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April 21, 2015

Via Electronic Filing

Public Utility Commission of Oregon
Attn: Filing Center
3930 Fairview Industrial Drive SE
Salem OR 97302

Re: PUBLIC UTILITY COMMISSION OF OREGON
Investigation into Large Customer Energy Efficiency Limitations
Docket No. UM 1713

Dear Filing Center:

Enclosed for filing in the above-referenced docket, please find the Opening Comments and Exhibits of the Industrial Customers of Northwest Utilities.

Thank you for your assistance. If you have any questions, please do not hesitate to call.

Sincerely,

/s/ Hannah A. Adams
Hannah A. Adams

Enclosures

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1713

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| In the Matter of |) | |
| |) | |
| PUBLIC UTILITY COMMISSION OF |) | OPENING COMMENTS OF THE |
| OREGON |) | INDUSTRIAL CUSTOMERS OF |
| |) | NORTHWEST UTILITIES |
| Investigation into Large Customer Energy |) | |
| Efficiency Limitations. |) | |
| _____ |) | |

I. INTRODUCTION

The Industrial Customers of Northwest Utilities (“ICNU”) appreciates the opportunity to submit comments in this proceeding. ICNU represents large energy users in both Portland General Electric Company’s (“PGE”) and PacifiCorp’s (collectively, the “IOUs”) service territories, many of which have worked successfully in partnership with the Energy Trust of Oregon (“Energy Trust” or “ETO”) to achieve significant reductions in their energy usage. This partnership involves both the receipt of incentive funding from the ETO to enable energy efficiency projects, and the expenditure of the customer’s own funds to cover the majority of these projects’ cost. Together, industrial customers and the ETO achieved 18.64 average megawatts (“aMW”) of electric energy efficiency savings in 2014, at an average levelized cost of 2.1 cents per kilowatt-hour (“kWh”).^{1/} This represents the least-cost source of energy efficiency acquired by the ETO in 2014.^{2/}

^{1/} Energy Trust of Oregon, “2014 Annual Report to the Oregon Public Utility Commission & Energy Trust Board of Directors” at 29 (Apr. 15, 2014), available at: http://assets.energytrust.org/api/assets/reports/2014_ETO_Annual_Report.pdf (“ETO 2014 Annual Report”).

^{2/} Id.

The Oregon Public Utility Commission (“Commission”) opened this investigation to implement a stipulation between the parties to PGE’s 2014 general rate case, which requested a proceeding “to consider the question of whether customers with loads greater than 1 aMW are receiving a direct benefit from conservation measures funded by amounts collected pursuant to Senate Bill (“SB”) 838.”^{3/} While the stipulation posits a number of questions, all addressed below, the answer to this overarching question is “no.” In fact, customers over 1 aMW receive no direct benefit from SB 838 funding; and, an informal agreement following passage of SB 838 that was neither memorialized nor approved by the Commission also limits the amount of funding these customers can receive from the SB 1149 public purpose charge, without any basis in the law for such a limitation.

Prior to SB 838, the ETO had the flexibility to spend all funds collected under the public purpose charge for energy efficiency on the most cost-effective conservation, regardless of which customer group implemented the project. This led to customers over 1 aMW receiving large percentages of this funding in some years, and very small percentages in other years. What was important was the acquisition of the most cost-effective energy efficiency, irrespective of who received the incentives. Today, despite the fact that customers over 1 aMW are, on average, receiving less funding as a percentage of the public purpose charge than they did before SB 838 was passed, the caps instituted as part of the informal agreement following SB 838 are concerned primarily with who receives incentives rather than the source of the most cost-effective energy efficiency.

^{3/} Docket No. UE 283, Order No. 14-422, Appen. C at 1 (Dec. 4, 2014).

This could jeopardize the ETO’s ability to acquire all cost-effective energy efficiency. Such an outcome is not in the public interest and would benefit no one. Large customer conservation projects are 2.5 times more cost-effective than residential energy efficiency and deliver a number of ancillary economic benefits, such as higher wages, increased productivity, and more jobs.^{4/} To ensure the ETO can fulfill its mission and, in the process, adhere to the statutory mandates of Oregon’s energy efficiency legislation, the Commission should abandon the informal caps and ensure that customers over 1 aMW are prohibited only from receiving funds collected under SB 838, rather than funds collected from the public purpose charge.

II. BACKGROUND

A. Oregon’s Energy Efficiency Laws and the Informal Cap

As part of restructuring legislation passed in 1999 (“SB 1149”), all customers within the IOUs’ service territories are required to pay a three percent “public purpose charge,” which applies to the customer’s total bill.^{5/} The public purpose charge is assessed regardless of whether a customer is on a cost-of-service rate or direct access.^{6/} The majority of the public purpose charge goes to fund “cost-effective conservation” and “new market transformation.”^{7/} These funds are administered by the ETO.^{8/}

According to the ETO’s first annual report to the Commission, the organization “was created to streamline and stabilize energy conservation and renewable energy programs

^{4/} Infra, n. 39.

^{5/} ORS § 757.612(2)(a).

^{6/} Id. Customers over one average MW that self-direct their own energy efficiency are entitled to a credit against the energy efficiency portion of the public purpose charge. ORS §757.612(5)(a).

^{7/} ORS § 757.612(3)(b)(A).

^{8/} ORS § 757.612(3)(d).

across PGE and Pacific Power service territories”^{9/} The ETO noted that it had “established a goal to help consumers save 300 average megawatts of electricity by 2012.”^{10/} The ETO exists, in other words, to promote the acquisition of cost-effective energy efficiency in the IOUs’ service territories, regardless of the customer class from which it is acquired.

In 2007, the legislature passed SB 838, which allows the Commission to impose an additional charge to enable increased funding to the Energy Trust above the public purpose charge to allow it to pursue all “cost-effective energy conservation measures.”^{11/} This funding is not part of the public purpose charge, but rather, incremental to it. Thus, the IOUs collect SB 838 funding from customers under a separate tariff.^{12/} Under the statute, customers with loads greater than 1 aMW are exempted from charges collected under SB 838 and are prohibited from receiving “any direct benefit from energy conservation measures if the costs of the measures are included in rates under this section.”^{13/} This is known as SB 838’s “direct benefit cap.”

To implement the direct benefit cap after SB 838 passed, various interest groups crafted an “informal multiparty agreement” that limited the amount of incentive funding customers over one aMW could receive from the ETO.^{14/} This large customer cap was expressed as a percentage of SB 1149 public purpose charge revenues the Energy Trust received for energy efficiency.^{15/} Specifically, for PGE the large customer cap is 18.4%, and for PacifiCorp it is

^{9/} Energy Trust of Oregon, “Annual Report to the Oregon Public Utility Commission” at 1 (April 15, 2003), available at: http://assets.energytrust.org/api/assets/reports/2002_Annual_Report0.pdf.

^{10/} Id. at 5.

^{11/} ORS § 757.689(1).

^{12/} PGE collects the public purpose charge under Schedule 108 and SB 838 incremental funding under Schedule 109. PacifiCorp collects the public purpose charge under Schedule 290 and SB 838 incremental funding under Schedule 297.

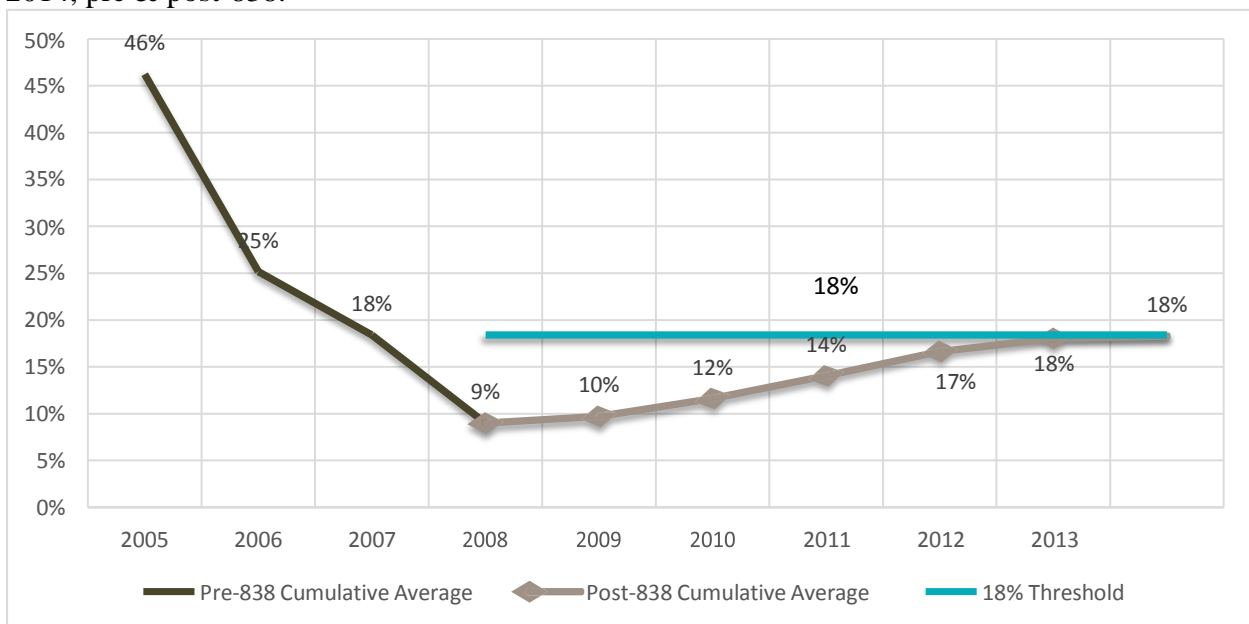
^{13/} ORS § 757.689(2)(b).

^{14/} ICNU/101 at 1 (Energy Trust of Oregon, “Large User Funding Analysis” (Oct. 31, 2013)).

^{15/} Id.

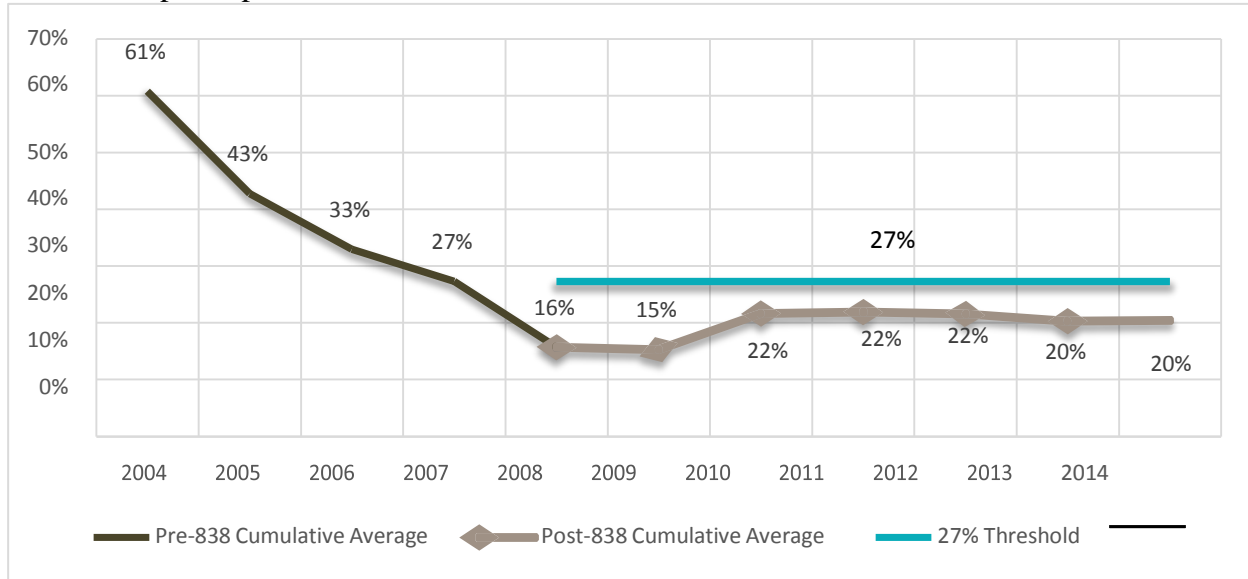
27%.^{16/} These percentages represent the average percentage of incentives paid to large customers during the 3-4 year period prior to SB 838’s passage.^{17/} In other words, the caps are intended to maintain the average amount of incentive funding customers over 1 aMW received prior to SB 838.^{18/} To illustrate the informal cap, the following charts provide the cumulative average incentive funding to large customers through 2014. The horizontal lines denote the informal caps:

PGE cumulative average of SB 1149 revenue spending on >1aMW customer incentives 2005-2014, pre & post-838:^{19/}



^{16/} ICNU/103 at 2 (Energy Trust of Oregon, “Greater Than 1 aMW Analysis Project: PGE 2014 Report,” prepared by CLEAResult (April 8, 2015)); ICNU/104 at 2 (Energy Trust of Oregon, “Greater Than 1 aMW Analysis Project: Pacific Power 2014 Report,” prepared by CLEAResult (April 13, 2015)).
^{17/} ICNU/101 at 1. For PGE, the period is 2005-2007; for PacifiCorp it is 2004-2007.
^{18/} ICNU/102 at 2 (Energy Trust of Oregon, “Large Energy User Funding Limit” (March 12, 2014)).
^{19/} ICNU/103 at 3.

PacifiCorp cumulative average of SB 1149 revenue spending on >1aMW customer incentives 2004-2014, pre & post-838:^{20/}



Under the informal cap methodology, the ETO must adhere to the percentage caps as a cumulative average.^{21/} Thus, the ETO can exceed the cap in one year, so long as the average of all years following passage of SB 838 does not exceed the cap.^{22/} The ETO has not yet reached the cap in either of the IOUs’ service territories.^{23/} Thus, the ETO is meeting its energy efficiency acquisition goals today while providing customers over 1 aMW *less* funding, as an average percentage of SB 1149 incentives, than these customers received before SB 838 was passed.

No limitation on the amount of public purpose charge funding the ETO could spend on a particular customer group existed before SB 838 and, indeed, as the above charts show, prior to SB 838, the ETO spent significantly more on customers over 1 aMW in certain years than the informal caps currently allow.

^{20/} ICNU/104 at 3.

^{21/} ICNU/102 at 2-3.

^{22/} Id.

^{23/} ICNU/103 at 3; ICNU/104 at 3.

If the “informal multiparty agreement” was ever officially memorialized in writing, no one has a copy of it today.^{24/} Nor is there any record of the Commission reviewing or approving this agreement.^{25/} Nevertheless, lacking direction or a consensus on an alternative methodology, the ETO continues to adhere to the funding caps developed under this informal agreement.^{26/} Currently, the ETO reports that it is in danger of exceeding the informal cap in PGE’s service territory, while it foresees no short-term issues in PacifiCorp’s service territory.^{27/}

B. Energy Efficiency Funding in Oregon

The ETO is an important source of capital to fund energy efficiency in Oregon, but it is not the only source of such capital. The ETO only funds electric energy efficiency in PGE’s and PacifiCorp’s service territories.^{28/} Additionally, it does not fund all energy efficiency undertaken in these service territories. For instance, in 2013, the ETO provided approximately \$9.7 million in total incentives to PGE and PacifiCorp customers with loads greater than 1 aMW.^{29/} It estimates, however, that the total cost of the projects implemented by customers with loads greater than 1 aMW that the ETO incentivized was approximately \$27 million.^{30/} The difference between the total cost of the projects and total ETO incentives – approximately \$17.3 million, or 64% of the total project cost – was funded by customers themselves. This is cumulative to amounts such customers paid toward the public purpose charge. This figure does

^{24/} See ICNU/105. ETO documents produced in discovery include a “straw man proposal” for implementing the informal caps, but no official agreement between stakeholders.

^{25/} ICNU/102 at 2 (noting that the informal agreement “was not created within the formal regulatory docket process”).

^{26/} Id. at 4.

^{27/} Id. at 3.

^{28/} ETO 2014 Annual Report at 11.

^{29/} ICNU/106 at 1 (ETO Resp. to ICNU DR 3a).

^{30/} Id. (ETO Resp. to ICNU DR 3b).

not consider the cost (and associated energy savings) of energy efficiency projects customers over 1 aMW undertook entirely on their own (which the ETO does not track).

This suggests that it is particularly important that ETO incentives be available to large customers. These incentives help ensure that large customers pursue major conservation projects that yield significant energy savings for the State. The ETO reports that “[o]n average, large site projects are 2.5 times more cost effective than 838 eligible site projects.”^{31/} From a system resource perspective, this means smaller customers benefit when the ETO directs funding to large customers because it is acquiring the least cost resource for all customers – “[a]ll ratepayers are benefitting from the higher savings.”^{32/}

III. COMMENTS

The stipulation the Commission approved in PGE’s 2014 general rate case that establishes the framework for this investigation lists six questions related to energy efficiency funding for large customers.^{33/} Accordingly, the Commission’s Staff issued a framing document in this docket that requests responses to the questions in the stipulation.^{34/} These comments address each of those questions, but reverse the order of the first two questions for clarity purposes.

A. What is the meaning of “any direct benefit” as used in ORS 757.689(2)(b)?

The “direct benefit” contemplated by ORS § 757.689(2)(b) is the individual customer load reduction and associated cost savings for that customer that results from the

^{31/} ICNU/102 at 3.

^{32/} Id.

^{33/} Docket No. UE 283, Order No. 14-422, Appen. C at 2 (Dec. 4, 2014).

^{34/} Docket No. UM 1713, “Staff’s Initial Framing Document” (Feb. 25, 2015).

implementation of an energy efficiency measure incentivized by the ETO through SB 838 funding.

When interpreting a statute, “[t]he first step [is] an examination of text and context.”^{35/} “[T]here is no more persuasive evidence of the intent of the legislature than the words by which the legislature undertook to give expression to its wishes.”^{36/} A statute “should be read in connection with all statutes relating to the same subject matter, and effect should be given to every word, phrase, sentence and section of all such statutes, if possible.”^{37/}

Subsection (1) of ORS § 757.689 allows the Commission to authorize the IOUs to include in rates the costs of cost-effective energy conservation measures that are incremental to those funded through the public purpose charge. ORS § 757.689(2) then provides:

The commission shall ensure that a retail electricity consumer with a load greater than one average megawatt:

- (a) Is not required to pay an amount that is more than three percent of the consumer’s total cost of electricity service for the public purpose charge under ORS 757.612 and any amounts included in rates under this section; and
- (b) Does not receive *any direct benefit* from energy conservation measures if the costs of the measures are included in rates under this section.^{38/}

Accordingly, ORS § 757.689(2) prohibits customers over 1 aMW from contributing to, or receiving a direct benefit from, incremental energy efficiency measures funded through SB 838.

There are a number of potential benefits that could be ascribed to energy efficiency measures that the ETO incentivizes. One is the incentive itself. Another is the reduced energy use and associated cost savings the individual customer enjoys as a consequence

^{35/} State v. Gaines, 346 Or. 160, 171 (2009).

^{36/} Id. (citation and internal quotations omitted).

^{37/} In re Holmlund’s Estate, 232 Or. 49, 67 (1962); see also, In re Honeywell Int’l, Inc. et al. Application for Declaratory Ruling, DR 40, Order No. 08-388 at 12 (July 31, 2008).

^{38/} ORS § 757.689(2) (emphasis added).

of implementing a conservation measure. Yet another is the generalized reduced system costs and environmental benefits all customers potentially realize as result of energy efficiency eventually displacing the need for more expensive (and possibly carbon-intense) supply-side resources. Another benefit is the imputed net economic impacts of energy efficiency, which include lower-cost products, increased competitiveness in a globalized economy, higher wages, and more jobs.^{39/} While all of these are potential “benefits” of energy efficiency, only the first two – the incentive and the individual customer energy and cost savings – can legitimately be considered “direct benefits” if the word “direct” is to have any meaning in the statute.

Although “direct” is not defined in the statute, its common dictionary definition is something that is “marked by absence of an intervening agency, instrumentality, or influence.”^{40/} It is “immediate.”^{41/} A customer that implements a conservation measure that receives ETO funding sees an immediate reduction in its energy usage and a corresponding immediate cost savings. This is a “direct benefit.” Meanwhile, all customers may see a long-term generalized benefit from this reduced load, but that benefit is not quantifiable with any certainty and is only realized at an indeterminate future period when the utility has been able to avoid installing a new supply-side resource following the cumulative impact of many energy efficiency projects. In fact, in the interim period between the customer load reduction and the time when the utility would otherwise have had to build a new resource, energy efficiency actually causes customer

^{39/} See, State & Local Energy Efficiency Action Network, “Industrial Energy Efficiency: Designing Effective State Programs for the Industrial Sector” (March 2014), available at: http://www.energy.gov/sites/prod/files/2014/03/f13/industrial_energy_efficiency.pdf; Pinnacle Economics, “Economic Impacts from Energy Trust of Oregon 2013 Program Activities” at 7 (May 5, 2014) (finding net economic impacts from ETO program activities of \$175,089,000 in output, \$60,448,000 in wages, \$14,705,000 in business income, and 1,091 jobs), available at: http://assets.energytrust.org/api/assets/reports/2013_Economic_Impacts_Report.pdf.

^{40/} Merriam-Webster, Inc., Webster’s Third New International Dictionary, unabridged 640 (1993)

^{41/} Id.

costs in the aggregate to increase because the costs of the system are allocated to fewer megawatt hours. As PGE testified in its current rate case, “in the short-term, energy efficiency leads to a reduction in contributions that would otherwise help offset our existing fixed costs, which raises customer prices on average, but also lowers customer bills because of reduced usage.”^{42/}

Thus, the generalized system benefit of lower energy costs overall that customers may realize from energy efficiency does not occur until individual customers have implemented conservation measures and the cumulative effects of those customers’ reduced loads have resulted in the utility avoiding the need to purchase more expensive generation. This cannot be said to be an “immediate” benefit. Moreover, there is at least one “intervening agency, instrumentality, or influence,” which is the avoided need to purchase or build a new resource. There are also potentially many others, including the energy efficiency measures pursued by other customers, as well as reduced load growth for reasons other than energy efficiency.

For these reasons, the “direct benefit” that customers over 1 aMW are prohibited from receiving under SB 838 is the incentive funding enabled by collections under this statute and the reduced energy usage and cost savings that an individual customer realizes from pursuing a conservation measure with these incentives. The generalized reduced system cost all customers may ultimately realize from energy efficiency does not constitute a “direct benefit.”

B. Are customers with loads greater than 1 aMW receiving a direct benefit from conservation measures funded by amounts collected pursuant to SB 838?

No. The informal caps originally developed following passage of SB 838, and to which the ETO continues to adhere, effectively make it impossible for customers over 1 aMW to receive the incremental funding collected under SB 838. This is because the informal caps are

^{42/} Docket No. UE 294, PGE/100 at 3:21-4:1.

expressed as a percentage of *SB 1149* incentive funding that can be provided to customers over 1 aMW – 18.4% for PGE and 27% for PacifiCorp.^{43/} In other words, they are *more* restrictive than SB 838’s direct benefit limitation because they restrict the ETO’s ability not only to spend incremental funding received under SB 838 on these customers, but they also limit the expenditure of SB 1149 public purpose charge dollars as well.

This can be seen from the data. An October 31, 2013 ETO analysis stated that, “[i]f in PGE territory we were to continue >1aMW incentive spending at a rate equal to the average of the past 3 years (2010-2012, \$5.9M), we would exceed the current spending limit in 2015.”^{44/} However, the average amount of public purpose charge dollars earmarked for energy efficiency that PGE remitted to the ETO between 2010 and 2012 was nearly \$28 million.^{45/} Obviously, there is a huge discrepancy between the less than \$6 million the ETO can spend on customers over 1 aMW under the 18.4% informal cap, and the amount of public purpose charge dollars it collects from PGE overall. Meanwhile, the ETO also collected an average of over \$30 million in SB 838 funds between 2010 and 2012 in addition to its collections under the public purpose charge.^{46/} Thus, customers over 1 aMW do not receive a direct benefit from SB 838 funding; and, they are also not allowed to receive a direct benefit from most of SB 1149 funding despite the fact that SB 1149 does not limit the types of energy efficiency projects the ETO may fund with public purpose dollars.^{47/}

^{43/} ICNU/103 at 2; ICNU/104 at 2.

^{44/} ICNU/101 at 1.

^{45/} ICNU/107 at 1 (PGE Resp. to ICNU DR 2, Attach. A).

^{46/} Id. at 2 (PGE Resp. to ICNU DR 3, Attach. A).

^{47/} See ORS §757.612.

C. Are there any barriers that prevent the ETO from obtaining all cost-effective energy efficiency?

As the ETO's 2014 Annual Report demonstrates, the organization is doing an excellent job of acquiring cost-effective energy efficiency. In 2014, the Energy Trust had one of its highest-savings years ever, exceeding its goal by more than one percent.^{48/} The average levelized cost of energy efficiency the ETO acquired in 2014 was only 2.6 cents per kWh.^{49/} The Energy Trust also exceeded its long-term strategic plan goal of 479 aMW in electric energy efficiency by 13 aMW.^{50/} Thus, the ETO has, to date, acquired the cost-effective energy efficiency it has set for itself as a goal.

Meanwhile, the Energy Trust's 2015-2019 strategic plan establishes a goal of acquiring an additional 240 aMW of electric energy efficiency over this period.^{51/} To achieve this "ambitious figure[,]"^{52/} the ETO will need access to industrial energy efficiency, which the informal cap in PGE's service territory may soon prevent. In 2014, cumulative average incentive spending for customers over 1 aMW in PGE's service territory had reached 18.3%, only one-tenth of a percent below the cap.^{53/} Thus, this informal cap does present a potential barrier to the ETO's acquisition of all cost-effective energy efficiency in future years.

D. If such barriers exist, what other options exist to gain all cost-effective energy efficiency, including from customers with loads greater than 1 aMW?

There may be methods other than tracking incentive dollars to ensure acquisition of all cost-effective energy efficiency from large customers while still maintaining compliance

^{48/} ETO 2014 Annual Report at 7.

^{49/} Id.

^{50/} Id. at 6.

^{51/} Energy Trust of Oregon, "2015-2019 Strategic Plan" at 5 (Oct. 1, 2014), available at: http://assets.energytrust.org/api/assets/plans/2015-2019_Strategic_Plan0.pdf.

^{52/} Id.

^{53/} ICNU/103 at 3.

with the SB 838 direct benefit cap. To the extent such alternative methods are proposed in this docket, ICNU will review and may support them if they adhere to the statutory requirements.

If, however, compliance with the SB 838 direct benefit cap continues to be measured by incentive dollars paid to large sites, then the most straightforward option available to the Commission to ensure the ETO can acquire all cost-effective energy efficiency and still comply with the law is to simply eliminate the informal caps. These caps were never approved in a Commission proceeding, and to the extent they limit SB 1149 funding to large customers, they have no basis in the statutes.

Another option available to the Commission could be to increase one or both of the informal caps. Increasing PGE's 18.4% cap to align it with PacifiCorp's 27% cap, for instance, would provide some breathing room in PGE's service territory. The ETO notes that "[i]f we assume the average incentive demand for the past three years in PGE (\$5.8M) increases by 25% (\$7.25M) and is sustained for the next three years, the cumulative % of incentives to total revenues from PGE large customers would increase from 17% to 20%."^{54/} Thus, if PGE's cap were aligned with PacifiCorp's, even a significant increase in the amount of incentive funding directed to PGE's large customers would not threaten the new cap.

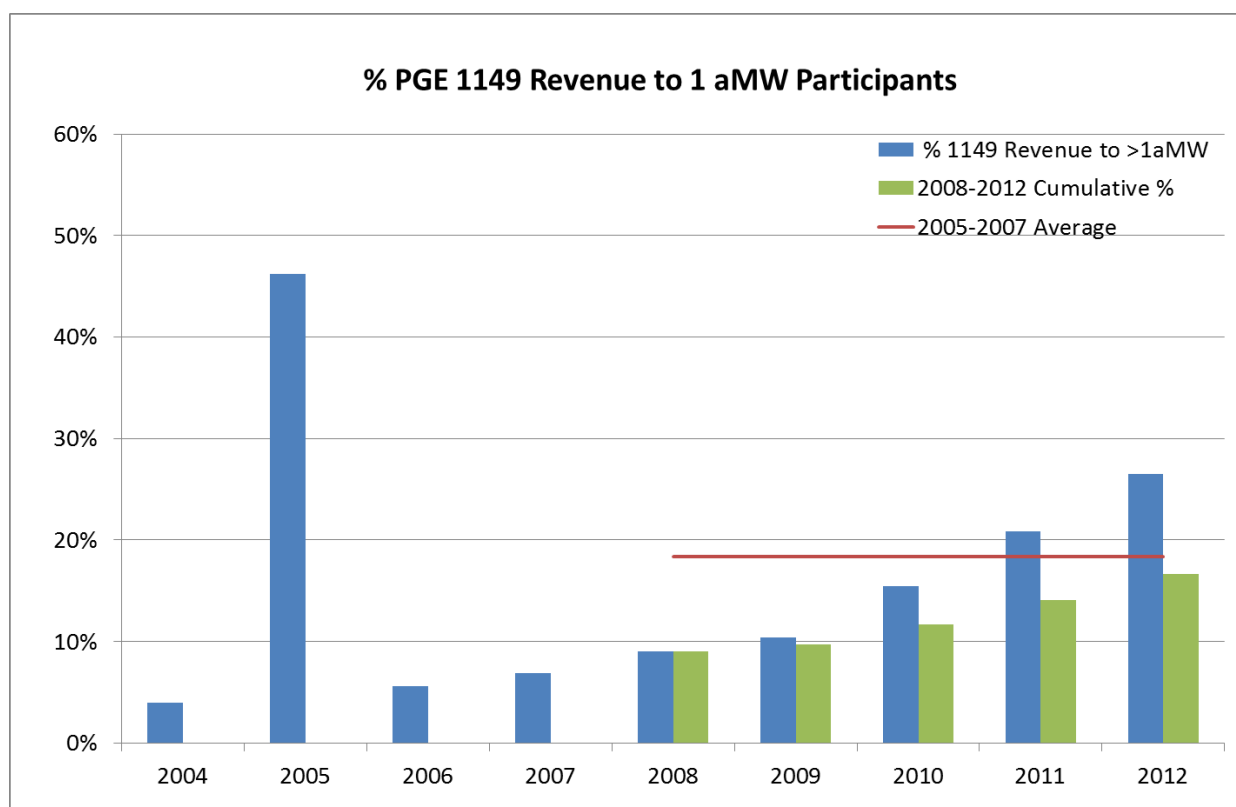
E. Should the ETO approach to funding energy efficiency be flexible to take advantage of energy efficiency savings brought about by changes in technology and the economy?

Yes. In PGE's service territory, the pre-SB 838 incentive funding that was used to establish the informal cap after passage of SB 838 was limited essentially to one large paper

^{54/} ICNU/101 at 3.

mill.^{55/} Since that time, the large customer base in PGE's service territory has grown to include a significant high-tech and manufacturing presence.^{56/} The ETO should not be constrained by an informal funding cap that no longer represents the large customer profile it seeks to serve.

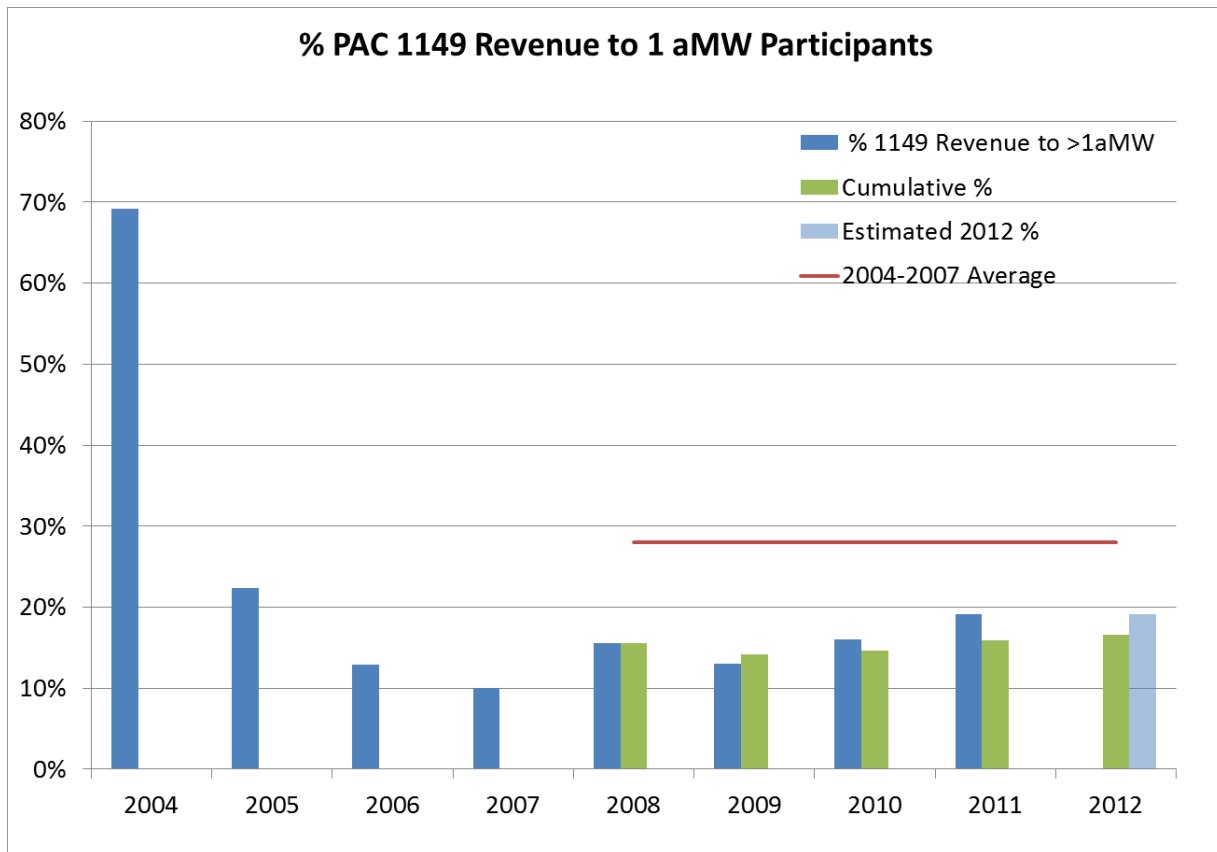
Moreover, the ETO's acquisition of cost-effective energy efficiency has principally been guided by where and when opportunities arise, which can be influenced by both technological and economic changes. This requires the ETO to be flexible in its funding to each customer group. Historically, this flexibility has resulted in customers over 1 aMW receiving large percentages of public purpose charge incentive funding in some years, and small percentages in other years. Consider, for instance, the following charts.^{57/}



^{55/} ICNU/102 at 2.

^{56/} Id.

^{57/} ICNU/108 at 8-9 (“A Summary of Factors Affecting the Annual Analysis of SB 838 Compliance,” attached to ETO Resp. to ICNU DR 2).



The year-to-year difference in the amount of incentive funding the ETO has provided to customers over 1 aMW is striking. In PGE’s service territory, it provided a mere 4% of incentive funding to these customers in 2004, which increased to 46% in 2005 before falling back to 6% in 2006. Similar fluctuations have occurred in PacifiCorp’s service territory, going from a high of 69% in 2004 down to 10% in 2007.

Such ETO flexibility in funding is essential because industrial conservation projects in particular are time-sensitive. “Because many industrial projects and larger commercial projects are one-time opportunities driven by facility or plant construction or major change-outs, trimming program activity may result in significant efficiency lost opportunities.”

the ETO has reported.^{58/} This is especially the case for what the Energy Trust calls “mega-projects.” These are projects that receive over \$500,000 in incentives and require approval of the ETO Board of Directors.^{59/} They yield very large savings and are the most cost-effective conservation the ETO acquires. Such projects can yield energy savings for less than one cent per KWh – over three times as cost-effective as the levelized cost of residential energy efficiency the ETO acquired in 2014.^{60/} These are, in other words, projects the ETO should be encouraged to pursue when it has the opportunity. The best way to encourage such funding is to give the ETO the flexibility to fund large technology-driven projects to the maximum extent allowed by the statutory framework. That means the ETO should have the flexibility to use all funds collected pursuant to the public purpose charge to fund the most cost-effective projects, and funds collected pursuant to SB 838 should be used exclusively for projects at sites under 1 aMW.

Prior to implementation of the informal funding caps, the ETO did just that with respect to the public purpose charge. The large percentages of public purpose charge incentives allocated to large customers in PacifiCorp’s and PGE’s service territories in 2004 and 2005, respectively, were influenced by the ETO’s funding of mega-projects.^{61/} In fact, a significant reason the ETO is in danger of exceeding the informal cap in PGE’s service territory today is because it has pursued a series of mega-projects with one customer beginning in 2012, which is expected to continue through 2017.^{62/} In 2012, these mega-projects accounted for 34% of all

^{58/} ICNU/108 at 1,.

^{59/} ETO 2014 Annual Report at 17; ICNU/109 at 1 (ETO Resp. to ICNU DR 21).

^{60/} ICNU/109 at 3 (ETO Resp. to ICNU DR 23); ETO 2014 Annual Report at 29 (showing levelized cost of residential energy efficiency of 2.9 cents per kWh).

^{61/} ICNU/108 at 7.

^{62/} ICNU/109 at 1-2 (ETO Resp. to ICNU DRs 21 and 22).

incentives directed to customers over 1 aMW.^{63/} They accounted for 22% of such incentives in 2013.^{64/} However, if the ETO exceeds the informal cap in PGE's service territory in 2015, it may need to curtail its support for these mega-projects. If the informal caps were removed, however, it could continue to pursue the most cost-effective energy efficiency available.

The consequence of removing the informal caps, therefore, is that it would enable the ETO to pursue very large conservation projects for the least cost to ratepayers if and when such projects become available. In the future, technological or economic changes may shift the source of the least-cost conservation to smaller customers, as was the case in most years prior to SB 838. Before the informal caps were implemented, the ETO was able to spend all public purpose charge dollars on any customer segment that provided the most cost-effective energy efficiency in any given year. Some years that segment was customers over 1 aMW, and other years it was not. The ETO should again have the ability to pursue the most cost-effective energy efficiency when it is available, regardless of the customer source, provided that it complies with the restrictions imposed by SB 838.

F. Should there continue to be a cap on energy efficiency funding provided by the ETO to PGE and PacifiCorp customers with loads greater than 1 aMW, and if so, what criteria should be used to set such a cap?

As already discussed above, the informal caps no longer serve a useful or practical purpose and should be abandoned. There should, however, continue to be a cap on funding to customers over 1 aMW that adheres to the plain language of the law. Specifically, SB 838 mandates that customers over 1 aMW neither pay into, nor receive a direct benefit from,

^{63/}

Id.

^{64/}

Id. Final 2014 data is not yet available.

energy efficiency funding incremental to the three percent public purpose charge.^{65/}

Accordingly, the ETO should be directed to ensure that no funding collected pursuant to SB 838 is spent on energy efficiency projects at sites over 1 aMW, but should be allowed to spend all SB 1149 funds in any manner it determines to be most cost-effective. As discussed above, such a cap would comply with the language of the law and would ensure that the ETO can pursue the most cost-effective energy efficiency available.

IV. CONCLUSION

For the foregoing reasons, ICNU recommends that the Commission modify the way in which the ETO limits incentive funding to customers over 1 aMW. The current informal caps are not grounded in any statute and unnecessarily limit the ETO's flexibility in pursuing the most cost-effective energy efficiency in the IOUs' service territories. While raising the informal cap in PGE's service territory could alleviate the immediate problem of the ETO's ability to acquire all cost-effective energy efficiency in this service territory, removing the informal caps altogether in favor of a simple limitation on funding to customers over 1 aMW from SB 838 funds would provide the ETO with maximum flexibility and would most closely comply with the requirements of the law.

^{65/} ORS § 757.689(2).

Dated this 21st day of April, 2015.

Respectfully submitted,

DAVISON VAN CLEVE, P.C.

/s/ Tyler C. Pepple

S. Bradley Van Cleve

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Of Attorneys for the Industrial Customers
of Northwest Utilities

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

UM 1713

In the Matter of)
)
PUBLIC UTILITY COMMISSION OF)
OREGON)
)
Investigation into Large Customer Energy)
Efficiency Limitations.)
_____)

AFFIDAVIT OF TYLER C. PEPPL

I, TYLER C. PEPPL, being first duly sworn on oath, depose and say:

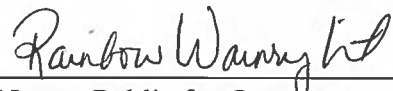
1. My name is Tyler C. Pepple. I am an attorney representing the Industrial Customers of Northwest Utilities ("ICNU") in this matter.
2. I filed comments and exhibits (ICNU/100-109) on behalf of ICNU in this matter.
3. To the best of my knowledge, the filed comments are true and accurate.

SIGNED this 21 day of April, 2015.

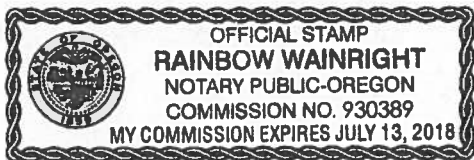


TYLER C. PEPPL

SUBSCRIBED AND SWORN to before me this 21 day of April, 2015.



Notary Public for Oregon
My Commission Expires: July 13, 2018





Large Energy User Funding Analysis

October 31, 2013

Background

Through SB838, electric utilities can add an additional amount to the bills of all customer sites with usage less than or equal to 1aMW. The resulting funds are to be used to fund electric efficiency beyond the established public purpose charge from SB 1149, to meet efficiency resource needs identified in utility integrated resource planning. Because larger customers are not paying in to the 838 fund, they are ineligible for efficiency program funding from 838. As a way of assuring that large customers are not benefitting from this added funding, a 2008 informal multiparty agreement set a limit to the percentage of 1149 incentive funding that Energy Trust can allocate to customers over 1 aMW.

The limits, established separately for each utility, are based on large customer funding prior to SB 838 implementation. They are calculated as the total *incentives* paid to >1aMW sites divided by total 1149 efficiency *revenues* directed to Energy Trust over a base pre-838 timeframe. For PacifiCorp the base period is 2004-2007 and for PGE, the base period is 2005-2007. For PacifiCorp this value is **27%** and for PGE it is **18%**.

Compliance with this spending limit is evaluated by comparing post-838 funding to these limits. The post-838 percentage for comparison to the numbers described above is calculated on a cumulative basis starting in 2008. It is the sum of incentives for >1aMW over the sum of total 1149 energy efficiency revenues to Energy Trust. 2008-2012 for PacifiCorp is 22% (five points beneath the limit of 27%) and for PGE is 17% (1% point below the limit of 18%).

There are two types of issues to be addressed: 1) Strong program interest from large sites is expected to continue, leading to the potential for the current funding cap methodology to limit Energy Trust's ability to acquire all cost effective resources. If in PGE territory we were to continue >1aMW incentive spending at a rate equal to the average of the past 3 years (2010-2012, \$5.9M), we would exceed the current spending limit in 2015. The cap may cause us to redirect funds above the cap to higher cost projects from smaller, 838 eligible sites. It is also possible that as a consequence Energy Trust does not meet IRP goals in some years. The result may mean lost opportunity of low cost resource, unmet demand and unrealized savings.

2) Implementation of the spending limit is extremely challenging. A) Energy Trust still does not have access to knowing which meters and sites are paying 838 and which are not- the estimates cited above are based on the best available data. B) This is further complicated by the fact that the definition of a self-direct eligible site and an 838 exempt site differs. Meters that are <1aMW yet are included with a self-direct site definition totaling >1aMW pay 838 charges. Since they are meters within a self-direct site (total meter load >1aMW) the programs are only reasonably able to treat them as an exempt, 1149 only site. It's impossible to know which projects are on which meters and which ones are paying 838 or not paying 838. We run the risk of limiting program participation to sites which do have some meters paying 838.

Today the OPUC is aware of these issues and is questioning whether the methodology used to set Energy Trust's spending limit for >1aMW sites is the best policy. There may be a more appropriate level

of funding for customers >1 aMW that brings the proper balance between getting all cost-effective measures and reasonable equity for funders. To determine this we need to look at the problem differently. The solution should leave sufficient revenue for other customer classes while not limiting the acquisition of all cost-effective savings. This paper summarizes an analysis of key questions to help frame the issue and make decisions and offers some recommendations to address both categories of issues.

Scope

To help inform the review of the spending limit methodology, information is needed that can help policymakers gauge the balance between funder equity and best benefit for all ratepayers.

Questions to be addressed:

1. How much are > 1aMW sites paying in to Energy Trust efficiency funding? How has this changed over time?
2. How much is currently being spent on them?
3. How much savings is acquired with current cap?
4. How levelized cost for large customer projects compare to costs for other customers.
5. How does self-direct factor into the whole issue?
6. How has the ratio of revenues received from <1aMW customer to spending for <1aMW has changed over time?
7. Whether the ratio of energy usage by > 1 aMW to other customers has grown or shrunk since base period.
8. Estimate how much savings we could end up foregoing with the current cap to spending
9. Looking at how limiting spending on > 1 aMW might affect levelized cost

Analysis

To answer these questions, both utilities provided historical annual load and revenue data separated by 838 exempt (>1aMW sites) and non-exempt (<=1aMW sites) customer categories. The exempt group was further separated into those that are versus are not actively self-directing energy efficiency. Those sites don't contribute to 838 but also don't contribute to Energy Trust revenue.

This utility data was combined with Energy Trust's historical database of savings and incentives paid (created by a third party contractor to date), also separated by those >1aMW and those <=1aMW. Below is a brief summary of key takeaways, followed by responses to each question for each utility.

Summary of key findings

- Dollars provided to Energy Trust by sites with loads greater than 1aMW have remained relatively steady over all years while non-exempt sites are contributing 36%--66% more per kWh in 1149 funds than in 2004/2005. This reflects 838 charge increases plus other rate increases over the years for the non-exempt meters.
- Demand for efficiency program spending from >1aMW sites has varied year to year but is expected to maintain recent levels or increase over the next 5 years, just how much of an increase is unknown.
- In recent years, >1aMW sites contribute 9% and 13% of total 1149 revenues (PGE/PAC) and receive 18% and 24% of 1149 incentives.
- The utility cost of savings from >1aMW sites is less than half the cost of non-exempt site projects

- Savings potential from >1aMW sites is estimated to be 20% of our current 20 year potential assessment.
- The risk of the current spending cap hindering acquisition is high in PGE territory but low for PAC.
- Although Energy Trust has historically spent more on large sites than the revenue collected from those sites, the value of the large site energy savings to the system has been significant and benefits all ratepayers.

Options

Option 1. Consider removing the exemption for >1aMW sites contributing to the 838 funds. This would require a legislative act.

- Large sites have received significantly more incentive benefit per dollar contributed compared to non-exempt sites as well as more savings per dollar received. However, the lower-cost savings benefit both large users directly and nonexempt sites through a lower cost energy system.
- If the large customer exemption were removed, the impact of removing the exemption would be an overall increase in Energy Trust funding from large customers from an average of 0.09 cents/kWh to 0.31 cents/kWh.

Option 2. Align implementation of 838 charges to self-direct site definitions.

Individual meters within a self-directing site may be <1aMW and therefore charged 838 rates. Administration of spending caps within a site is overly complex. For example, project eligibility would need to be tied to an 838 eligible meter. That level of precision is not reasonable to assume is possible in implementing a program. The risk to Energy Trust is that we would be limiting program participation for sites that are paying 838 at some meters. By aligning definitions, meters within a self-direct eligible site would not be charged 838, regardless of load and the risk of unnecessarily limited participation at some meters would be minimized.

Option 3. Revise the method for compliance with 838 from the current spending cap to some less restrictive cap.

The cap will result in a resource acquisition constraint in PGE territory but is not estimated to have an impact on acquisition in PAC. Removing the constraint ensures that all least cost resource can be acquired and reactive program design methods intended to comply with the cap don't result in damaging participant interest/relationships for future projects.

Removing or adjusting the cap results in small incremental risk to equity. Large site demand varies significantly by year. If we assume the average incentive demand for the past three years in PGE (\$5.8M) increases by 25% (\$7.25M) and is sustained for the next three years, the cumulative % of incentives to total revenues from PGE large customers would increase from 17% to 20%. This is still below the current PAC spending cap. It would allow PGE's >1aMW customer to spend about twice the revenue collected from them. That is roughly the limit for PacifiCorp.

There are several possible ways to set a different cap. The new cap for PGE might be set at a particular ratio of revenue from and to larger customers or it might be set at the same level as PacifiCorp. There might be a different way to assure compliance than the cap, but we do not recommend running separate

programs for the same customer with 838 and 1149 funds as was suggested after SB 838 was passed. From a customer relationships and program effectiveness strategy, this is not feasible.

Option 4. Apply the limit across both utilities as a single limit.

This would provide some additional headroom, but might not provide a permanent solution.

Option 5. Maintain current policy. Based on our current projections (which depend greatly on what customers choose to do) this is likely to result in the need to limit funding to projects at >1aMW sites for PGE in 2015. A review of options for limiting program activity was provided as part of the board retreat packed for the June, 2012 retreat. All of the options would reduce acquisition of cost-effective savings. There would also be some disruption of customer relationships and the ability to pursue additional savings. The preferred options from that review might minimize this disruption.

DETAILED ANALYSIS OF UTILITY DATA

1. How much are > 1aMW sites paying in to Energy Trust efficiency funding? How has this changed over time?

PGE

Since 2005, they have contributed between \$1.8 and \$2.7million per year, equating to 6.5%-12% of the total 1149 energy efficiency revenues to Energy Trust with a trend towards a decreased percentage in more recent years. 2005-2007 averages 10.3%, 2008-2012 average is 8.1%.

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| \$M- revenues to ETO EE >1aMW | \$2.48 | \$2.74 | \$1.82 | \$1.76 | \$1.76 | \$2.44 | \$2.58 | \$2.62 |
| % of total ETO EE 1149 \$ reported | 11.8% | 12.0% | 7.1% | 6.5% | 6.6% | 9.0% | 9.0% | 9.3% |

The downward trend may be attributed to a few factors. Although load as a % of total load is not decreasing, rates for non-exempt sites have increased more than for exempt sites. Although the calculation of efficiency funds to Energy Trust from SB 1149 has not changed (56.7% of 3% of rates), the underlying \$/kWh for non-exempt sites has increased due to SB 838 charges and other general rate case increases allocated to these customer segments that are not impacting the >1aMW sites.

PAC¹

Since 2004, they have contributed between \$1.9 and \$2.9million per year, equating to 11%-22% of the total 1149 energy efficiency revenues to Energy Trust with a trend towards a decreased percentage in more recent years. 2004-2007 averages 18.5%, 2010-2012 average is 12.8%.

| | 2004 | 2005 | 2006 | 2007 | | 2010 | 2011 | 2012 |
|------------------------------------|-------|-------|-------|-------|--|-------|-------|-------|
| \$M- revenues to ETO EE >1aMW | \$2.9 | \$2.9 | \$2.7 | \$1.9 | | \$2.3 | \$2.1 | \$2.7 |
| % of total ETO EE 1149 \$ reported | 22% | 21% | 19% | 12% | | 14% | 11% | 14% |

Similar to PGE, 838 exempt revenues have not changed much over time but the revenues from non-exempt have increased due to 838 charges and other larger rate increases over the years than large customers have seen. These factors are leading to their revenues being a lower % of the total 1149 funds received.

2. How much is currently being spent on them?

PGE

Our current metric for limiting spending is measured by incentives spent on sites >1aMW as a percentage of total 1149 efficiency funds received. For PGE this limit is the average of this annual calculation for years 2005-2007, **18%**. The cumulative average for 2008-2012 is **17%** with specific years ranging from 9% to 27% in 2012. Actual incentives per year range from \$1.3M to a high of \$9.7M. 2012 incentives totaled \$7.5M.

To estimate total 1149 dollars spent on these sites, we applied the current ratio of incentives to total budget for the Production Efficiency program, where most of the projects are seen, which is 64%. From this perspective, >1aMW sites have received 25% of total funds. Although more is being spent on these sites, significantly more savings are being acquired per kWh of load, and per dollar spent via these sites when viewed as a group than through smaller sites as a group.

PAC

For PAC our spending limit is the average of this annual calculation for years 2004-2007, **27%**. The cumulative average for 2008-2012 is **22%** with most recent years at 20 and 22%. Actual incentives per year range from \$1.5M to a high of \$9.2M. 2012 incentives totaled \$3.8M, up from \$3.6M in 2011.

¹ Our data analysis approach for PacifiCorp is slightly modified to work with the data provided by the utility which differs from what PGE was able to provide. PAC provided 2004-2007 and 2010-2012. Load and revenue detail for efficiency self-directors was not possible to distinguish from renewables only self-directors which make up the majority of PAC self-directors. The one exception is for efficiency specific revenue data from 2011 and 2012 which was available through monthly revenue reports provided outside of the data request for this study.

3. How much savings is acquired with current cap?

PGE

Annual savings from <1aMW PGE customers have ranged from 1.6aMW to 14.4aMW, with 7.1aMW in 2012 and total of 47.4aMW from 2005-2012. On average, the 20% of Energy Trust efficiency spending dedicated to this group is acquiring 34% of the savings. Going forward, assuming a 1% annual increase in total 1149 efficiency funds collected (to represent load and rate growth) and maintaining a cumulative average of 18% incentives vs. total 1149 PGE revenue collected, \$5-\$5.5M per year can be directed in incentives to >1aMW sites. Assuming an average acquisition cost of 11.3 cents per annual kWh saved, escalating by 2% per year, about 5aMW can be acquired per year at the current cap.

Due to the uncertainty in each of the assumptions behind this estimate, there's likely a range around that estimate of at least 25%.

PAC

Annual savings have ranged from 1.7aMW to 8.8aMW, with 4.9aMW in 2011 and 6.9aMW in 2012 for a total of 42 aMW from 2004-2012, averaging 4.7 aMW/yr. Energy Trust spending in PAC territory (>1aMW incentives / total revenues) has not yet reached the cumulative cap of 27%. Going forward, assuming a 1% annual increase in total 1149 efficiency funds collected (to represent load growth), to reach the 27% spending cap in 2016, annual spending on PacifiCorp sites >1aMW would need to increase by 40% to \$6.5M per year (For reference the average of the past three years of spending has been \$4.6M.) This implies that there's room within the PAC methodology to meet a 40% growth in demands from >1aMW sites for the next 4 years. Assuming an average acquisition cost rate of 8 cents per annual kWh (based on the last 3 years of project acquisition and escalating by 2% per year) about 9aMW can be acquired per year within the current cap.

Again, there is much uncertainty in each of the assumptions behind these estimates, there's likely a range around that estimate of at least 25%.

4. How does levelized cost for large customer projects compare to costs for other customers?

PGE

Levelized **incentive** costs for these projects have averaged just under 1cent/kWh since 2005, with 2012 being 1.2 cents/kWh. There is much year to year variability, and no real trend in cost up or down through time. This compares with levelized incentive costs for <=1aMW sites averaging 2.3cents/kWh.

PAC

Levelized incentive costs for PAC projects have also averaged under 1 cent/kWh since 2005, with 2012 being just 0.6 cents/kWh . There is much year to year variability with no real trend in cost up or down through time. This compares with levelized incentive costs for <=1aMW sites averaging 2.5 cents/kWh.

5. How does self-direct factor into the whole issue?

PGE

Revenues to PGE from sites self-directing efficiency have increased over time from \$16M in 2005 to \$41M in 2012. Although a small proportion of >1aMW revenues, the efficiency public purpose charge they are self-directing is equal to 25% of the >1aMW efficiency revenues received by Energy Trust. Although the energy use and utility revenues for efficiency self-directors has increased the number of sites has declined. One large partial requirements self-director is mainly responsible for the large increase in load seen in 2010.

PAC

PacifiCorp could not provide revenue, load and site data for efficiency self-directing sites. For 2011 and 2012, revenues but not loads from these sites were available. We do know that there are very few sites self-directing efficiency (yet several are self-directing their renewable portion of the PPC) and that in 2012, >1aMW revenues to Energy Trust would have been just 5% greater had these customers not self-directed. With current levels of self-direction, it really doesn't factor into the issue other than noting that over time the trend away from self-direct has helped maintain >1aMW revenue contributions to Energy Trust at a sustained annual level.

6. How has the ratio of revenues received from >1aMW customer to spending for >1aMW changed over time?

PGE

The ratio of 1149 revenues received compared to incentive spending has trended down over time reaching 35% of incentive dollars in 2012. When considered on a total 1149 spending basis (includes estimates for program management and administration costs), the ratio is now 22%.

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|--------------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| >1aMW revenues to ETO | \$ 2,483,367 | \$ 2,735,959 | \$ 1,824,171 | \$ 1,755,651 | \$ 1,762,977 | \$ 2,443,411 | \$ 2,578,003 | \$ 2,615,793 |
| >1aMW incentive spending | \$ 9,742,145 | \$ 1,282,158 | \$ 1,762,765 | \$ 2,421,817 | \$ 2,778,261 | \$ 4,189,900 | \$ 5,950,881 | \$ 7,508,724 |
| >1aMW total spending | \$ 15,222,102 | \$ 2,003,372 | \$ 2,754,320 | \$ 3,784,089 | \$ 4,341,033 | \$ 6,546,719 | \$ 9,298,252 | \$ 11,732,381 |
| Revs/incentives | 25% | 213% | 103% | 72% | 63% | 58% | 43% | 35% |
| Revs/total \$ | 16% | 137% | 66% | 46% | 41% | 37% | 28% | 22% |

PAC

The ratio of revenues received compared to spending has bounced up and down over time from a low of 36% to a high of 125%. In 2012, revenues were 68% of incentive \$s spent on >1aMW.

7. Whether the ratio of energy usage by > 1 aMW to other customers has grown or shrunk since base period.

PGE - The ratio of energy use has remained very consistent over time, hovering around 19% of total load.

PAC - The ratio of energy use has also remained very consistent over time, averaging around 19% of total load. Since we were unable to pull out load from sites self-directing efficiency over the years, this was calculation was done without adjusting load to reflect only those contributing to Energy Trust. We

know that the number of sites self-directing efficiency has declined but can't confidently reflect that trend in load comparisons.

8. Estimate how much savings we could end up foregoing with the current cap to spending

PGE

Based on a high level estimate of ~ 5aMW acquired per year maintaining the cap of 18% incentives budget to total 1149 revenues, over the next five years, we anticipate 8-12 aMW of savings could be lost, or 32-48 aMW over a 20-year period. We may be able to "roll" projects forward in time if there are years with fewer large projects, but that would not address the cumulative decrease. If funding continues to be limited, the issue will remain. Furthermore, many large efficiency projects are scheduled as part of other planned capital improvements, and might not be available if funding is not provided at the right time.

From our current resource assessment, sites <1aMW provide about 20% of the 20 year achievable potential. Three quarters of that is from industrial sites, and one quarter from commercial and institutional sites.

PAC

In PAC territory, we don't foresee a short-term risk of needing to forego resource acquisition with the current methodology and demand. Annual demand for funding for customers >1 aMW would need to increase 40% and hold steady for the next 4 years to hit the spending cap.

9. Looking at how limiting spending on > 1 aMW might affect levelized cost

PGE

By limiting spending the ratio of lower levelized cost project spending would be maintained at roughly 30%. Using 2012 spending as an indicator of demand (40% of spending) and assuming that smaller projects could be found to make up the different, 10% of spending would shift from sites >1aMW to projects at smaller sites due to the current spending cap. This results in the weighted average levelized cost increasing approximately 6%.

PAC

Any >1aMWw incentives dollars that are shifted to non-exempt projects result in fewer savings acquired. (62% of what could have been acquired for >1aMW projects) The impact to levelized cost would depend on how much of the dollars intended to meet >1aMW demand was shift to non-exempt projects. Since we don't anticipate enough large site demand to cause us to reach the spending cap we don't foresee and impact to levelized cost for PAC.



Large Energy User Funding Limit

History of the Methodology Used in Determining the Limit and Current Status

March 12, 2014

Issue Summary

The 1999 Oregon law that gave rise to Energy Trust, SB 1149, required the electric utilities to devote three percent of their revenues to electric efficiency programs. The three-percent charge is collected from all electric customers regardless of the amount of energy they use. A 2007 state law, SB 838, authorized utilities, with OPUC approval, to collect additional electric efficiency funds from customers using less than one average megawatt (aMW) or more per year. Large customers (those using more than 1 aMW) were excluded from paying additional funding, and so are not supposed to receive direct benefit from SB 838 funding. The resulting funds are to be used to fund electric efficiency beyond the established public purpose charge from SB 1149, to meet efficiency resource needs identified in utility integrated resource planning. Because larger customers are not paying in to the 838 fund, they are ineligible for efficiency program funding from 838. Language describing this efficiency funding mechanism in legislation reads as follows;

SECTION 46.

(1) In addition to the public purpose charge established by ORS 757.612, the Public Utility Commission may authorize an electric company to include in its rates the costs of funding or implementing cost-effective energy conservation measures implemented on or after the effective date of this 2007 Act. The costs may include amounts for weatherization programs that conserve energy.

(2) The commission shall ensure that a retail electricity consumer with a load greater than one average megawatt:

(a) Is not required to pay an amount that is more than three percent of the consumers' total cost of electricity service for the public purpose charge under ORS 757.612 and any amounts included in rates under this section; and

(b) Does not receive any direct benefit from energy conservation measures if the costs of the measures are included in rates under this section.

As a way of assuring that large customers are not benefitting from this added funding, a 2008 informal multiparty agreement set a limit to the percentage of 1149 incentive funding that Energy Trust can allocate to customers over 1 aMW.

Due to success of the programs serving them, savings from large customers and incentives going to them have been increasing. Without a change, before 2015 Energy Trust will likely need to cap spending in PGE's service territory for these customers. In the fairly near term and in the long run, the limitation in SB 838 funding means that Energy Trust will not be able to pursue all cost-effective efficiency from these customers. In PAC territory, we don't foresee a short-term risk of needing to forego resource acquisition with the current methodology and demand but PAC customers will be impacted by program designs instituted to manage funding for PGE.

Today the OPUC and stakeholders are questioning whether the methodology used to set Energy Trust's spending limit for >1aMW sites is the best policy. There may be a more appropriate level of funding for customers >1 aMW that brings the proper balance between getting all cost-effective measures and

reasonable equity for funders. This paper documents the creation of the existing spending limit methodology and documents current discussions by stakeholders related to next steps.

Methodology

One of the first steps in implementing 838 efficiency funding was to set up processes for ensuring that large energy users were not charged and did not receive direct benefit from funds collected. Energy Trust, OPUC staff and utilities met informally to work through details. Since the details of the discussions and resulting methodology were not created within the formal regulatory docket process, the history is sparse and largely undocumented. The following description documents the practice that Energy Trust has followed since those discussions took place and is meant to reflect our best understanding of the intent at the time.

- Exempting large energy users from contributing towards 838 was, with PUC knowledge, addressed within specific customer billing systems at each utility, informed by site use and self-direct certification status. Utilities worked through their process with OPUC staff to ensure large energy users were not charged 838.
- The next step was to ensure that those that are not contributing are not directly benefiting. The group interpreted the need to show no direct benefits are received as meaning that the current spending practices should not be exceeded going forward. This could be shown by tracking what proportion (%) of public purpose charge funding (SB1149 only) went, collectively, to large energy users prior to the new 838 funding and limiting future spending (post 838) to not exceed that pre 838 baseline spending.
- Tracking project incentives paid to large energy users compared to total efficiency 1149 revenues to Energy Trust was the agreed upon metric to characterize spending. Incentive spending was thought to be a reasonable, but not perfect, indicator of spending to a specific customer class that was relatively easy to separate from other program data. Funding spent on delivery and program management is more challenging to separate between types of customers.
- To best represent current (pre-838) spending, Energy Trust elected to look at utility specific spending, not a combined look.
- There are slight differences in the baseline years selected by Energy Trust for comparison between utilities, 2005-2007 PGE and 2004-2007 for PAC. PGE had one very large (“megaproject”) year and two small years in their baseline and PAC had four consistently high activity years. The PGE range was likely limited to three years because there was not much of an operational industrial program in 2004, and a significant proportion of large customer activity is from industrial customers.
- The resulting methodology sets the baseline funding limit as the sum of incentives in base years, divided by the sum of 1149 efficiency revenue to Energy Trust. This value is set as the funding cap, not to be exceeded.
 - The funding caps differ significantly by utility, PAC = 27%, PGE 18%
 - The difference is representative of specific project activity that occurred during the base period; PAC territory saw many forest products projects move forward while PGE activity was largely limited to one large paper mill. A larger proportion of PGE’s large customer loads are from the semiconductor industry. Energy Trust programs were not as active in that industry until recently.
- Determining “compliance” against this funding limit was agreed to be calculated as a rolling, cumulative look. Because large projects can have lumpy impacts on program incentive spending with year by year variability, measuring compliance on a year to year basis did not seem

appropriate. The resulting methodology takes a broader perspective. The sum of all large energy user post 838 incentives are divided by total 1149 revenues across the same time period. For example, to determine compliance with funding limits at the close of 2012, by utility, all large user incentives from 2008-2012 were summed and divided by the total 1149 efficiency revenues for each utility. PAC was 22% and PGE was 17%.

- The final step is to compare the “post 838” percentage to the baseline funding limit. Through 2012 activity, PAC is 5 percentage points below the limit and PGE is 1 percentage below their limit.
- If cumulative spending reached or exceeded baseline spending, parties agreed that time would be needed for “correction” to be able to adjust program spending below the limit within 2 years.

This development of a process to limit benefits was never a question of setting a dollar in (revenues from large customers) to dollar out (expenditures on large customers) measure but rather to find a way to set a reasonable level of spending for large users that made sure there was enough funding left for those who were contributing to 838.

Current Situation

In anticipation of reaching the funding limit in PGE territory before 2015, Energy Trust staff raised the topic of possible impacts on the program at the June 2013 board retreat. Program staff outlined possible program tactics that could be employed if we were to reach the limit and need to take actions to adjust program spending downward.

Due to possible limitations to acquire cost effective savings that could result from Energy Trust managing to the existing funding caps, OPUC staff asked Energy Trust to provide more information on the topic. Because Energy Trust did not have complete data describing r how much of the 1149 revenue received is from large energy users, OPUC staff issued a data request to utilities to provide that information. As a result, the full picture of costs and benefits to large energy users and all ratepayers could be compared. Although a larger portion of funding goes to large energy users than the portion of 1149 revenues contributed by that group, the cost of savings acquired is much lower than other projects and therefore the savings per ratepayer dollar invested are much higher. All ratepayers are benefiting from the higher savings.

Strong program interest from large sites is expected to continue, leading to the potential for the current funding cap methodology to limit Energy Trust's ability to acquire all cost effective resources. If in PGE territory we were to continue >1aMW incentive spending at a rate equal to the average of the past 3 years (2010-2012, \$5.9M/yr. in incentives), we would exceed the current spending limit in 2015. In PAC territory, we don't foresee a short-term risk of needing to forego resource acquisition with the current methodology and demand. Annual demand for funding for customers>1 aMW would need to increase 40% and hold steady for the next 4 years to hit the spending cap.

To maintain compliance with the cap for PGE will cause us to limit annual spending on customers > 1 aMW. To reach goals we will need to redirect funds above the cap to higher cost projects from 838 eligible sites. On average, large site projects are 2.5 times more cost effective than 838 eligible site projects. Therefore directing funding away from large site projects would result in less savings at higher cost. It is also possible that as a consequence Energy Trust does not meet IRP goals in some years. The result may mean lost opportunity of low cost resource, unmet demand and unrealized savings. In the long run, some savings from larger sites will not be captured. This is a particular threat for “lost opportunity” savings that must be acquired during specific events, such as a major capital investment in a

process line upgrade or redesign or a building renovation. A significant share of Energy Trust large customer savings comes through such events.

Outreach Efforts

Energy Trust convened a meeting of stakeholders January 31, 2014 to discuss the issue and current situation. In attendance were representatives from utilities, OPUC staff, CUB, ICNU, NWFPA, NWECA, NEEC, ODOE, and Energy Trust staff. A variety of views were heard. Stakeholders offered a range of ideas to address the funding limitations including;

- Expand 838 charges to large energy users (would require legislative action)
- Revisit the methodology so that it's more reflective of current large energy user potential activity and available cost effective resource
- Change the methodology to allow more funding to large users under the condition that those paying to 838 see direct rate benefit from the low cost efficiency in which they are investing (would require rate re-design)

No consensus was reached among attendees but Energy Trust did agree to keep the group fully informed of the situation going forward.

Next Steps

Energy Trust plans to provide results of the 2013 analysis in April 2014. If we have met or exceeded the funding limit in PGE territory, we plan to begin to take programmatic actions to lower funding and come back into compliance over a two year period. These actions will be worked through with our Conservation Advisory Council.

Greater Than 1 aMW Analysis Project

PGE 2014 Report

Prepared by CLEARResult for:
Energy Trust of Oregon
04.08.2015

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PROJECT OVERVIEW

The purpose of this project is to determine the percentage of SB 1149 funds that Energy Trust spent on sites that used more than 1 aMW (>1aMW) in 2014. This percentage was compared to Energy Trust's historical spending percentages from 2005-2007 to determine if spending on this group of customers has changed since the inception of SB 838.

PROJECT RESULTS

Key Findings

- Overall 1149 revenue increased in 2014 by over \$2.2 million while >1aMW incentives decreased by over \$1 million
- Total kWh savings in 2014 increased by close to 10 million kWh while savings at >1aMW sites decreased by over 20 million kWh during the same period
- The shifts outlined above changed the post-838 average share of 1149 revenue going to >1aMW sites. The cumulative post-838 share of 1149 revenue spent on incentives at >1aMW sites is 18.3%, close to the pre-838 baseline of 18.4%

In 2014, total incentive spending on >1aMW users was 20% of SB 1149 revenue. This is a decrease from 2013 spending as shown in Table 1 below. Table 1 also shows the average percentage of SB 1149 revenue spending on >1aMW customers since 2008, and the percentage of total savings from >1aMW customers.

Table 1: Comparison of the 2013 analysis results to the 2014 analysis results

| PGE >1aMW Customer Activity | 2013 | 2014 | Change in Overall Percentage |
|---|-------|-------|------------------------------|
| % 1149 revenue to >1aMW customers | 25% | 20% | -5% |
| Cumulative average % 1149 revenue to >1aMW customers since 2008 | 18.1% | 18.3% | 0.2% |
| % Total kWh savings from >1aMW customers | 31% | 23% | -8% |

*Historical baseline average is 18.4%

Tables 2 & 3 below show SB 1149 spending, incentives spent on >1aMW customers, the percentage of total SB 1149 revenue spent on the >1aMW sites, total kWh savings from projects at >1aMW sites, and the number of sites receiving incentives for 2005-2007 and 2008-2014.

Table 2: Summary of spending and kWh savings for >1aMW customers 2005-2007 (pre-838)

| Pre-838 Results | | | | |
|---|--------------|--------------|--------------|---------------------|
| Energy Efficiency 1149 Revenue | 2005 | 2006 | 2007 | 2005-2007 (average) |
| Energy Efficiency 1149 Revenue | \$21,065,813 | \$22,720,384 | \$25,673,961 | \$23,153,386 |
| Incentives to >1aMW Sites | \$9,742,145 | \$1,282,158 | \$1,762,765 | \$4,262,356 |
| >1aMW Incentives as a Percent of 1149 Revenue | 46% | 6% | 7% | 18.4% |
| Number of >1aMW Sites Receiving Incentives | 39 | 30 | 27 | 32 |
| Savings from >1aMW Sites (kWh) | 126,503,077 | 14,056,604 | 68,431,766 | 69,663,816 |
| Total Savings (kwh) | 213,903,461 | 121,192,910 | 139,322,053 | 158,139,475 |
| Percent of Total Savings from >1aMW Sites | 59% | 12% | 49% | 44% |

Post-838 Results

| PGE | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2008-2013 (average) |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------|
| Energy Efficiency 1149 Revenue | \$26,890,837 | \$26,669,621 | \$27,065,764 | \$28,510,770 | \$28,119,658 | \$26,484,405 | \$28,741,721 | \$27,497,539 |
| Incentives to >1aMW Sites | \$2,421,817 | \$2,778,741 | \$4,189,900 | \$5,950,881 | \$7,508,724 | \$6,705,824 | \$5,621,248 | \$5,025,305 |
| >1aMW Incentives as a Percent of 1149 Revenue | 9% | 10% | 15% | 21% | 27% | 25% | 20% | 18.3% |
| Cumulative Average | 9% | 10% | 12% | 14% | 17% | 18.1% | 18.3% | 18.3% |
| Number of >1aMW Sites Receiving Incentives | 41 | 48 | 49 | 54 | 56 | 56 | 55 | 51 |
| Savings from >1aMW Sites (kWh) | 21,022,885 | 26,348,517 | 49,949,458 | 46,516,463 | 62,520,010 | 95,229,586 | 73,813,874 | 53,628,685 |
| Total Savings (kwh) | 145,935,756 | 150,705,221 | 219,884,055 | 244,453,313 | 282,316,497 | 311,992,892 | 321,470,265 | 239,536,857 |
| Percent of Total Savings from >1aMW Sites | 14% | 17% | 23% | 19% | 22% | 31% | 23% | 22% |
| Potential additional incentives to >1aMW customers (Uncertain Sites) | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> | \$39,727 | \$0 | \$0 | \$0 | <i>n/a</i> |

Table 3: Summary of spending and kWh savings for >1aMW customers 2008-2014 (post-838)

Chart 1 shows the cumulative average of 1149 spending from 2005-2007 and 2008-2014. The horizontal line indicates the cumulative average from 2005-2007, which is the historical baseline and threshold for spending in the post-SB 838 period. Annual 1149 spending on >1aMW sites and the cumulative average increased from 2008 through 2012 but decreased slightly in 2013 and 2014. The cumulative average of the post-838 period at 18.3% is just below the historical threshold of 18.4% and without another decrease in incentive spending will likely pass the threshold in 2015.

Chart 1: Cumulative average of SB 1149 revenue spending on >1aMW customer incentives 2005-2014, pre & post-838

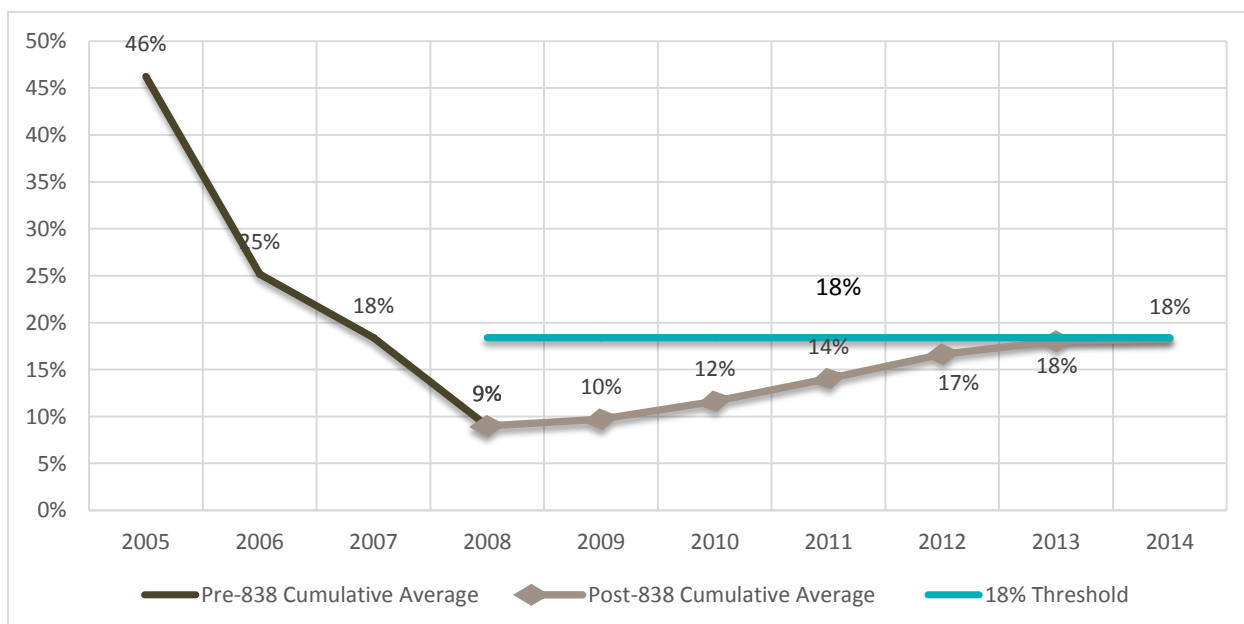


Table 4 below shows PGE spending on >1aMW customers by program by year beginning in 2005. Programs include Production Efficiency (PE), Existing Buildings (BE), and New Building Efficiency (NBE) projects.

Table 4: Summary of incentive spending & savings by program by year on >1aMW customers 2005-2014, pre & post-838

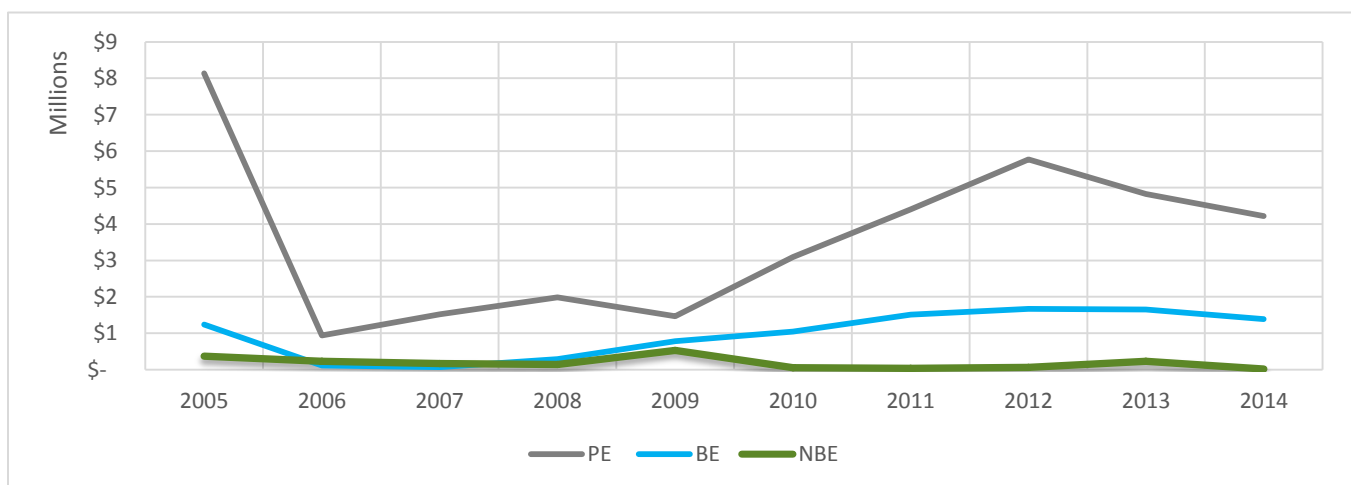
| PGE | Production Efficiency (PE) | | Existing Buildings (BE) | | New Building (NBE) | | Total | |
|-------------------------|----------------------------|------------|-------------------------|------------|--------------------|-----------|-------------|-------------|
| | \$ | kWh | \$ | kWh | \$ | kWh | \$ | kWh |
| Pre-838 Results | | | | | | | | |
| 2005 | \$8,134,413 | N/A | \$1,236,725 | N/A | \$371,008 | N/A | \$9,742,145 | 126,503,077 |
| 2006 | \$942,023 | N/A | \$111,121 | N/A | \$229,014 | N/A | \$1,282,158 | 14,056,604 |
| 2007 | \$1,520,782 | N/A | \$73,324 | N/A | \$168,659 | N/A | \$1,762,765 | 68,431,766 |
| Post-838 Results | | | | | | | | |
| 2008 | \$1,989,391 | N/A | \$294,243 | N/A | \$138,184 | N/A | \$2,421,817 | 21,022,885 |
| 2009 | \$1,466,194 | N/A | \$781,466 | N/A | \$531,081 | N/A | \$2,778,741 | 26,348,517 |
| 2010 | \$3,097,231 | 43,322,367 | \$1,042,144 | 6,495,907 | \$50,525 | 131,184 | \$4,189,900 | 49,949,458 |
| 2011 | \$4,397,749 | 39,347,943 | \$1,513,314 | 6,703,335 | \$39,818 | 465,185 | \$5,950,881 | 46,516,463 |
| 2012 | \$5,774,602 | 51,916,828 | \$1,673,182 | 10,428,884 | \$60,940 | 174,338 | \$7,508,724 | 62,520,010 |
| 2013 | \$4,824,179 | 81,668,283 | \$1,654,099 | 11,204,217 | \$227,546 | 2,357,086 | \$6,705,824 | 95,229,586 |
| 2014 | \$4,219,172 | 66,948,131 | \$1,384,860 | 6,765,869 | \$17,216 | 99,874 | \$5,621,248 | 73,813,874 |

Chart 2 below shows spending by program by year in graphical form. Each program category demonstrates unique year to year incentive spending patterns:

- Existing Buildings program spending showed a slight decrease since 2014
- New Buildings program decreased from the higher levels of last year with only two new construction projects in 2014
- Production Efficiency program spending and savings decreased from 2014

Production Efficiency projects continue to constitute the majority of spending on >1aMW sites, which is expected given that the majority of >1aMW users are industrial customers. Overall savings were down this year with fewer large scale projects, though the largest single project site still comprised 47% of all kWh savings and 26% of all incentives among all 1 aMW sites in 2014.

Chart 2: PGE >1aMW incentives by program 2005-2014, pre & post-838



METHODOLOGY

To calculate the incentive spending and percentages, a list of PGE >1aMW customers was compared to Energy Trust incentive program data, which includes incentives paid to all commercial and industrial PGE customers. Due to differences in the way that each data set is coded, address was the primary identifying characteristic to match >1aMW customers with incentive recipients.

There were several challenges to using address as the primary identifying characteristic. These challenges included:

- Some sites include multiple addresses
- A few addresses have multiple sites
- Some addresses have multiple customer names (typically, multiple divisions or business lines at one address)
- Multiple addresses exist for the same physical location (ie, one data set uses an address on a particular street, and the other uses an address on the cross street or a parallel street)
- Discrepancies in spelling or entry of addresses between data sets
- Generic locations are listed on the PGE >1aMW customer list instead of addresses; for example, “Warehouse” instead of “123 Main Street”
- For large industrial sites, the >1aMW customer list may contain an address for an adjacent office building and does not include every building address within the site

CLEAResult used newer software in addition to past methods to match project addresses to 1aMW sites:

- Both site and project addresses were normalized using Alteryx address normalization functionality
- Direct matches where street addresses matched exactly were considered matches
- Matching of 4-digit zip code extensions(usually indicate the same block)
- Utilized ArcGIS mapping tools to identify site and project locations
- GIS mapping software was used to determine closest adjacent projects to 1aMW sites by distance
- Sites with the closest projects in proximity and no direct address match were given the first priority for analysis and review
- Projects with highest kWh savings were given higher priority and additional scrutiny
- Projects and site addresses that matched with different company names were researched and included if proof existed that both were of the same company(often due to company mergers or using corporate names)

ASSUMPTIONS

The primary premise of this analysis is the site definition. The OR SB 1149 definition of a site is: “‘Site’ means a single contiguous area of land containing buildings or other structures that are separated by not more than 1,000 feet, or buildings and related structures that are interconnected by facilities owned by a single retail electricity consumer and that are served through a single electric meter.”

The site definition used to identify incentives paid to >1aMW user sites cannot be strictly applied to individual meters at large sites because neither CLEAResult nor Energy Trust has granular level data on the meters at a given site. Therefore, CLEAResult assumes that >1aMW user sites with generic addresses, such as “South of A Street,” or multiple close addresses, match Energy Trust incentive program data when the address is a close match. These instances occur most frequently for the three site types outlined below with a set of assumptions are used to overcome uncertainty in each case.

There are three main business types that compose the majority of the >1aMW list: large industrial, hospitals, and college campuses. Each of these business types are typically physically constructed in a campus-like manner with many buildings clustered together that are owned by a single entity. Assumptions must be made when selecting one of these businesses as a match due to subtle differences between the way the >1aMW user list is constructed and the way the Energy Trust incentive program data reports the location of a project:

Large Industrial

- The >1aMW user list typically reports a single address for the site
 - The reported address is typically adjacent to the actual industrial site
 - This address may be a central office that handles billing for all structures
- The Energy Trust incentive project list reports each individual building address within a site
 - The addresses reported on this list don't always align with the >1aMW user list address
- An assumption is made that all addresses on the Energy Trust incentive project list are part of a single site if the >1aMW user list contains an address that is adjacent or within close proximity to all other addresses
 - If a single office reports for several different industrial sites these sites must be relatively close to be considered a match

Hospitals

- The >1aMW user list handles hospital sites by reporting some sites with a single address and other sites with multiple addresses within a campus
 - Single address entries are typically within the hospital campus but not part of the main structures
 - This address may be a central office that handles billing, similar to large industrial
 - Sites with multiple addresses often times do not include every potential address within the site
- The Energy Trust incentive project list reports each individual building address within a site
 - A single health care company often times owns several different sites within a city where each site is relatively close together
 - Each hospital campus is clearly finite and separate from any other site regardless of whether the proximity to other sites is near or far
- An assumption is made for single address entries that all addresses on the Energy Trust incentive project list are part of a single site if they are within the finite campus where the >1aMW user address is located
- An assumption is made for multiple address entries that all addresses within the associated campus are part of a single site even if the >1aMW user list does not provide a complete list of addresses for the site

College Campuses

- The >1aMW user list always gives multiple addresses for a single site
 - Every potential address within a single college campus is not given
- The Energy Trust incentive project list reports each individual building address within a site
- An assumption is made that all addresses on the Energy Trust incentive project list for a college campus are part of a single site even if the >1aMW user list does not provide every address



Greater Than 1 aMW Analysis Project

Pacific Power 2014 Report

Prepared by CLEARResult for:
Energy Trust of Oregon
04.13.2015

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PROJECT OVERVIEW

The purpose of this project is to determine the percentage of SB 1149 funds that Energy Trust spent on Pacific Power (PAC) sites that used more than 1 aMW (>1aMW) in 2014. This percentage was compared to Energy Trust's historical spending percentages from 2004-2007 to determine if spending on this group of customers has changed since the inception of SB 838.

PROJECT RESULTS

Key Findings

- Overall 1149 revenue increased by over \$1 million in 2014 while >1 aMW incentives increased by roughly \$1.5 million
- Total kWh savings decreased by close to 8 million kWh while savings at >1 aMW sites decreased by almost 20 million during the same period
- The cumulative post-838 share of 1149 revenue spent on incentives at >1aMW sites is 20%, still below the pre-838 baseline of 27%

In 2014, total spending on >1aMW users was 21% of SB 1149 revenue. This represents an increase from 2013 spending as shown in Table 1 below. Table 1 also shows that the cumulative average of SB 1149 revenue spending on >1aMW customers remained effectively unchanged from 2013 to 2014. However, the percentage of total savings from >1aMW customers decreased by 9% in 2014. The overall decrease in savings is a result of 2013 savings totals including a large new construction project with close to 43 million kWh of savings, around 63% of total kWh in 2013.

Table 1: Comparison of the 2013 analysis results to the 2014 analysis results

| PAC >1aMW Percentages | 2013 | 2014 | Change in Overall Percentage |
|--|------|------|------------------------------|
| % 1149 revenue to >1aMW customers | 15% | 21% | 6% |
| Cumulative average % 1149 revenue to >1aMW customers since 2008* | 20% | 20% | 0% |
| % Total kWh savings from >1aMW customers | 35% | 26% | -9% |

*Historical baseline average is 27%

Tables 2 & 3 below show SB 1149 spending, incentives spent on >1aMW customers, the percentage of total SB 1149 revenue spent on the >1aMW sites, total kWh savings from projects at >1aMW sites, and the number of sites receiving incentives for 2004-2007 and 2008-2014.

Table 2: Summary of spending and kWh savings for >1aMW customers 2004-2007 (pre-838)

| Pre-838 Results | | | | | |
|---|--------------|--------------|--------------|--------------|---------------------|
| PAC | 2004 | 2005 | 2006 | 2007 | 2004-2007 (average) |
| Energy Efficiency 1149 Revenue | \$13,346,771 | \$13,584,551 | \$14,614,927 | \$15,514,799 | \$14,265,262 |
| Incentives to >1aMW Sites | \$8,109,843 | \$3,401,328 | \$2,194,056 | \$1,867,641 | \$3,893,217 |
| >1aMW Incentives as a Percent of 1149 Revenue | 61% | 25% | 15% | 12% | 27% |
| Number of >1aMW Sites Receiving Incentives | 38 | 42 | 27 | 34 | 35 |
| Savings from >1aMW Sites (kWh) | 64,086,521 | 36,711,900 | 14,947,636 | 27,311,042 | 35,764,275 |
| Total Savings (kwh) | 135,919,794 | 104,841,801 | 101,439,945 | 113,245,845 | 113,861,846 |
| Percent of Total Savings from >1aMW Sites | 47% | 35% | 15% | 24% | 31% |

| PAC | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2008- 2014 (average) |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| Energy Efficiency 1149 Revenue | \$16,068,161 | \$16,391,296 | \$16,254,154 | \$18,772,015 | \$19,637,424 | \$20,069,559 | \$21,298,942 | \$18,355,936 |
| Incentives to >1aMW Sites | \$2,527,165 | \$2,435,060 | \$5,595,740 | \$4,223,682 | \$3,993,951 | \$2,953,604 | \$4,552,097 | \$3,754,471 |
| >1aMW Incentives as a Percent of 1149 Revenue | 16% | 15% | 34% | 23% | 20% | 15% | 21% | 20% |
| Cumulative Average | 16% | 15% | 22% | 22% | 22% | 20% | 20% | 20% |
| Number of >1aMW Sites Receiving Incentives | 39 | 46 | 54 | 51 | 50 | 53 | 49 | 49 |
| Savings from >1aMW Sites (kWh) | 28,944,611 | 20,615,419 | 73,365,871 | 43,075,265 | 60,102,118 | 68,146,982 | 48,647,724 | 48,985,427 |
| Total Savings (kwh) | 114,454,241 | 91,026,119 | 175,567,589 | 163,873,693 | 180,707,979 | 194,374,912 | 186,775,439 | 158,111,425 |
| Percent of Total Savings from >1aMW Sites | 25% | 23% | 42% | 26% | 33% | 35% | 26% | 31% |
| Potential additional incentives to >1aMW customers (Uncertain Sites) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | <i>n/a</i> |

Table 3: Summary of spending and kWh savings for >1aMW customers 2008-2014 (post-838)

Chart 1 shows the annual cumulative average of 1149 spending from 2004-2007 and 2008-2014. The horizontal line indicates total cumulative average from 2004-2007, which is the historical baseline and threshold for spending in the post-SB 838 period. While annual 1149 spending on >1aMW customers has fluctuated since 2008, the cumulative average has remained steady at 22% from 2010 to 2012 with a slight drop to 20% in 2013 and 2014. The cumulative average of the post-838 period has not exceeded the 27% threshold and is not likely to reach that level without a considerable increase in >1aMW spending relative to recent trends.

Chart 1: Cumulative average of SB 1149 revenue spending on >1aMW customer incentives 2004-2014, pre & post-838

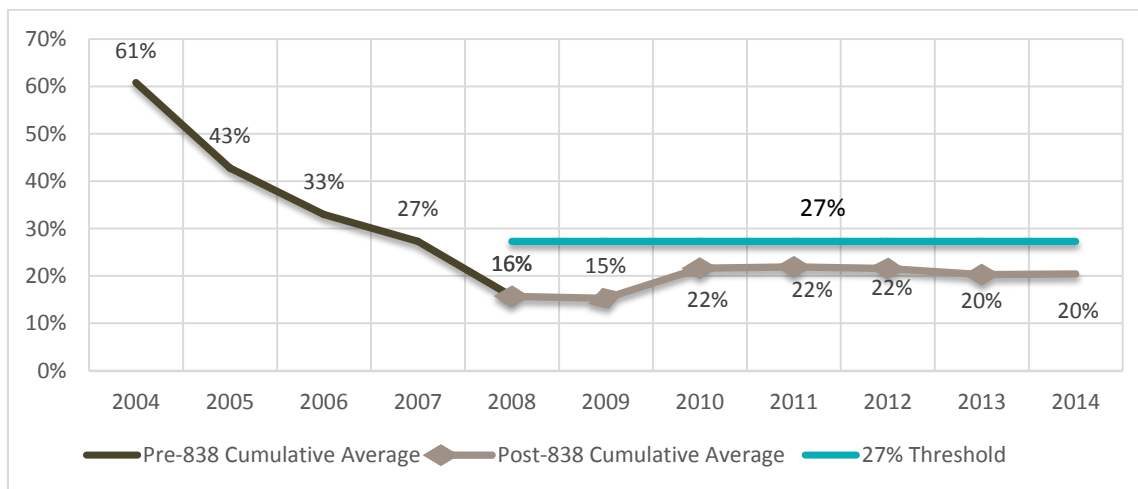


Table 4 below shows PAC spending on >1aMW customers by program by year beginning in 2004. Programs include Production Efficiency (PE), Existing Buildings (BE), and New Building Efficiency (NBE) projects.

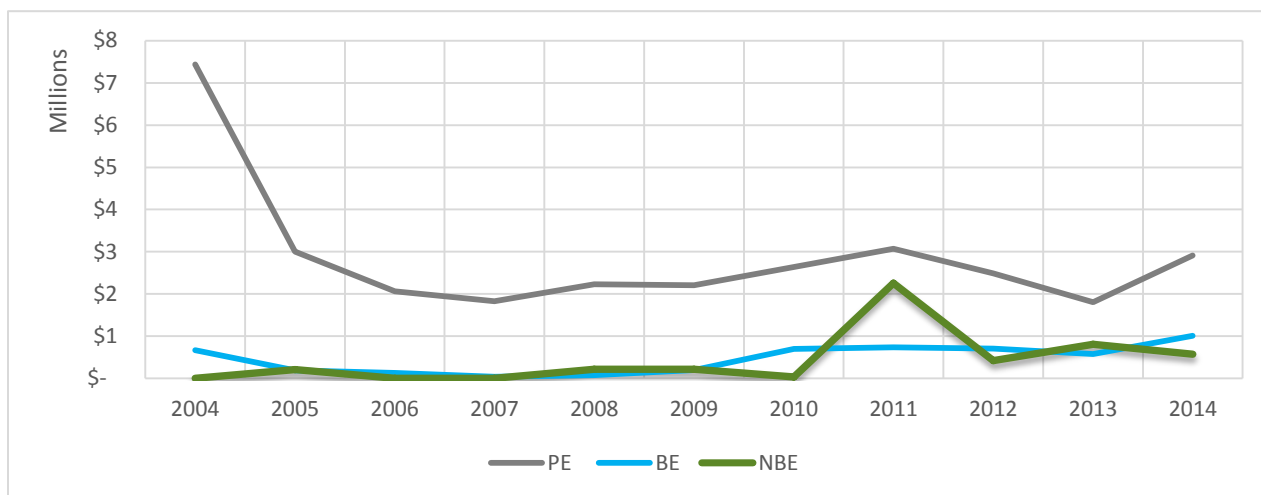
Table 4: Summary of incentive spending & savings by program by year on >1aMW customers 2004-2014 pre & post-838

| PAC | Production Efficiency (PE) | | Existing Buildings (BE) | | New Building (NBE) | | Total | |
|-------------------------|----------------------------|------------|-------------------------|------------|--------------------|------------|-------------|------------|
| | \$ | kWh | \$ | kWh | \$ | kWh | \$ | kWh |
| Pre-838 Results | | | | | | | | |
| 2004 | \$7,437,150 | 59,431,460 | \$672,694 | 4,655,061 | \$0 | 0 | \$8,109,843 | 64,086,521 |
| 2005 | \$3,001,897 | 32,462,637 | \$191,317 | 1,471,116 | \$208,114 | 2,778,147 | \$3,401,328 | 36,711,900 |
| 2006 | \$2,064,894 | 12,915,875 | \$129,162 | 1,954,899 | \$0 | 76,862 | \$2,194,056 | 14,947,636 |
| 2007 | \$1,829,793 | 26,303,769 | \$37,848 | 1,007,273 | \$0 | 0 | \$1,867,641 | 27,311,042 |
| Post-838 Results | | | | | | | | |
| 2008 | \$2,228,208 | 26,993,981 | \$81,581 | 558,736 | \$217,375 | 1,391,894 | \$2,527,165 | 28,944,611 |
| 2009 | \$2,205,999 | 19,304,368 | \$196,508 | 1,172,455 | \$32,553 | 138,596 | \$2,435,060 | 20,615,419 |
| 2010 | \$2,637,471 | 43,403,777 | \$701,914 | 3,988,196 | \$2,256,356 | 25,973,898 | \$5,595,740 | 73,365,871 |
| 2011 | \$3,068,225 | 36,323,836 | \$739,033 | 4,439,079 | \$416,424 | 2,312,350 | \$4,223,682 | 43,075,265 |
| 2012 | \$2,484,773 | 33,870,298 | \$704,960 | 2,905,115 | \$804,219 | 23,326,705 | \$3,993,951 | 60,102,118 |
| 2013 | \$1,803,408 | 21,747,738 | \$579,008 | 2,628,407 | \$571,188 | 43,770,837 | \$2,953,604 | 68,146,982 |
| 2014 | \$2,908,680 | 33,047,407 | \$1,009,363 | 10,392,722 | \$634,054 | 5,207,595 | \$4,552,097 | 48,647,724 |

Chart 2 below shows spending by program by year in graphical form. Each program category demonstrates unique year to year incentive spending patterns.

Incentives and savings increased for Production Efficiency and Existing Building this year, with PE constituting the majority of savings and spending. New Building saw a slight increase in spending with a sizable drop in total savings from 2013—though total savings that year were high in part due to one large project included in last year's totals.

Chart 2: PAC >1aMW incentives by program 2004-2014, pre & post-838



METHODOLOGY

To calculate the incentive spending and percentages, a list of PAC >1aMW customers was compared to Energy Trust incentive program data, which includes incentives paid to all commercial and industrial PAC customers. Due to differences in the way that each data set is coded, address was the primary identifying characteristic to match >1aMW customers with incentive recipients.

There were several challenges to using address as the primary identifying characteristic. These challenges included:

- Some sites include multiple addresses
- A few addresses have multiple sites
- Some addresses have multiple customer names (typically, multiple divisions or business lines at one address)
- Multiple addresses exist for the same physical location (ie, one data set uses an address on a particular street, and the other uses an address on the cross street or a parallel street)
- Discrepancies in spelling or entry of addresses between data sets
- Generic locations are listed on the PAC >1aMW customer list instead of addresses; for example, “Warehouse” instead of “123 Main Street”
- For large industrial sites, the >1aMW customer list may contain an address for an adjacent office building and does not include every building address within the site

CLEAResult used newer software in addition to past methods to match project addresses to 1aMW sites:

- Both site and project addresses were normalized using Alteryx address normalization functionality
- Direct matches where street addresses matched exactly were considered matches
- Matching of 4-digit zip code extensions(usually indicate the same block)
- Utilized ArcGIS mapping tools to identify site and project locations
- GIS mapping software was used to determine closest adjacent projects to 1aMW sites by distance
- Sites with the closest projects in proximity and no direct address match were given the first priority for analysis and review
- Projects with highest kWh savings were given higher priority and additional scrutiny
- Projects and site addresses that matched with different company names were researched and included if proof existed that both were of the same company(often due to company mergers or using corporate names)

ASSUMPTIONS

The primary premise of this analysis is the site definition. The OR SB 1149 definition of a site is: “‘Site’ means a single contiguous area of land containing buildings or other structures that are separated by not more than 1,000 feet, or buildings and related structures that are interconnected by facilities owned by a single retail electricity consumer and that are served through a single electric meter.” PAC uses two different methodologies for self-direct and non-self-direct customers:

- **Self-direct:** All meters at a site are included based on the 1149 definition of a site
- **Non-self-direct:** Usage is analyzed at the meter level with no aggregation at any higher level

The site definition used to identify incentives paid to >1aMW user sites cannot be strictly applied to individual meters at large sites because neither CLEAResult nor Energy Trust has granular level data on the meters at a given site. Therefore, CLEAResult assumes that >1 aMW user sites with generic addresses, such as “South of A Street,” or multiple close addresses, match Energy Trust incentive program data when the address is a close match. These instances occur most frequently for the three site types outlined below with a set of assumptions are used to overcome uncertainty in each case.

There are three main business types that compose the majority of the >1 aMW list: large industrial, hospitals, and college campuses. Each of these business types are typically physically constructed in a campus-like manner with many buildings clustered together that are owned by a single entity. Assumptions must be made when selecting one of these businesses as a match due to subtle differences between the way the >1 aMW user list is constructed and the way the Energy Trust incentive program data reports the location of a project:

Large Industrial

- The >1 aMW user list typically reports a single address for the site
 - The reported address is typically adjacent to the actual industrial site
 - This address may be a central office that handles billing for all structures
- The Energy Trust incentive project list reports each individual building address within a site
 - The addresses reported on this list don't always align with the >1 aMW user list address
- An assumption is made that all addresses on the Energy Trust incentive project list are part of a single site if the >1 aMW user list contains an address that is adjacent or within close proximity to all other addresses
 - If a single office reports for several different industrial sites these sites must be relatively close to be considered a match

Hospitals

- The >1 aMW user list handles hospital sites by reporting some sites with a single address and other sites with multiple addresses within a campus
 - Single address entries are typically within the hospital campus but not part of the main structures
 - This address may be a central office that handles billing, similar to large industrial
 - Sites with multiple addresses often times do not include every potential address within the site
- The Energy Trust incentive project list reports each individual building address within a site
 - A single health care company often times owns several different sites within a city where each site is relatively close together
 - Each hospital campus is clearly finite and separate from any other site regardless of whether the proximity to other sites is near or far
- An assumption is made for single address entries that all addresses on the Energy Trust incentive project list are part of a single site if they are within the finite campus where the >1 aMW user address is located
- An assumption is made for multiple address entries that all addresses within the associated campus are part of a single site even if the >1 aMW user list does not provide a complete list of addresses for the site

College Campuses

- The >1 aMW user list always gives multiple addresses for a single site
 - Every potential address within a single college campus is not given
- The Energy Trust incentive project list reports each individual building address within a site
- An assumption is made that all addresses on the Energy Trust incentive project list for a college campus are part of a single site even if the >1 aMW user list does not provide every address

STRAW MAN PROPOSAL FOR ADDRESSING REQUIREMENTS IN SB838 NOT TO INCREASE EFFICIENCY EXPENDITURES ON CUSTOMERS . 1 amw

1. **Define Boundary.** “1 AMW Per meter, totalized meter, or site or what?” decision will be finalized.
2. **Describe Historic ET Spending Patterns.** ET will develop an analysis of historic funding by <1 and > 1 AMW, with data help from utilities as needed.
3. **Project ET Funding Baseline if SB838 Did Not Exist.** ET will project future funding >1 AMW from SB1149 funds based on past trends and on forecasts by class of customer. These forecasts preceded SB838, so are a bias-free basis for forecasting what would have happened absent SB838.
4. **Develop and Implement Management Approach.** ET will develop systems to assure that over a multi-year period overall funding for customers >1 AMW does not exceed these trend forecasts. Specifically, ET will correct any spending beyond forecast on customers > 1 AMW within two years.
5. **Reporting.** ET will report on how it will stay within these bounds in two ways:
 - a. As part of our budget process, we will forecast spending by program above and below 1 AMW.
 - b. As part of our annual report process, we will report on how it went for the prior year and cumulatively from 2008 forward.
 - c. We will also report on spending and savings separately for SB838 funds (by utility) and SB1149 funds.
6. **Flexibility.** SB1149 provided that we can spend up to 20% of the funds from one utility on another utility. I don't read this type of flexibility into 838. Should we assume it's dollar-in/dollar out for PGE and separately for Pacificorp? This means that all unbalanced spending would be in SB1149, which might make the balance a bit more volatile. We could ask the PUC what they think.

Tasks:

If It's 1 AMW/Meter:

1. We will rely on discussions between utilities and ICNU to resolve site vs meter. Our implementation will be more viable if it's on a site basis, but more customers will be eligible if we do it on a meter basis. Our one big issue is what to do with new buildings. The utilities have to figure this out to classify the buildings- we follow their lead. They need to tell us. Options include:
 - a. Treat them all as <1 AMW since that's their historic load (convenient but not equitable and a bit disingenuous.)
 - b. Use their projected connected load/meter that they provide to the utility x a standard load factor. We could brainstorm with the utilities what the standard load factors are. They need to classify by connected load anyway, the only new part is the load factor.
 - c. We may be in conversations years before there's a utility capacity estimate or rate classification. But if we follow this “correct over time” model of compliance,

that's not a disaster. We sometimes may need to rough out a pre-guess at the classification for the forecasting system. But being wrong is non-fatal.

2. ID % of ET incentive \$ in past three years which are >1 AMW per meter.
 - a. ID those customers who might be bigger than 1 AMW per meter. Process of elimination
 - i. Obtain bills for all industrial or commercial participants for last 3 years who are not known to be small.
 1. Where we already have meter level data, analyze that.
 2. Where we have site level data, analyze that to see if it's worth getting the meter level data.
 3. Where we have waivers but have not picked up the site load data from utilities, or where sites are > 1 AMW, acquire the load data at the meter level from the utilities.
 4. In cases where there are meters at the site > and < 1 AMW, try to identify which meters the measures were on.
 - a. Ask the evaluator if he knows.
 - b. Ask the PMC and PDC if they know.
 - c. Look at the pre/post bills if it might be obvious from them.
 - d. Where necessary ask the customer.
 - e. In a few big cases where it's important, maybe visit the site.
 - Clarification: Phil- do we have arrangements with PGE and PCorp to obtain meter-level industrial data for participants?
 - b. For 2004-6, summarize the percent of SB1149 efficiency expenditures which went to customers >1 AMW, both in total and by program. Present by program or year for information and to help with forecasting, but the "control number" for the future is the total.
3. Develop trend projection two ways:
 - a. Based on spending same % of SB1149 money on >1AMW customers as prior 3 years.
 - b. Based on adjustments for future forecasts of program trends (note, this would probably result in a lower cap.)
4. Track % of ET incentive \$ in each year which is going to customers > 1.
 - a. Develop field in FT for utility rate class, which should track MW status.
 - b. Develop crystal report or something which analyzes \$ of incentives going to > 1 AMW by program. Report should work for forecasts and for actuals.
 - c. For sites with large and small meters, require consumers to identify potential projects by meter, as best they can.
 - i. Where a control system straddles meters, the ATAC and customer should estimate savings by meter the best they can, and use that to pro-rate costs.
 - ii. *Alternative: Assume all projects are on all meters at a site. Pro-rate costs across meters.*
 1. *This would require that we define a site for this purpose. Self-direct definition?*
 - d. Compare to projection of SB1149 revenues for the year.
 - e. Utilities will need to update the list of meters on the >1AMW rate annually, or with whatever interval they reclassify.
 - i. We'll have to set up procedures for Fast Track to take this data in. Best system may be for Fast Track to track rate class by year. We may leave

the field blank for customers who clearly are < 1AMW, unless we're collecting it for other purposes.

- f. We will need to train PDCs and/or ATAC to identify when a project may be on a meter > 1 AMW (usually by identifying the meter and the rate), and to arrange with us to acquire load data to confirm the project's status. We will need to work with PMCs to assure 100% compliance from the start.
 - i. This will involve some back-and-fill for projects where the ATAC study is already approved, but the project will be completed in 2008 or beyond.
 - ii. This will need to become a key element of quality control and acceptance for projects.

5. Reporting would be based on the same data.

If The Definition is 1 AMW/Site

This eliminates many of the messier procedures:

- We would not need to obtain meter level data for projects from the past three years or future projects except where it is valuable for evaluation.
- We would not need to identify the meter that projects were on for the past three years.
- We would not need to identify the meter that prospective projects are on, or pro-rate savings across meters.
- We would not need to track projects by meter in Fast Track.

Utilities would need to define a site. We could rely on their rate classification.

003 For each of the last five years, please provide the following for PacifiCorp and PGE customers:

- a. Total incentives paid to customers over one average megawatt.
- b. The total cost of conservation projects undertaken by customers over one average megawatt for which incentive funding identified in subsection a, above, was provided.
- c. Total incentives paid to residential customers.
- d. The total cost of conservation acquired from residential customers for which incentive funding identified in subsection c, above, was provided.

RESPONSE

- a. Per the attached reports from 2013, the incentives paid to customers over one average megawatt were

| | 2009 | 2010 | 2011 | 2012 | 2013 |
|-----|-------------|-------------|-------------|-------------|-------------|
| PGE | \$2,778,741 | \$4,189,900 | \$5,950,881 | \$7,508,724 | \$6,705,824 |
| PAC | \$2,435,510 | \$5,595,740 | \$4,223,682 | \$3,993,951 | \$2,953,604 |

The analysis of the 2014 program year is underway. Results can be provided upon completion, which is expected in Q2.

- b. The estimated total cost of conservation projects undertaken by commercial and industrial customers over one average megawatt in 2013 was **\$18,060,867 for PGE** and **\$8,928,984 for PacifiCorp**. This is the cost of the efficiency measures including Energy Trust incentive and customer expenditures but does not include Energy Trust program delivery and administrative costs. Until the analysis and report analyzing the 2014 program year are completed, 2013 is the only year for which measure level detail is available.

- c. Incentives paid to residential customers are as follows

| | 2009 | 2010 | 2011 | 2012 | 2013 |
|-----|-------------|-------------|--------------|-------------|-------------|
| PGE | \$7,258,332 | \$7,866,050 | \$10,072,005 | \$9,269,344 | \$7,769,287 |
| PAC | \$4,014,809 | \$5,576,348 | \$7,041,375 | \$6,663,461 | \$5,383,495 |

- d. The estimated total cost of conservation measures acquired from the residential customers receiving the incentives detailed in part c. above is shown below. This is the cost of the efficiency measures including Energy Trust incentive and customer expenditures but does not include Energy Trust program delivery and administrative

costs. This data is not available by utility, but is likely to follow a similar split to the incentives, since the same incentives are offered regardless of utility.

| 2009 | 2010 | 2011 | 2012 | 2013 |
|--------------|--------------|--------------|--------------|--------------|
| \$24,233,745 | \$24,967,882 | \$31,334,820 | \$30,142,615 | \$35,193,147 |

UM 1713 PGE Response to INCU DR No. 002
Attachment 002-A
Page 1

Schedule 108 PPC Funds Allocated to Energy Efficiency (SB 1149)

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Energy Conservation in Schools | \$4,927,646 | \$5,079,520 | \$4,867,199 | \$5,101,079 | \$4,876,658 | \$4,842,060 | \$5,166,623 |
| Energy Trust of Oregon - Conservation | \$26,387,047 | \$26,968,799 | \$27,068,050 | \$28,698,128 | \$27,971,825 | \$26,647,957 | \$28,693,870 |
| Housing & Community Services - LI Weatherization | \$5,765,346 | \$5,943,039 | \$5,694,623 | \$6,075,370 | \$5,962,748 | \$5,920,677 | \$6,296,852 |
| Total | \$37,080,039 | \$37,991,358 | \$37,629,873 | \$39,874,577 | \$38,811,231 | \$37,410,694 | \$40,157,345 |

UM 1713 PGE Response to ICNU DR No. 003
Attachment 003-A
Page 1

Schedule 109 Funds Remitted to ETO and Schedule 110 Collections as Authorized by SB 838

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|------------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Schedule 109 Funds Remitted to ETO | \$6,930,422 | \$13,766,914 | \$23,397,922 | \$27,775,063 | \$40,795,172 | \$49,402,929 | \$48,160,176 |
| Schedule 110 Funds Collected* | \$228,756 | \$449,703 | \$680,661 | \$925,790 | \$918,669 | \$922,052 | \$920,894 |
| Total | \$7,159,178 | \$14,216,617 | \$24,078,583 | \$28,700,853 | \$41,713,841 | \$50,324,982 | \$49,081,069 |

* Net of revenue-sensitive costs

A Summary of Factors Affecting the Annual Analysis of SB 838 Compliance

Summary

Energy Trust analyzes the share of SB1149 efficiency funds going to customers with load over 1 Average MegaWatt. We then compare it to the share going to these customers prior to the SB838 funding. This is a method to assure that the additional funds from SB838 do not lead to additional funding for larger customers, who do not contribute to the additional funding. This analysis is based in outline on an agreement between Energy Trust, the Oregon PUC, utilities and interested parties. However, the details of the method have never been approved or extensively discussed. Some of the details of the analytic methods are based on Energy Trust decisions, and others are determined by how utilities classify customers.

If Energy Trust exceeds pre-838 spending on larger customers, Energy Trust has agreed that it will modify programs to reduce spending on those customers. This has significant customer service and resource acquisition implications. Because many industrial projects and larger commercial projects are one-time opportunities driven by facility or plant construction or major change-outs, trimming program activity may result in significant efficiency lost opportunities. Because large customer project occur in three programs, and many of these customers are key strategic assets for state economic development, management of this issue will be complex. Energy Trust expects program opportunities from these customers to continue to expand due in part to changes in the economy and our success at building relationships with this customer class. These customers include all manner of manufacturing, hospitals, universities, larger office and retail centers, and data centers. As the market conditions for fossil Combined Heat and Power are improving, opportunities may in the near future include CHP projects. Energy Trust is developing a separate analysis to explore options to -manage over-spending on this group of customers.

The following table summarizes the factors that most influence the results, and the impact on the analysis.

| Factor | PAC | PGE | Impact |
|---------------------------------|--|--|--|
| Energy use aggregation | Meter level, except for sites certified to self-direct | Site level, regardless of self-direction status | Inconsistency in which customers pay SB 838 charges. PAC approach is less inclusive for > 1 aMw, PGE's more inclusive. |
| Time period for energy use | Previous calendar year, no proration for new construction | | New large energy using sites may pay SB 838 charges for >1 year and are not included in Fluid's analysis as large customers. |
| Pre-SB 838 Baseline Period | 2004-2007 | 2005-2007, defined in Advice No. 09-24 | PAC's baseline would be lower if 3 years, PGE's would be lower if 4 years. |
| Summation of Post-SB 838 Period | Cumulative average | Energy Trust uses cumulative average, but Advice No. 09-24 mentions 3-year rolling average | If 3 year average, little impact to PAC, PGE large site funding would exceed baseline |
| How analysis is done? | Meters over 1 aMW applied to whole site, no aggregation of individual meters | PGE sites and Energy Trust sites are compared directly | |
| Timing | Analysis completed annually, after the completion of the program year | | Retrospective look only. No real-time management |
| Benchmark – pre-838 percentage | 28% | 18% | PAC's would be 15% if 2005-2007 is used. PGE's would be 15% if 2004-2007 is used. |
| Latest Result | 2008-2011: 16% | 2008-2012: 17% | If 3-year average used: PAC – 16%, PGE – 21% |

Background

Oregon Senate Bill 838 of 2007 allowed Pacific Power and Portland General Electric to collect additional revenue so that Energy Trust could pursue all cost-effective energy efficiency, beyond what was achievable solely through the public purpose charge authorized by SB 1149. As part of SB 838, retail

electricity consumers with loads greater than one average megawatt were exempted from the charges and any benefits from conservation measures included in these rates.

The Oregon PUC held discussions to determine how to assure that benefits of the additional SB 838 funding did not flow to those >1 aMW customers who did not contribute to the additional funding. Those discussions led to an agreement in principle, between Energy Trust, the PUC, and interested parties including Industrial Customers of Northwest Utilities, Associated Oregon Industries, and Citizens Utility Board. This agreement allowed for operation of programs that were funded by both SB 1149 and SB 838, so long as the proportion of SB 1149 funding spent on larger customers after SB 838 was passed did not exceed the proportion prior to SB 838 funding. Incentives were to be used as a proxy for overall spending, as program management and administrative costs were difficult to allocate to specific program participants. It was proposed that should large customer incentive funding exceed their historical level, Energy Trust would have two years to bring large customer funding back into this guideline. However, this agreement was never made official and was never formalized.

To track this, each year Energy Trust has tasked Fluid Market Strategies to perform an analysis that tallies what percentage of Energy Trust's prior year SB 1149 incentive spending goes to sites not paying SB 838 charges. This is done by comparing Energy Trust program information with lists of customers not paying SB 838 charges from each utility to verify which incentive payments went to these sites.

Energy Trust has needed to have this analysis conducted by a third party because of the need to maintain the confidentiality of both Energy Trust's participant data and the usage information of large utility consumers. Historically, Energy Trust has not had access to information confirming whether or not a customer is paying SB 838 charges in a given year. As we approach the limits on spending for these customers and need to implement changes that will reduce spending on these customers, Energy Trust needs to know who is or is not paying SB 838 charges and track this information on an ongoing, real-time basis, instead of after the conclusion of each year. It is our hope that the recent revisions to the data sharing agreements enable this capability.

Current Situation

The past few years have seen an increase in spending going to sites using more than 1 aMW for a variety of factors, including:

- A transition to internal management of the industrial program at the beginning of 2008 has led to more productive relationships and higher savings achieved at the large industrial sites.
- The introduction of Strategic Energy Management has been very effective at reaching low- and no-cost savings, driving additional capital projects, and increasing the overall awareness of a site's energy usage, but until recently has been focused at large sites.
- After a quiet period lasting from 2007-2011, 2012 saw the return of an industrial mega-project. Additional phases of this mega-project are expected in 2013-2014.

Due to this increase, Energy Trust is now near the historical benchmark in one utility territory, and may exceed that threshold in 2013.

As the results of this annual analysis have grown closer to the historical benchmark and garnered more attention, Energy Trust has noticed several aspects of the analysis that we wish to clarify before making modifications to our programs that help ensure we are managing incentive spending appropriately.

These aspects include:

- Inconsistencies between utilities in interpretation of identifying which customers pay SB 838 charges
- Treatment of new construction sites
- Inconsistencies in the implementation of the baseline calculation between utilities
- Ambiguity surrounding the calculation of post 838 spending to compare to the baseline

Once these technicalities are understood and addressed, questions remain.

- How will limiting future funding to this customer segment impact our ability to meet goals?
- What program approaches do we recommend to best balance the need to comply with the 838/1149 funding split with our need to engage participants and achieve all cost effective savings?
- Are there other ways of interpreting the intent of the allocation of 1149 funds that would better meet the needs of all ratepayers?
- Is the only way to capture all the cost effective efficiency for this segment via legislation change?

Discussion

The following is a list and discussion of the various factors, processes, and assumptions that affect the annual analysis of how much of Energy Trust's incentive spending went to sites that do not pay SB 838 charges. Those factors are:

1. At what level (meter or site) is energy use aggregated and considered?
2. What time period is considered for whether a site used more than 1 aMW?
3. What pre-838 time period is considered the baseline?
4. How are the post-838 years summarized and compared against the benchmark?
5. How is the analysis done?
6. How does the timing of the analysis affect Energy Trust's ability to manage the outcome?

- 1. At what level is energy use aggregated and considered?**

The SB 838 language states that “retail electricity consumers with a load greater than one average megawatt” are excluded from the additional tariffs. Since the language does not define a “consumer”, some interpretation has been required.

The level at which a consumer’s energy use is aggregated and considered has a significant impact on the results this analysis because the energy usage of multiple meters, buildings, or facilities may be aggregated and amount to more than one average megawatt. Different approaches to this question may lead to different outcomes for a utility. In 2012, Fluid Market Strategies was asked to interview both PGE and PAC on how their lists of consumers using more than 1 aMW are determined.

PGE reported aggregating energy use by site and using the SB 1149 definition of a site, which is used to define what energy use is required to qualify for self-direction. It states:

(31) “Site” means a single contiguous area of land containing buildings or other structures that are separated by not more than 1,000 feet, or buildings and related structures that are interconnected by facilities owned by a single retail electricity consumer and that are served through a single electric meter.

PAC reported using two different methodologies for coming up with their list of 1 aMW users. Unlike PGE, PAC includes all meters at customer sites who self-direct on their list. It is assumed that these all meet the 1149 definition required to self-direct. Outside of those self-directing, PAC analyzes usage at the meter level and does not aggregate usage at any higher level. While this may seem contradictory to PGE’s practice, an OPUC Staff Report from a meeting dated January 22, 2008 (Advice 07-022) on PAC’s schedule discusses the large consumer exemption as “consumer meters with usage greater than 8,760 megawatt hours and consumers receiving site certification from ... the self-direction program will not pay the Energy Conservation Charge in Schedule 297.” The inconsistent description of the exclusion between SB 1149 and the Staff Advice document may have led to this inconsistency. The equivalent Advice document on PGE’s SB 838 associated tariff does not discuss the large customer exemption.

Energy Trust records installed conservation measures at the site level. Although utility account numbers are collected for each site that participates and can be linked to meter numbers, it would be administratively burdensome to track which measures were installed on which utility meters, as some measures might impact the usage of multiple meters.

Since PAC provides data by the meter level and Energy Trust only tracks to the site level, it is assumed that for any site having a meter that is over 1 aMW, the site itself is over 1 aMW. No aggregation of smaller meters is done as part of the analysis, as this is understood to be inconsistent with how PAC assesses its SB 838 tariff. As a consequence, Energy Trust may work with a site with several meters which, when taken individually do not exceed 1 aMW but do when added together, and allocate any incentives paid to these sites to SB 838 funding.

2. What time period is considered for whether a site used more than 1 aMW?

In this aspect, the utilities are consistent in their approach. While having different practices in regard to the level at which energy usage is aggregated, both utilities look at the electricity consumed over the prior year calendar year. A site that uses more than 1 aMW in a given year will be excluded from SB 838 charges in the subsequent year.

When comparing Energy Trust program data with utility large user lists, Fluid compares the year a site is exempt from SB 838 charges with the information from same program year. For example, a sites using more than 1 aMW in 2011 would be exempt from SB 838 charges in 2012. It is these sites that are compared against Energy Trust's 2012 program year information.

This approach of looking at the energy usage of the previous calendar is applied to new buildings and sites by both utilities as well. The energy usage of a building that is occupied partway through the year is not prorated when the usage is analyzed at the beginning of each year.

Because of this practice, it is believed that many large new construction sites pay SB 838 charges in at least their first year of occupancy. They would not immediately be on the utility lists of large consumers provided to Fluid, and any incentives awarded by Energy Trust programs during construction or their first year of occupancy would likely not be counted as incentives given to large consumers, even though they may be subsequently exempted from SB 838 charges.

3. What pre-SB 838 time period is considered the baseline?

To ensure that the annual spending for larger customers is consistent with historic trends, the amount of incentives going to large consumers is calculated after the completion of each year. This is compared against the time period before SB 838 was implemented, roughly 2004-2007.

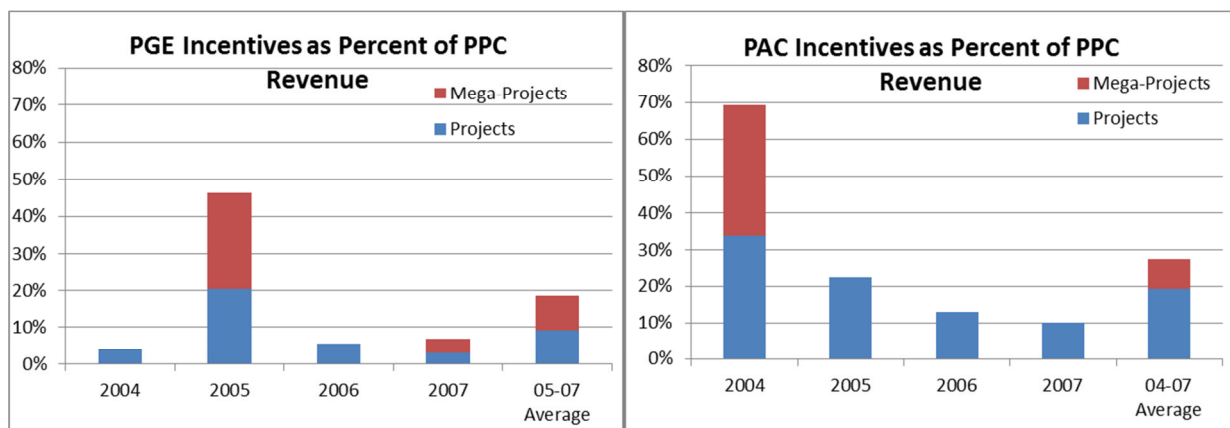
These years, however, represent a time of fluctuation, as Energy Trust's programs were just beginning, large "mega-projects"¹ happened in each utility territory, and Energy Trust went through a period in 2006 when incentive funding needed to be more carefully managed and those seeking incentives needed to apply through a reservation system.

To account for these fluctuations, slightly different time periods were chosen as historical benchmark periods, against which future incentive distributions are compared. For PAC, this time period is 2004-2007. For PGE, the same time period was initially used by Fluid, but it was subsequently discovered that the Commission Staff's advice to PGE (No. 09-24) references a "2005-2007 benchmark" so it was adjusted accordingly.

¹ A mega-project is a project with very large savings that is given an incentive that exceeds normal Energy Trust program incentive limits, but at a levelized cost far below traditional incentive levels. The projects are reviewed by the Energy Trust Board of Directors prior to approving an incentive offer.

Both the time range, as well as the presence and size of mega-projects that occurred in these periods has a great effect—perhaps the greatest of all discussed here—on the outcome of how Energy Trust’s incentive spending may be constrained.

The charts below show the percentage of incentive funding given to sites using more than 1 aMW by utility, from 2004-2007 as well as the effect of megaprojects on the averages across these years. One can see from these graphs that there was clearly more participation by large sites in PAC territory in Energy Trust’s early years. In the past few years, however, incentives going to large sites in PGE territory have exceeded PAC. As a result of this methodology, the pre-SB 838 large customer funding benchmark against which future funding is measured is 18% for PGE and 28% for PAC.



Note that an error was recently discovered in how PAC was identifying their list of 1 aMW users. As a result, an analysis is currently underway to review past work by Fluid and the percentages listed above may change.

4. How are the post-838 years summarized and compared against the benchmark?

Due to fluctuations in program participation from year to year, it makes sense that a single year not be compared in isolation against historical incentive spending. To date, Energy Trust has used a cumulative average in analyzing program incentive spending for the years after SB 838 was implemented.

While this makes sense in that it addresses whether the share of SB 1149 funding going to large customers has remained constant, the PGE Advice document (No. 09-24) does have a footnote that states that “Projected spending on incentives, plus scaled percentage of program costs is expected to remain below the 2005-7 benchmark (the three year rolling average should remain below 14% of SB 1149 spending).” Later analysis revealed that the 2005-2007 benchmark was actually 18%. The PAC Advice document is more general on this topic, stating only that

There also needs to be assurance that customers who are exempt from the incremental energy efficiency tariff do not receive benefits from it. The Trust will review its spending and determine the average percent of public purpose funds spent on this customer class historically so it will not materially change in the future.

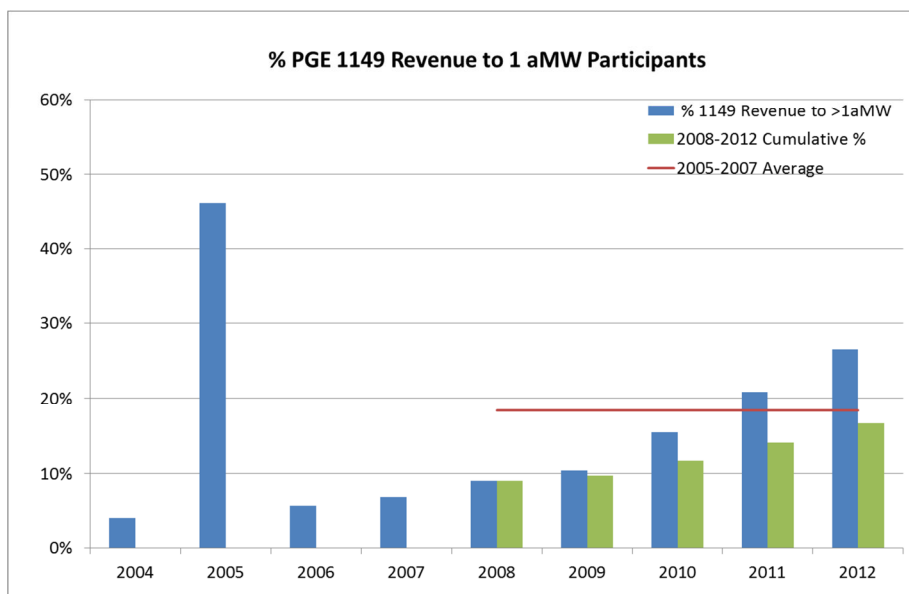
A change from the cumulative average employed in the Energy Trust analysis to a three-year rolling average) would mean that Energy Trust may have already exceeded its benchmark limit in PGE service territory.

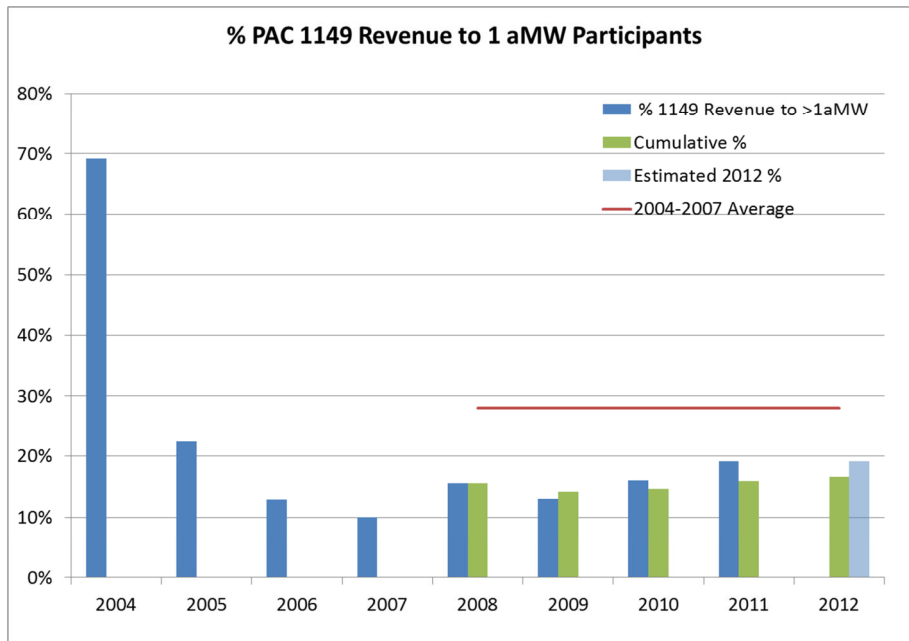
5. How is the analysis done?

Fluid Market Strategies completes the analysis for Energy Trust each year. Using both Energy Trust program data and the utility lists of large users, matching is done. Street address and business name are the primary identifiers used in the matching, since Energy Trust does not track the account or meter number(s) affected by a single measure.

Due to large sites with multiple addresses, multi-building campuses, and companies with varying names, the matching is not always straightforward and requires other sources of information and interpretation.

The results of this analysis to date are below. At this point we have 2012 results for PGE, but not PAC.





As previously stated above, the analysis and results for PAC are currently under review due to an error recently discovered by PAC in how they compiled their list of 1 aMW users.

6. How does the timing of the analysis affect Energy Trust’s ability to manage the outcome?

Energy Trust currently tracks the savings achieved and incentive spending at sites that are believed to use more than 1 aMW in its project database. However, these estimates of energy usage are often based upon field judgment and have not been informed by the annual review conducted by the utilities due to previous data sharing limitations, and may or may not match up with annual determinations made by the utility. Due to these inconsistencies, comparison of past estimates by program staff to the official results of the analysis conducted retrospectively by Fluid Market Strategies has shown significant differences between the two, and therefore the internal data about large customers is not considered reliable for purposes of managing to 838 funding limitations. That may change with the data sharing agreements that are being implemented now, but the programs must currently rely upon the retrospective review each year for accurate results. This delay, in combination with two-year budget cycles, long project development timelines, and a revolving pipeline of outstanding incentive commitments makes quick adjustments and fine-tuning of program offerings to change spending patterns difficult.

If the current historical benchmarks are maintained, and given the steady upwards trend in participation by large sites since 2008, adjustments to Energy Trust’s programs will be required within the next few years. Efficiency programs depend on stability, however, and it is difficult to make small adjustments without causing larger disruptions to the programs. Further, as every year is unique in the combination of projects that will complete in a given year and a majority of projects complete in the last quarter of the year, it is difficult to predict the outcomes of spending on these customers proactively.

Other Considerations

Beyond the topics discussed above, two additional questions fundamental to the issue may be worth consideration.

1. Are incentive costs a reasonable proxy for the overall proportion of costs spent on larger customers?
2. Is analysis by individual utility appropriate?

1. Are incentive costs a reasonable proxy for the overall proportion of costs spent on larger customers?

The proportion of program costs represented by incentives varies between utilities, programs, and even projects. However, estimating “fully loaded costs” for specific customers or groups of customers is difficult. Large customers participate in three programs—New Buildings, Existing Buildings, and Production Efficiency—each with its own ratio of incentive to overall funding. Energy Trust believes that so long as the incentive spending from the pre-SB 838 period is compared to post-SB 838 incentive spending, it’s a reasonable proxy for overall spending. This assumes that spending on a variety of large customers occurred in both pre- and post-periods, so the overall proportion of incentive vs. other funding will be about the same.

2. Is analysis by individual utility appropriate?

Energy Trust has performed the analysis separately for PGE and PAC because incentives given to a large customer of one utility should not impact the availability of incentives for large customers in another territory. Further, the question of whether smaller customers are subsidizing increased funding of larger ones through SB 838 charges could be determined to be different by utility. If the utilities were considered together, the benchmark percentages of incentives going to large customers would be higher for PGE, but lower for PAC.

One potential consequence of conducting the analysis separately for each utility is the possibility of separate program services and incentives for each utility. As a limit is reached in one utility is reached, it necessitates changes in the program for only that utility service territory. This complicates program design and market messaging.

0021 For each year between 2011 and 2013 (please also include 2014 if data is available), please identify the percentage of 1149 incentives provided to customers over 1 aMW that were directed toward mega projects. Please also identify whether there was more than one mega project during this period.

RESPONSE:

Energy Trust characterizes a “mega project” as a project that requires board authorization to exceed established program incentive caps, and this characterization underlies the responses to this DR and those that follow.

Energy Trust provided incentives to a multi-phased mega project in 2012 and 2013. The incentives provided totaled 34% and 22% of incentives provided to PGE customers over 1 aMW in 2012 and 2013, respectively. There were no mega projects in PacifiCorp territory during this time.

Final 2014 data is not yet available.

0022 Is the ETO aware of any new mega projects that are likely to receive incentive funding in 2015 or 2016 that have not received incentive funding in past years?

RESPONSE:

In November 2014, the Energy Trust board of directors approved funding for a mega project in PGE territory projected to be paid in 2016 and 2017. At this time, no other mega projects have been identified for this period.

0023 What is the average levelized cost per kwh for savings from a mega project? Please estimate if necessary.

RESPONSE:

Energy Trust assumes a 15-year measure life for most custom measures and uses a 4.5% discount rate. Using these assumptions, Energy Trust's average levelized cost of acquisition for mega projects is \$0.007/kWh. This does not include program management and delivery costs, which cannot be allocated to individual projects or measures.