy Trust. Three firms were satisfied with the support for SEG and Energy Trust and one firm suggested that paperwork, for applying for both the IEI and capital incentives, could be more streamlined.

*“I feel I can call SEG with a question any time - I called them last week and was very happy with the service they gave.”*

*“Anything [SEG and Energy Trust] can do to simplify or streamline the paperwork is welcome.”*

#### ***Suggestions for IEI***

One firm suggested IEI share more success stories and case studies. This firm indicated it would have liked to have more hands on experiences, field trips, and presentations from previous participants as part of the program.

One firm suggested that companies be grouped together by industry; however, some firms may be reluctant to share freely in this type of environment for fear of sharing competitive or sensitive information.

*“Try to group by type of industry so you can focus on the specifics in that industry. We had manufacturers and saw mills and office buildings and we didn’t have a lot in common with them.”*

Two firms suggested that IEI aid participants in documenting and presenting energy savings to upper management. A common theme from is the importance of support from and accountability to upper management. One participant observed that some of the IEI participants or energy champions were tradesmen who were not proficient with software programs and struggled to prepare analysis and graphics. This participant converted their MT&R data into a format that was more compelling and that he could better explain to his leadership team.

*“It didn’t seem like there was a great deal of IEI work on documenting and presenting success and achievement to upper management. There could have been more support here.”*

Two firms had no suggestions for IEI.

*“There are no improvements I can think of. They did a great job.”*

#### ***Advice to future IEI participants***

All seven firms would recommend the program to other firms considering participating. Four firms advised future participants to meter and track energy consumption in their facility before starting the IEI program.

*“Starting out fresh with IEI, companies would be better off if they started on the front end understanding their power consumption with tools to meter and monitor. We were half way through before we started gathering the data to understand what was going on.”*

Three firms emphasized the need for upper management to be involved and committed to the program. Beyond just providing initial approval for participating in the IEI, teams that were required to report their progress regularly to their management teams were motivated to stay on track.

*“Before a business ventures into [this program] they need a real commitment from upper management.”*

Four firms addressed employee involvement while another firm recommended educating employees about the program.



Two firms recommended future participants don't need to complete all of the activities, but instead only select the portions that are relevant to them. For instance, one firm indicated that as a smaller company, advice geared toward companies that operate 24/7 was not always applicable to them and they instead picked and choose the content that was applicable. One of these firm recommended sending different employees to different events depending on the title and skill set of the employee.

*"I would say to think about who it is that's going to be participating and maybe it's not the same person at every event. The skills and job title should match the event that's going on."*

One company warned that the program is time consuming and firms should be aware of that and allocate time to dedicate to it to get the most out of the program. Potential participants should be aware that there is much work to be done between each of the IEI meetings. Three firms recommended using a charge code to deal with this issue.

*"You need to be aware that it's going to take some percentage of your time...If you can only commit to the meetings, you should pass."*

Other suggestions included going into the program with clear goals and expectations, staying motivated throughout the program, and tailoring program content to fit the situation of the company.

*"It's a great program – go for it. Well worth the time, especially if you've never done any energy audits."*

### ***Miscellaneous***

One participant, with several meters covering large portions of their facility, expressed a desire to do sub metering to better understand their energy consumption better.

Through the IEI, one participant realized the importance tailoring the data in order to provide regular reporting to a number of parties:

- Detailed reports are reviewed in energy team meetings;
- Graphs of usage by department are post on the company intranet web site so all employees can see how their performance compares to other departments; and
- Initiative-specific data is incorporated into presentations to upper management to show successes and lobby for support for new initiatives.

This particular participant does not use the IEI's MT&R.

*"If you don't have that kind of visibility it's going to make it hard to sell. Need that data to get both employees engaged and upper management support for initiatives and capital projects."*

Energy Trust rebate checks capture the attention of the plant's upper management more so than BETC support because the incentive checks are delivered to the facility. This visibility may serve to remind upper management of the benefits and recognition possible from pursuing energy efficiency upgrades.

One participant observed that their peers that had a maintenance manager in the role of energy champion were more successful because they had the responsibility for maintaining the equipment and could direct the staff and resources within their control to make the changes.

## Conclusions and Recommendations

### *Conclusions*

The key conclusions from the IEI Cohort 1, one- year interviews are:

- Participants thought their participation in the IEI was valuable and a good use of time and resources.
- Participants maintained energy savings with many firms indicating that they were able to use the tools they'd learned through the IEI to leverage additional savings.
- Most firms continue to track their energy use (through the MT&R or another, similar tool) and maintain their energy teams which positions them well to undertake additional improvement activities in the future.
- Participants continued to undertake additional energy saving measures even after the conclusion of the program. These additional measures were split equally between operations and maintenance activities and capital projects in terms of number of projects.
- Most energy saving projects planned for the future involved repeating successful projects from one facility at additional facilities.
- Much of the low hanging fruit has been picked and firms are hoping for help with identifying additional ways to save energy through the maintenance program.
- Participants continued to work with the Energy Trust mostly for incentives for capital projects.
- The majority of the participants rated their overall satisfaction with the IEI, as well as the support they received from SEG, as very high. All participants would recommend participation in the IEI to other firms in their industry.
- Upper management or corporate support was a key success factor for the IEI. Support should go beyond authorizing participation in and resources for the IEI and extend to holding the energy teams accountable over the course of IEI. Requiring the teams to give regular status updates on activities undertaken and progress towards IEI objectives provides this accountability.

- Some participants thought the MT&R was not convenient to use and used other programs more regularly instead of or in addition to IEI's MT&R.
- Participants with an energy team that continued to meet frequently were more involved in employee awareness campaigns than those whose energy teams no longer met or met infrequently.

### *Recommendations*

Based on the participant feedback from the IEI Cohort 1, one-year interviews, Navigant Consulting recommends the following:

- Continue the IEI as a regular component of the PE program:
  - Ensure high-level management support and a mix of involvement, including team members from the shop floor.
  - The executive sponsor can support the energy team by freeing up the resources necessary to undertake the IEI activities and requiring that the team show progress at regular status update meetings.
- The format of the trainings should emphasize face to face meetings;
- Have participants begin metering and recording energy consumption prior to the start of the IEI program to establish a baseline and make this a clear expectation in program literature and presentations;
- Leverage participants enthusiasm for the IEI and their plans to continue and expand IEI activities by:
  - Asking past IEI participants to speak at current trainings; and
  - Hosting annual follow up meetings to discuss progress with initiatives.
- SEG should continue enhancements to their MT&R functionality:
  - Make the MT&R compatible with other software or certification programs participants may be using, such as LEED or Energy Star. Specifically, data input and output formats should be consistent across tools.
  - Enhance graphic and reporting capabilities.
  - Improve usability to make the tool easier for participants who may not be proficient with software tools or data analysis.
- Include training and support for presenting success and achievement to upper management.



It should be noted that, prior to this evaluation report, Energy Trust had already implement several improvements for Cohort 2, including modifying the format of the trainings to emphasize face to face meetings, asking past participants to speak at current trainings and modifying the IEI schedule so that setting up the MT&R is one of the first activities.

**Appendix 1: Cohort 1, Year 2 Interview Guide**

**Energy Trust of Oregon Industrial Energy Improvement Pilot Evaluation  
Cohort 1: One year post Interview Guide**

Project #:

Organization Name:

Call/Email Attempts

	Date	Time	Result			Comments
1						
2						
3						
4						
5						
6						
7						

**Num of Calls** \_\_\_\_\_ **Num of Contacts:** \_\_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## Notes to interviewers

This topic guide is designed to help you to complete an approximately 15-minute in-depth interview (IDI). As you know, the qualitative research process is about discovery, not coverage. As such, we expect you to cover all areas of investigation, but, if necessary, to focus on those questions that seem most relevant to each respondent or those that develop new and/or useful information. Additionally, you are not required to ask questions in the order they are given herein; based on your experience in qualitative interviewing, allow the flow of the conversation to dictate the order in which you ask them.

### **Background**

Navigant Consulting is evaluating the Industrial Energy Improvement (IEI). The IEI is a service under the Production Efficiency Program, which promotes energy efficiency at industrial customer sites. Strategic Energy Group runs the IEI service for the Energy Trust.

The IEI seeks to reduce participant site energy intensity and production costs by applying continuous improvement practices, the premise being that energy is a variable and manageable (as opposed to fixed) cost for industry. The IEI assists participant firms by putting in place a structured energy program which includes establishing accountability for tracking energy and engaging employees to reduce energy use through the “Plan, Do, Check, Act” cycle. The IEI services are delivered to participants in a group environment. Monthly trainings are held over the course of a year in various formats, consisting of six, day-long in person workshops, four, two-hour Webinars, and two individual, on site meetings. The workshops are often held at IEI participant firm locations on a rotating basis.

A previous interview was conducted one month after the last IEI meeting/training. This interview is being held approximately one year after the last IEI meeting/training and is intended to determine if the participant is maintaining the savings they realized during the IEI and if they’ve taken any other actions.

### **Interview Preparation**

The interview notes should detail the responses. “Yes” or “no” responses are not sufficient and should be probed for “why”. *Interviewer must review one-month interview notes prior to conducting this interview.*

### **Interview Recording**

If you record the interview, you must obtain explicit permission from the respondent.



## **Confidentiality**

If respondents ask, tell them yes, their answers will remain confidential.

## **Introduction**

Hello, my name is \_\_\_\_\_ and I work for Navigant Consulting. I am calling on behalf of Energy Trust of Oregon; they are interested in following up with you to determine the extent to which your firm is still using and benefiting from your participation in the Industrial Energy Improvement (IEI). As one of only ten participants in cohort 1, your feedback is critical to Energy Trust as they determine if the benefits of the IEI persist over time and how to make it more effective and compelling for future participants. I anticipate that the interview will take approximately 15 minutes. This interview is for research purposes; your feedback will only be reported to Energy Trust anonymously and will not affect the status of any Energy Trust project(s) you are involved with.

*NOTE: IF RESPONDENT QUESTIONS THE LEGITIMACY OF THE SURVEY, YOU MAY GIVE THEM THE EVALUATION MANAGER'S CONTACT INFORMATION:*

Phil Degens

Evaluation Manager

Energy Trust of Oregon

[Phil.degens@energytrust.org](mailto:Phil.degens@energytrust.org)

503-445-7620

## Interview

### **Background**

*If interviewee is different than the one-month interview, ask:*

What is your title?

What is your role within your organization?

How long have you been with your organization?

What was your involvement with the IEI project?

You saved #% over the course of the IEI. Are you maintaining these savings?

If yes or if savings have increased, ask:

How have you been able to do this?

What challenges have you encountered?

If no, ask:



Do you know why the savings have dropped?  
Do you believe you'll be able to regain the savings?  
How?

When the IEI ended last year, did you expect to save more or less energy or maintain the savings level?

Is your facility operating at the same level as it was a year ago? Determine higher or lower and by what degree.

Have you conducted any additional Energy Efficiency activities since the IEI ended?

If yes, ask:

What were they? (Are they working with Energy Trust and if they are how is it going and if they aren't why is that)

What challenges did you encounter in undertaking the various activities and how were these overcome?

Do you plan to take any additional actions as a result of the IEI? How influential was the IEI in undertaking these changes?

Are you using the MT&R? If not, why not?

Who uses it and for what purposes?

How often?

Have you added or removed any variables?

Do you still have your energy team in place?

Is there still support from upper management?

How often do you meet?

What is the purpose of the team?

What types of projects or activities do you undertake?

Do you foresee maintaining the team on an ongoing basis?

Maybe here: (did you work with energy trust on projects since the IEI ended) if not why not or do you plan to and if yes how is that going.

Is there any other assistance or support you would have liked to have received over the past year from SEG or Energy Trust? Specify

Have you conducted any capital projects since the IEI?

Are you planning any capital projects?

If yes to either, ask:

Was the IEI influential in making these changes?

Did you work/Are you working with Energy Trust on the project?

How is working with your PDC going?

If they aren't yet working with Energy Trust, ask:

Are you planning to contact Energy Trust?

Is there any assistance Energy Trust can offer on the project?

What suggestions do you have for improvement to the IEI?

What advice do you have for someone who is considering participating in the IEI?

Energy Trust would like to check back on your progress in the future. What would be a reasonable timeframe?

### **Closing**

If I have a clarification question as I'm reviewing my notes, is it all right to call you back or email you? Yes/No

Thank you very much for your time today.