

# **July 21, 2011 CRAG Meeting**

## **Summary Notes**

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## **Attendees**

### **CRAG**

Danielle Dixon  
Chuck Eberdt  
Tom Eckman  
Stefanie Johnson  
David Nightingale  
Stan Price

### **Guests**

Irion Sanger, on behalf of ICNU  
Christian Carlson, Public Counsel

### **PSE**

Dan Anderson  
Eric Englert  
Andy Hemstreet  
Bill Hopkins  
David Landers  
Grant Ringel  
Cal Shirley  
Bob Stolarski  
Jeff Tripp

### **Facilitator**

Dune Ives

## Meeting Topics

1. Review agenda
2. Review ground rules and standing agenda items
3. Discuss REM and BEM program updates and revisions
4. Discuss Schedule 258 program revision proposal
5. Review IRP highlights as they relate to the ten-year potential and two-year conservation target
6. Discuss the 2012-2013 savings targets
7. Review a proposal to revise the format of Exhibit 1
8. Wrap up and next steps

## Discussion Highlights and Notes

*(Only the topics above in which there was discussion. All questions or items that were captured in the “Parking Lot” are noted in the applicable sections below. Specific points are available in the PowerPoint slide PDF. Any resultant action items are captured below.)*

### General Comments

After introductions all around, the assembled reviewed CRAG-related activities that occurred since the last meeting. Sun safety tips were also reviewed in the safety moment.

### EES program status updates

Dan reviewed the preliminary six-month 2011 savings and expenditures, and year-end forecast figures. A key point was that, despite a projection of falling slightly short on savings in 2011, PSE will still finish the 2010-2011 biennium ahead of plan.

Jeff Tripp reviewed plans for the LED pilot, refrigerator replacement, Rock the Bulb, and the Home Energy Report pilot. There were several suggestions made by the group that PSE will follow up on, relative to appliance recycling, retail channel conditions and measure costs. These suggestions may have positive impacts on savings achievement and were very much appreciated.

David updated the group on new and revised initiatives in Small Business Lighting and Rebates, where there was discussion around incentive levels.



David also presented PSE's Schedule 258 revision proposal. The group discussed various ramifications of proposal, including accounting timing, ratemaking rules and customer (both 258 and other customers). There was a brief, slight confusion over the total allocation amount for the proposed period. This was cleared up by indicating that recent information requests were primarily focused on \*non-449\* funding/payments/etc. A concern was expressed that it may appear that PSE would be collecting funds but withholding access to them for one year. PSE acknowledged that this perception would need clarification when it files the revised Schedule 258. The issues of accounting true-up and the disposition of unused funds (they would be made available to \*all\* customers) were also clarified.

PSE proposed that it file the revised Schedule 258 with an effective date of September 16, 2011, to be considered at the September 15 Open Meeting. PSE acknowledged that, consistent with condition K(3)(c) [..... When extraordinary circumstances dictate, the Company may provide the CRAG with a copy of a filing concurrent with the Commission filing.], the CRAG will receive a copy of the Schedule revision when it is filed. There was no objection to PSE providing the CRAG less than 60 days (prior to the effective date) to review the draft tariff schedules.

Additional concerns were expressed, (also noted in the Parking Lot section of this summary) including equitable treatment for all customers, perceived accounting difficulties, access to funds, and a lack of alignment with I-937/biennial targets. Such concerns would certainly be voiced in filing comments.

Points were also made that the affected customers very much like the program and the suggested revision, so that they have the appropriate amount of time to use the funds now made available by implementation of the Peak Credit Method.

The group agreed that the objective of the discussion was not necessarily to come to consensus, but to ensure that all views were presented and that members had a chance to review and comment on this program in an open, frank exchange.

### **2012-2013 Savings Targets -- Planning**

Bob Started the discussion off by reviewing the key milestones leading up to the filing of PSE's 2012-2013 Biennial Conservation Plan ("BCP" henceforth). He clarified that today's presentation of the ten-year potential and two-year targets constitutes compliance with the first milestone outlined in condition K(8)(f).

Bill then reviewed several elements that contributed to the ten-year potential figure, based on IRP calculations and considerations. It was pointed out that the presentation should also reference compliance with and applicability to conditions K(9) (a) & (b) and K(3)(d).

He also shared the Sixth Power Plan figures for the equivalent time period. There was general discussion regarding the potential of revised federal standards for CFLs and the impact that may have on estimates. The group also discussed the reasons why PSE's 10-year figures are different than that of PSE's allocation of the Regions'; including the makeup of industrial customers, CFL saturation, etc. Efficiency in generation was also discussed, and a request was made to see any studies made relative to generating efficiencies improvements. It was noted that there is some discussion about the statute going on at the State level, relative to generation efficiency; does it refer to energy efficient motors, HVAC, etc. within the plants or does it mean re-winding turbines, etc.? It was also noted that PSE informed the CRAG of its study of generation efficiency improvements in the last biennium's planning period.

At this point in the discussion, it was pointed out that the settlement "conditions" apply only to electric conservation. There are no gas "conditions". All original gas settlement rules still reside in the 2002 Stipulation Agreement. The third-party review of electric 2010-11 portfolio-level conservation savings does not apply to gas conservation savings.

Bill also presented an overview of the avoided costs that will be used to calculate cost-effectiveness for electric and gas programs. Overall, electric and gas conservation avoided costs will be lower, primarily due to decreases in projected electricity and gas market prices. A key consideration in the electric avoided cost calculations is the definition of peak load. Specifically, the switch from a spike hour to an average load over a range of hours during a peak period.

Following lunch, Bob presented the portfolio two-year savings targets for electric and gas. There was fairly detailed discussion on several factors that affect PSE's ability to acquire savings that are consistent with the IRP and the established targets. It was pointed out that PSE contributed to the analyses of CFL savings and that an updated study may be warranted to see if there may be an adjustment to the storage figure indicated (thus, increasing the saving figure).

Jeff then shared with the group details on REM savings, starting with the sector breakdown of saving types. He then provided additional drivers of savings at the program level for both electric and gas. He discussed a few specific measures and their overall effect on anticipated savings. For instance, gas furnace savings moving from 89 therms to 65. It was pointed out that ARRA may have had an impact on savings here, as well. There was also discussion around the pending changes to the WashWise program; each utility in the group will be forming its own version of this program. Jeff indicated that he'd obtain additional information about this change.

David provided a similar view for Business programs. He pointed out that lighting projects continue to grow. He shared that PSE is focusing on educating customers; rather than conducting simple one-for-one replacements, it is better to evaluate the overall lighting needs and possibly reduce the number of fixtures, as well as consider controls and exterior lighting.

It was generally acknowledged that PSE's target was well-thought out, reasonable and presented in a thorough fashion.

### **Exhibit 1 Reformatting**

Grant provided the group handouts of a "current view" and "proposed view" of PSE's Exhibit 1. He emphasized that no budget amounts were being affected; only how programs are organized. The emphasis was on presenting information-oriented programs and activities in a better structure, which will make calculating the 10% non-savings figure easier. Re-named activities will be much more intuitive. It was generally agreed that the revisions made sense and that they were straightforward. Grant pointed out that the CRAG won't see this format for 2011-related budgets/expenditures; only for 2012-2013--forward.

### **EM&V Framework Status**

Bob, substituting for Syd France, provided the assembled a review of key development dates. Handouts were provided of the 14<sup>th</sup> draft framework, along with several attachments. The attachments consisted of several key EES protocols and guidelines, which have been in place and in use since 2008. It was pointed out that the attachments represented documents that were constantly evolving, while the EM&V Framework was more static. Members agreed to review the documents and provide comments to Andy by August 5.

### **Third Party Review of 2010 Electric Savings**

Bill reported the current timeframe of expected deliverables. During the discussion, the topic of the Navigant C/I evaluation arose and the expected delivery of a draft report. It is expected that the draft report may be ready by the end of August. PSE will focus on getting the Schedule 258-specific portion to the CRAG first.

### **Wrap-up**

Handouts were provided to members:

- The current CRAG action item list
- The updated compliance calendar
- The EES condition compliance "report card"
- The 2011 preliminary six-month view of savings and expenditures by program

The group discussed the content and tenor of the meeting and there was general agreement that, since our "level-setting" meeting in May 2010, each meeting was an improvement on the last.

For the most part, attendees indicated that the meetings are well-structured, productive, informative and clear. Most appreciate the candor in an environment conducive to working together. It was specifically pointed out that our facilitator Dune Ives has played a large part in the group's success.

The next CRAG meeting is scheduled for Thursday, August 25 in the Summit room.

### **Parking Lot & Questions**

The following issues/ideas/questions were noted in the meeting parking lot (all related to the Schedule 258 proposal discussion. Text in parentheses is additional for clarification or interpretation.):

- 1) Accounting timing (—Is there a matching principle issue? Or other ratemaking principle issue?)
- 2) (The proposal makes the program ) Too complex now
- 3) (It would be preferable to ) Keep timing in line with RCW 19.285 biennial targets
- 4) (There still remain) Equity issues

### **Agreements, Decisions**

- 1) PSE will file its Schedule 258 revision with a requested effective date of September 16, 2011, to be considered at the September 15, 2011 Open Meeting.
- 2) Public Counsel, NWECC, ICNU and PSE will check with their various experts to resolve any ratemaking or accounting rules as they relate to PSE's proposed Schedule 258 revisions.
- 3) Mr. Sanger will forward additional Schedule 258 questions to PSE shortly.
- 4) CRAG members will review the EM&V Framework package and provide comments to Andy by Friday, August 5.

### **EES Action Items**

- Provide any available 2009 generating facility efficiency studies to the CRAG.
- PSE will obtain more information on the changes to the WashWise program.
- Provide the gas furnace study to the CRAG.
- Provide the draft Navigant C/I evaluation as soon as it's available.



# Conservation Resource Advisory Group

Energy Efficiency Services



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**Welcome!**



**Cal Shirley**

*Vice President, Energy Efficiency Services*

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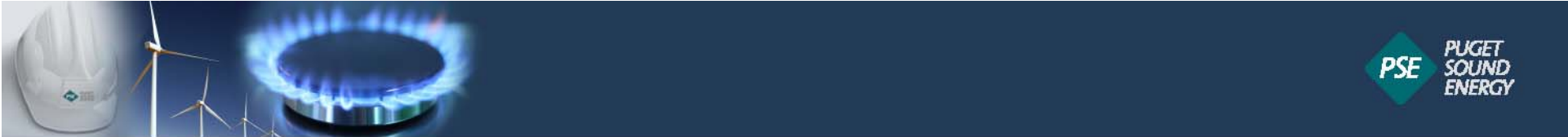


# Today's Agenda

**Facilitator:** Dune Ives; President, Milepost Consulting

<i>Time</i>	<i>Topic</i>		<i>Discussion Lead</i>
<b>Morning Session</b>			
9:30 AM	Welcome!		<b>Cal Shirley</b> , <i>Vice President, Energy Efficiency Services</i>
9:35	Agenda review, ground rules, meeting objectives and compliance status		<b>Dan Anderson</b> , <i>Manager, EES Budget &amp; Administration</i>
9:45	Safety moment		
9:50	Program reviews and updates: <ul style="list-style-type: none"> <li>- Preview of semi-annual savings &amp; expenditures</li> <li>- LED Pilot</li> <li>- Hard-to-reach markets refrigerator replacement</li> <li>- Residential incentives adjustment</li> <li>- Home Energy Reports status</li> <li>- Rock the Bulb II</li> <li>- Schedule 258 discussion conclusion and presentation of filing papers</li> </ul>	<p><i>Ensure that 2<sup>nd</sup> quarter updates are acknowledged and understood.</i></p> <p><i>Gain agreement that PSE should file a revised Schedule 258.</i></p>	<b>Dan, Jeff Tripp</b> , <i>Manager, Residential Energy Management</i> <b>David Landers</b> , <i>Manager, Business Energy Management</i>
11:20 PM	2012-2013 Savings targets: <ul style="list-style-type: none"> <li>- 2011 Planning Milestones</li> <li>- IRP guidance &amp; 10-year potential</li> <li>- Cost effectiveness impacts</li> <li>- Market trends affecting planning</li> <li>- Program targets               <ul style="list-style-type: none"> <li>- Residential</li> <li>- Business</li> </ul> </li> </ul>	<p><i>Provide all relevant considerations used to develop EES's 2012-2013 savings targets. Gain agreement that targets are appropriate.</i></p>	<b>Bill Hopkins</b> , <i>Manager, Strategic Planning &amp; Research</i> , <b>Bob, David, Jeff</b>
Noon	Lunch break		

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# Today's Agenda

**Facilitator:** Dune Ives; President, Milepost Consulting

<i>Time</i>	<i>Topic</i>	<i>PSE Objective</i>	<i>Discussion Lead</i>
<b>Afternoon Session</b>			
12:30 PM	Conclude 2012-2013 savings target discussion		
1:40	Exhibit 1 revisions & Information Services clarifications	<i>Simplify and increase transparency of EES's information-oriented and non-savings program budget presentations.</i>	<b>Grant Ringel</b> , Director, Customer Market Strategies <b>Dan</b>
2:00	Summaries of: <ul style="list-style-type: none"> <li>- Status of one-time third party review of PSE's 2010-11 electric savings</li> <li>- EM&amp;V Framework</li> </ul>	<i>Provide status updates on ongoing condition compliance-related issues.</i>	<b>Bob, Dan, Syd France</b> , Manager, New Prgm. Dev. & Evaluation, <b>Bill Hopkins</b> , Manager, Strategic Planning & Research, <b>Jeff Tripp</b> , Manager, Residential Energy Management
2:20	Wrap-up, next steps		<b>Dan</b>

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## Safety Moment



**Dan Anderson**

*Manager, Budget & Administration*

July 21, 2011 CRAG Meeting



# Safety in the sun



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## Standing Agenda Items



Dan Anderson

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## Summary of CRAG-Related Activities Since May 19, 2011

### E-mails:

- PSE provided responses to outstanding Schedule 258 information requests:
  - o10 from Public Counsel, 3 from NVEC, 2 from ICNU

### Meetings:

- Third-party review meeting; June 15
- EM&V Framework development; June 16 & July 15
- Public Counsel, Reviewed revised Exhibit 1 organization; 7/7/2011

### UTC Events/Filings:

1. Two Statewide Collaborative meetings; June 2 & 29
2. GRC—Conservation Savings Adjustment component ; July 14
3. File Q2 revisions to Exhibit 3 & Exhibit 4; July 21



## Action Items Status Since May 19, 2011

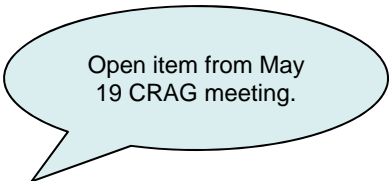
### PSE Completed:

- During July 21 CRAG meeting:
  - Describe the elements of information-oriented activities
  - Provide the CRAG a status update on how spending for non-programmatic activities is trending (also provided in the Semi-annual report)
  - Develop Schedule 258 revision proposal
- Initiated EM&V framework sub-committee meetings

### Ongoing:

### CRAG Open:

Provide assistance to PSE in drafting condition compliance language for K(10)(b).



*The complete 2011 PSE Action Item table is part of today's handouts.*

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## Program Status Updates

Applicable conditions: **K(6)(d), K(3)(a)(ix),  
K(3)(a)(v), K(3)(a)(vi)(2), K(6)(d), K(7)(c)**



**Dan Anderson,**

**David Landers,** *Manager, Business Energy Management*

**Jeff Tripp,** *Manager, Residential Energy Management*

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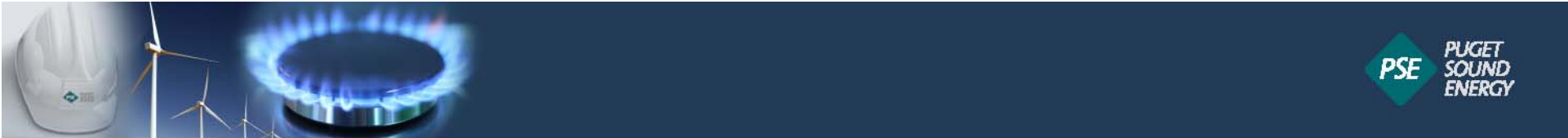


# Mid-year Review Preview

	Savings Total (MWh)	Expenditures
<b>Electric (MWh)</b>	<b>137,918</b>	<b>\$ 30,824,572</b>
2011 Goal	338,960	\$ 90,793,904
Percent	40.7%	34.0%
YE Forecast	333,713	\$ 84,834,000
<b>Gas (Therm)</b>	<b>1,652,940</b>	<b>\$ 6,226,881</b>
2011 Goal	4,789,478	\$ 19,280,456
Percent	34.5%	32.3%
YE Forecast	4,441,021	\$ 19,039,000

Details are available in the EES Tracking tables handout

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# LED Pilot



- Consumers who receive a PSE incentive will be encouraged to participate in a technology forum



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# Hard-to-Reach Markets

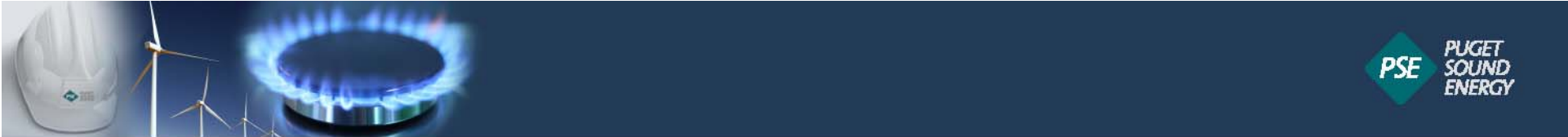
## *Refrigerator Replacement*

- Manufactured before 1993
- In working/cooling condition and regularly used
- For primary food storage in the kitchen
- Properly grounded (3-prong) to ensure safety
- Refrigerator will be replaced with the most similar size to the one replaced



15, 18 & 21 ft<sup>3</sup>

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# Residential Incentive Adjustments

New Incentive:	Rebate:
Windows (Upgrade to a .30 U-Factor or better.)	\$5/ft <sup>2</sup> up to \$750.00

Modified Incentives:	Rebates:
Ductless Heat Pump	\$1,200
Forced-air-furnace to Heat Pump Conversion	\$1,500
Electric Heat Pump Sizing & Lockout Controls	\$300
Electric Energy Star® Heat Pump Water Heater	\$500
Floor Insulation (R-0 to R-30)*:	50 percent of the cost, up to \$400
Attic Insulation (R-11 or less to R-38)*:	50 percent of the cost, up to \$400
Wall Insulation (R-0 to R-13)*:	50 percent of the cost, up to \$400

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# Rock the Bulb

**ROCK THE BULB™**  
**THE RE-ENERGIZE TOUR**  
**CHUYÊN LỰU DIỄN TÁI TẠO NĂNG LƯỢNG**

Qua **8** thành phố kéo dài **16** ngày tặng free **10** bóng đèn CFL

Mang 10 bóng đèn incandescent cũ để đổi lấy một bóng đèn CFL của PSE tại bất kỳ điểm Rock the Bulb nào.

- July 9 & 10 **federal way**
- July 16 & 17 **bremerton**
- July 23 & 24 **kent**
- July 30 & 31 **renton**
- Aug 6 & 7 **redmond**
- Aug 13 & 14 **oak harbor**
- Aug 20 & 21 **lacey**
- Aug 27 & 28 **burlington**

Phải là thân chủ tự gia khách hàng của PSE. Mang theo số tài khoản PSE của bạn để kiểm tra.

**PSE.COM/R**  
 Để biết thêm chi tiết xin gọi cố vấn năng lượng của bạn.

**ROCK THE BULB™**  
**THE RE-ENERGIZE TOUR**

8 ciudades 16 días 10 focos CFL gratis

Traiga hasta **10** focos incandescentes para recibir **10** focos CFL gratuitos de PSE en cualquiera de los eventos de Rock the Bulb.

- 9 & 10 de julio **federal way**
- 16 & 17 de julio **bremerton**
- 23 & 24 de julio **kent**, Fred Meyer, SE 240<sup>th</sup>
- 30 & 31 de julio **renton**, Fred Meyer, Renton Center
- 6 & 7 de agosto **redmond**, Fred Meyer
- 13 & 14 de agosto **oak harbor**, Ace Hardware
- 20 & 21 de agosto **lacey**, Fred Meyer
- 27 & 28 de agosto **burlington**, Fred Meyer

Debe ser un consumidor de electricidad residencial de PSE. Traiga su número de PSE para un servicio más rápido.

**PSE.COM/R**  
 Para obtener más información, llame a un Asesor de Energía.

**ROCK THE BULB™**  
**THE RE-ENERGIZE TOUR**

8 cities 16 days 10 free CFL bulbs

Exchange 10 incandescent bulbs for FREE energy-saving CFL bulbs and learn ways to lower your energy use at any of these events!

- July 9 & 10 **federal way**, Northshore Ace Hardware
- July 16 & 17 **bremerton**, Goodwill
- July 23 & 24 **kent**, Fred Meyer, SE 240<sup>th</sup>
- July 30 & 31 **renton**, Fred Meyer, Renton Center
- Aug 6 & 7 **redmond**, Fred Meyer
- Aug 13 & 14 **oak harbor**, Ace Hardware
- Aug 20 & 21 **lacey**, Fred Meyer
- Aug 27 & 28 **burlington**, Fred Meyer

Must be a PSE residential electric customer. Bring your PSE account number for faster checkout.

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For more information call a PSE Energy Advisor at 1-800-562-1482, Monday through Friday, 8 a.m. to 5 p.m.

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**THE RE-ENERGIZE TOUR**  
**家庭節能新動力巡迴活動**

8個城市 16天巡迴 10隻免費節能燈泡

Puget Sound Energy 普捷灣能源公司誠邀貴公司的電力用戶，到任意一個 Rock the Bulb 家庭節能巡迴活動站點，用 10 隻白熾燈泡免費換取 10 隻節能燈泡，並了解更多家中節能的好點子。

- 7月9至10日 **federal way**, Northshore Ace Hardware
- 7月16至17日 **bremerton**, Goodwill
- 7月23至24日 **kent**, Fred Meyer, SE 240<sup>th</sup>
- 7月30至31日 **renton**, Fred Meyer, Renton Center
- 8月6至7日 **redmond**, Fred Meyer
- 8月13至14日 **oak harbor**, Ace Hardware
- 8月20至21日 **lacey**, Fred Meyer
- 8月27至28日 **burlington**, Fred Meyer

免費換取燈泡 PSE 住宅電力用戶專用。數量有限。請帶同電力用戶號碼到站點登記。為方便您更快完成換燈泡活動請帶同您的好點子。詳情請電 PSE 能源顧問。

**PSE.COM/ROCKTHEBULB**  
 詳情請電 PSE 能源顧問，1-800-562-1482，服務時間週一至週五，早上 8:00 至下午 5:00 時。

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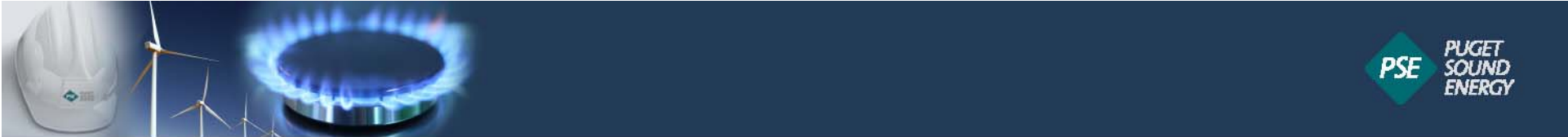


# Home Energy Reports

- 24,766 Dual Fuel Customers
- PSE Evaluation
- 3rd Party Evaluation - KEMA
- BPA entering the regional discussion
- Poised to claim savings 2011 and beyond.



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# Business Incentive Adjustments

- Hot Food Holding Cabinet Rebate
  - CEE Tier 2 efficiency criteria
  - Minimum size restriction (7 cu ft)
  - RTF deemed savings & measure life
  - Incentive aligned with regional utilities
- LED Down Lights
  - Prescriptive rebate for recessed & can-type LED down lights
  - Regional Utility LED Qualification Process required
  - Point of sale incentives to promote adoption





# Business Incentive Adjustments

- **Reduced-Wattage T8 Rebate**
  - \$1/lamp for CEE-listed 25 to 28 watt T8 lamps
  - One-time only incentive for group re-lamping
  - Incentive aligned with regional utilities
  - Point of sale incentives to promote adoption
  
- **CFL Incentives**
  - \$3 to \$12/lamp for Energy Star qualifying products
  - Incentives for specialty lamps:
    - Dimming, three-way, reflector, candelabra, globe, cold cathode
  - Point of sale incentives to promote adoption





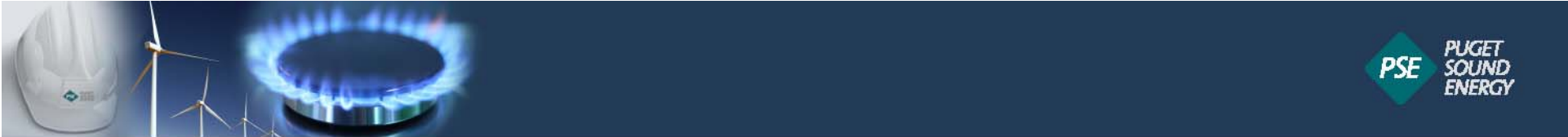


# Schedule 258 Program Proposal



David Landers

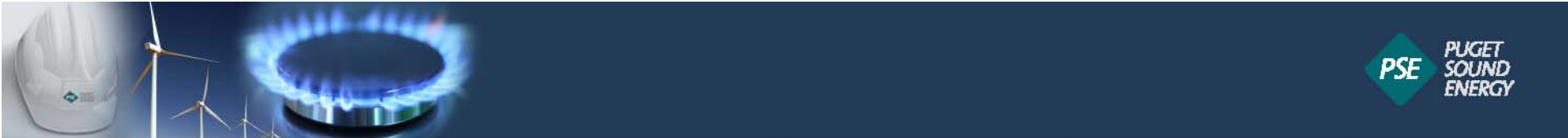
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# Key Proposed Changes to Sch 258 Program

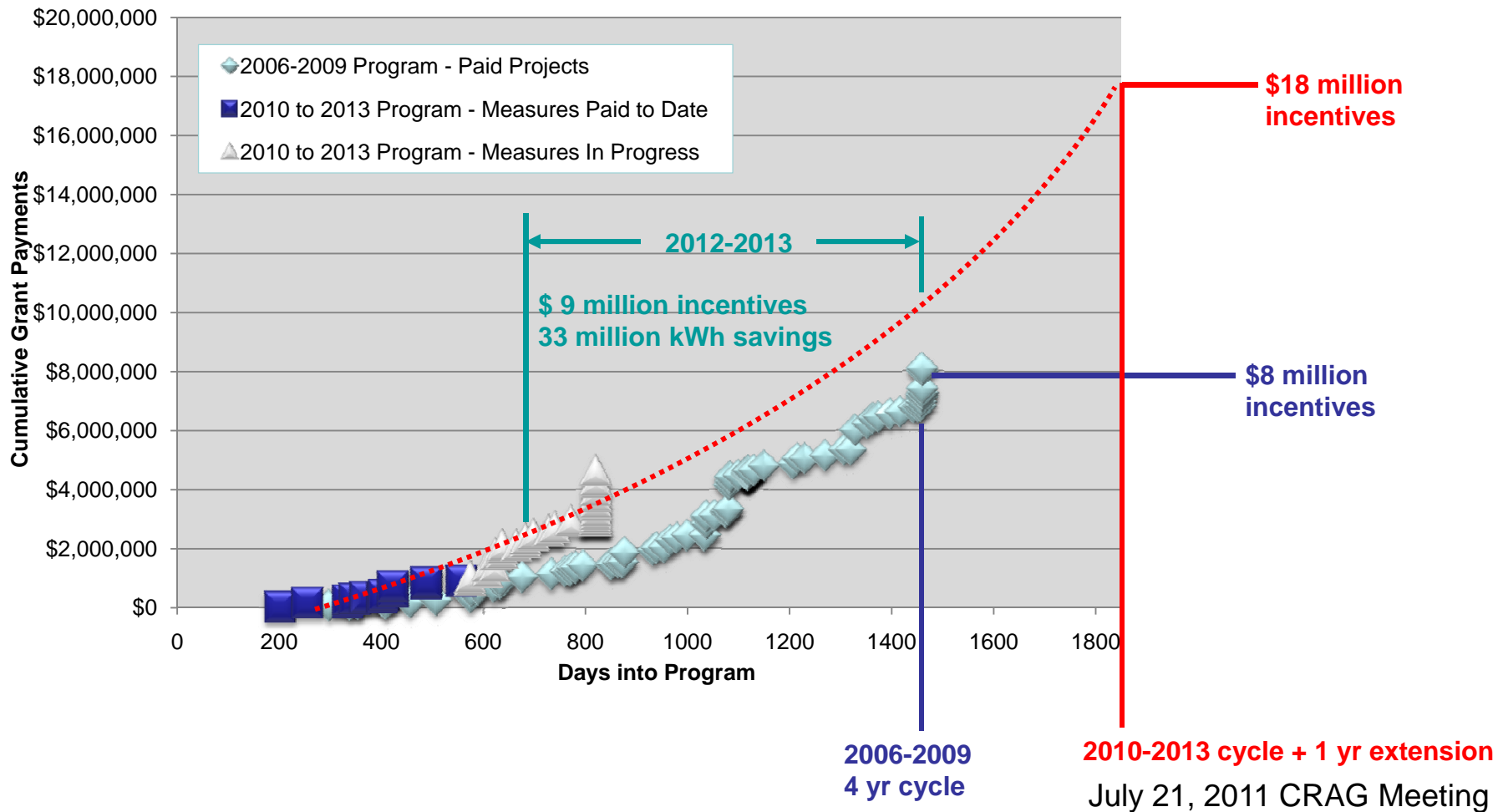
- **Changes implemented to date**
  - Apply Peak Credit Method to Sch 120 collections for non-449 customers
  - Withhold 7.5% program admin and 10% market transformation (NEEA) from allocation for non-449 customers
  - Collection of previously uncharged program admin and market transformation fees from non-449 customers (backward look)
- **Proposed additional changes**
  - Extend current program cycle by one year to enable customers to utilize increased allocations
  - For non-449 customers, require full utilization of Sch 258 funds prior to accessing other programs, with exceptions for multi-year non-Sch 258 programs (i.e. RCM, BEOP)
  - Transfer unused Sch 258 funds to Sch 250 at end of program cycle





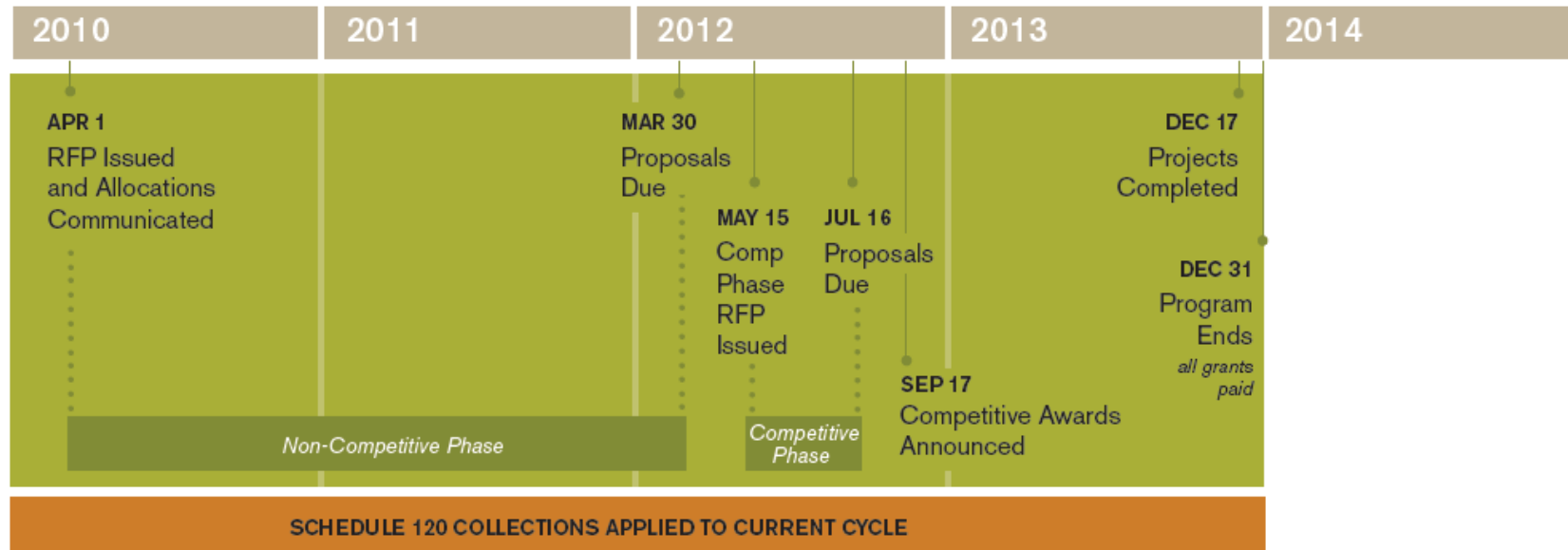
# Sch E258 Large Power User Self-Directed Program

## Schedule 258 Program Tracking - Grant Payments

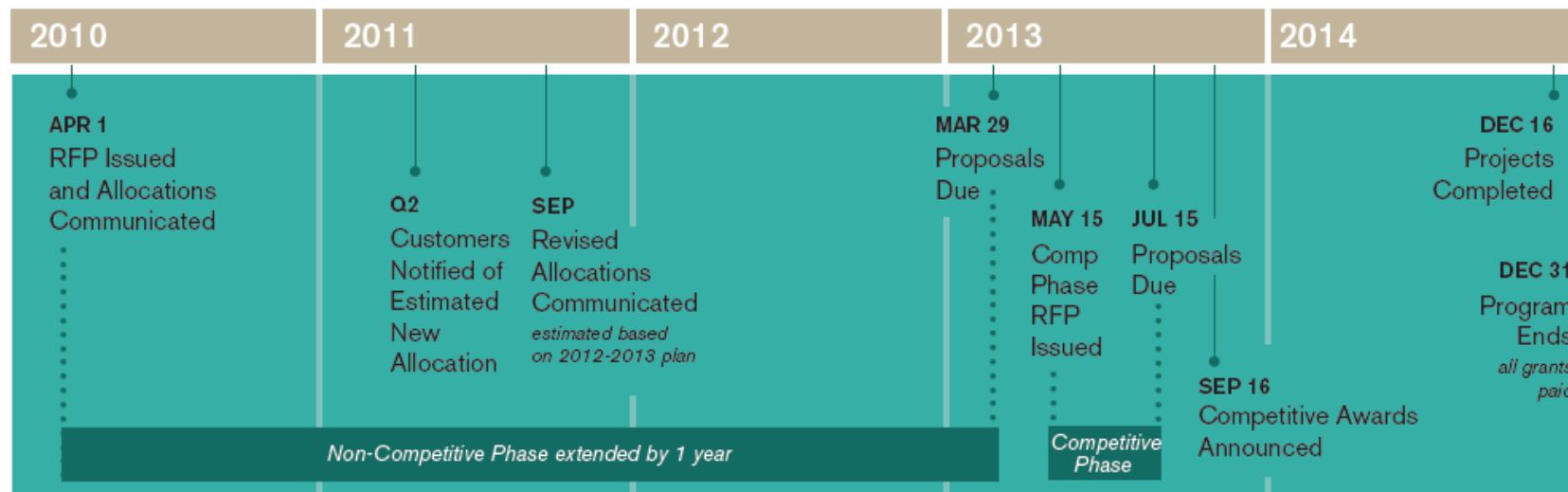




### CURRENT SCHEDULE



### PROPOSED SCHEDULE





# Incentive Allocation Management

- Non-Competitive Phase: communicate a fixed allocation based on estimated contributions
- Prior to Competitive Phase: true up allocation pool based on actual collections to date & estimated future collections
- At end of program cycle:
  - Unused funds (incomplete projects, under-budget projects, etc.) transferred to Sch E250 C/I Electric Retrofit
  - Over/under collections (actual vs. estimate at time of true-up) applied as adjustment to next competitive phase



## Subsequent Sch 258 Program Cycles

- Collections lead project implementation by one year to allow more-accurate determination of incentive allocations
- “Schedule 258-like” program considered for large power users not on qualifying rate schedules
  - RFP process
  - Customized incentives for self-directed highly cost-effective projects



## Conservation Targets

**Applicable Section: E(10)**

**Applicable conditions: K(8)(f), K(3)(a)(ii),  
K(3)(a)(iii), K(6)(b), K(6)(c), K(7)(a)**



**Bill Hopkins**, *Manager, Strategic Planning and Market Research*

**Bob Stolarski**, *Director, Customer Energy Management*

**David Landers**

**Jeff Tripp**

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## 2012-2013 Planning Milestones



**Applicable condition: K(8)(f)**

**Bob Stolarski**

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# Planning Milestones

*(All dates are “by”)*

Provide information on:

- 1) August 1: Ten-year potential and two-year target presented to CRAG
- 2) September 1: Draft program details and budgets
- 3) October 1: Draft program tariff Schedule changes
- 4) November 1: Completed Biennial Conservation Plan filed with WUTC



## Conservation Potentials



**Applicable condition: K(8)(f)**

**Bill Hopkins**

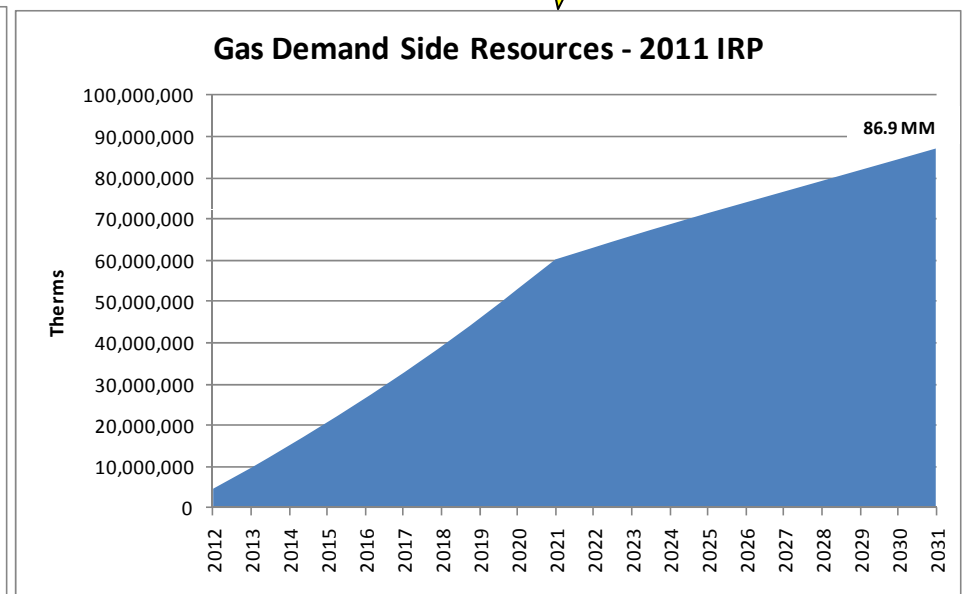
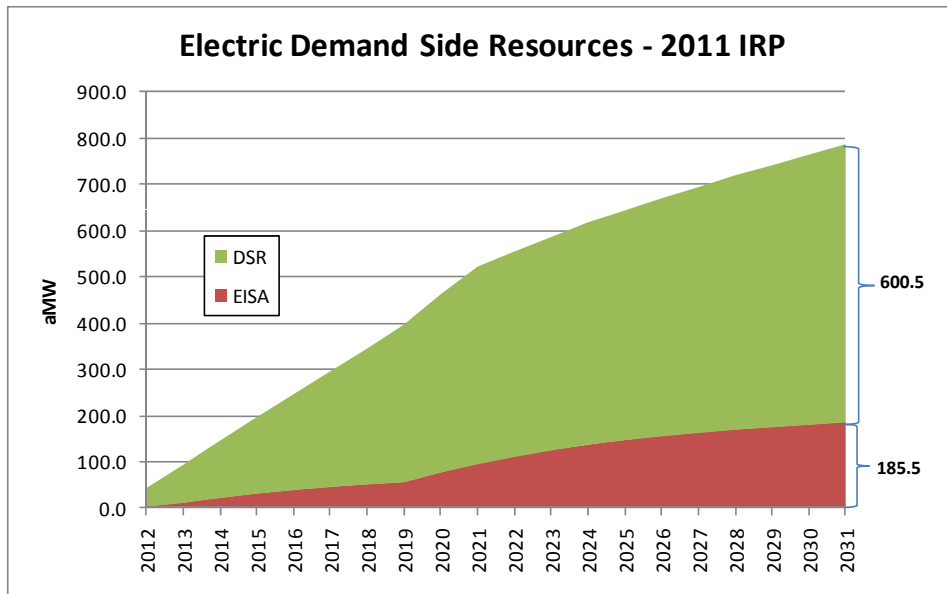
July 21, 2011 CRAG Meeting



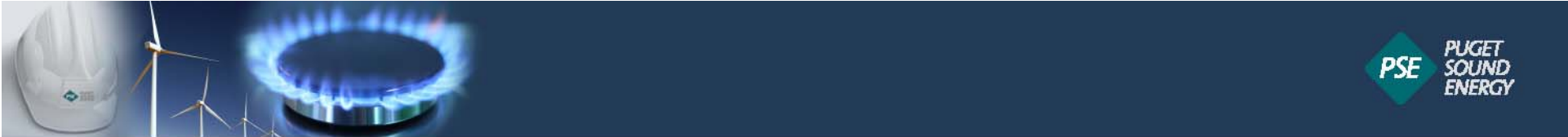


# 2011 IRP “Base Case” Results

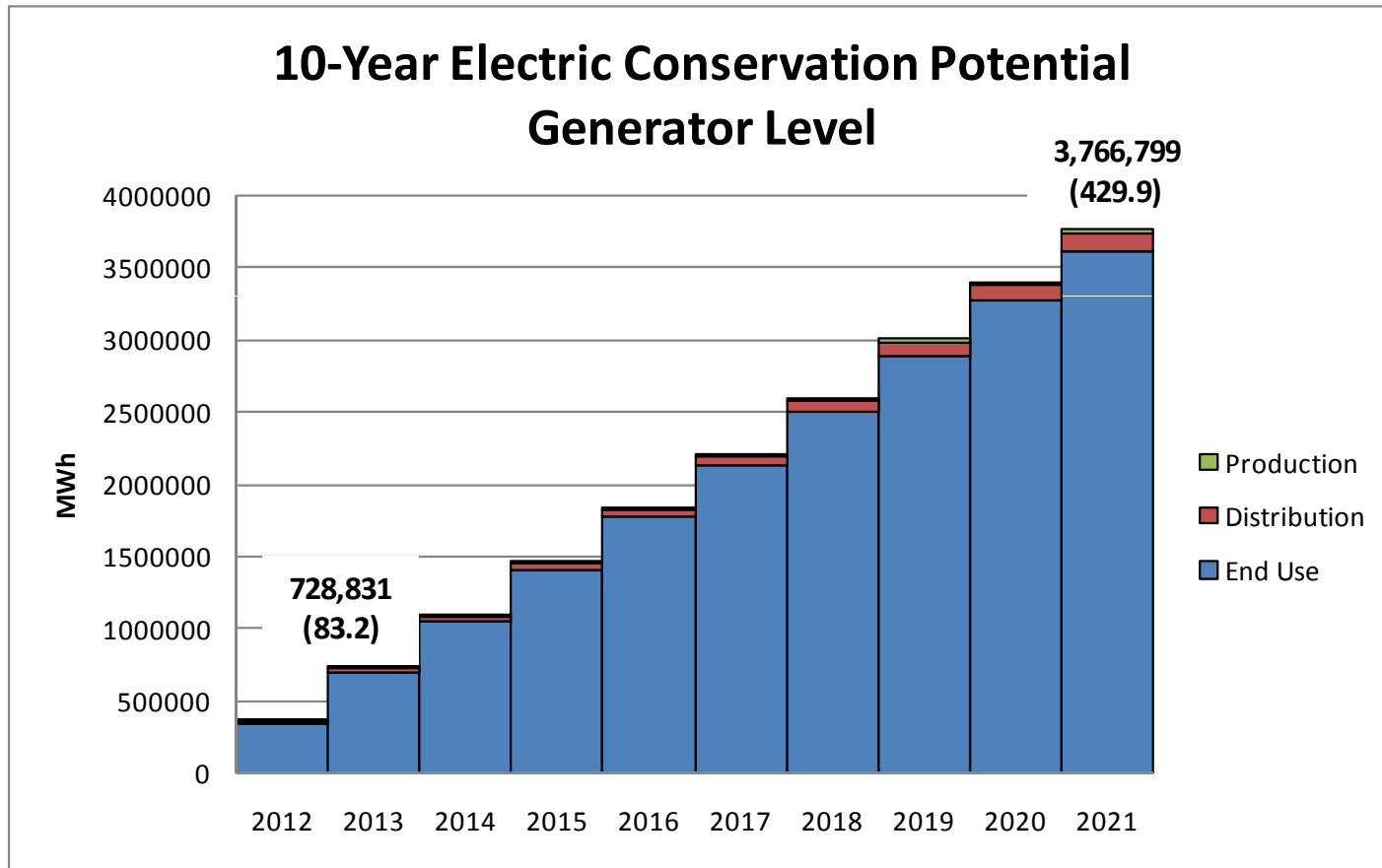
**Details  
presented to  
CRAG 5/19/11**



- Includes non-programmatic savings (current codes/standards, naturally occurring)
- Excludes technology improvement, new codes/standards
- All retrofit opportunities accelerated into first ten years



# 10-Year Electric Conservation Potential



- 2-year potential is 19% of 10-year potential
- Production facility efficiency added to IRP potential

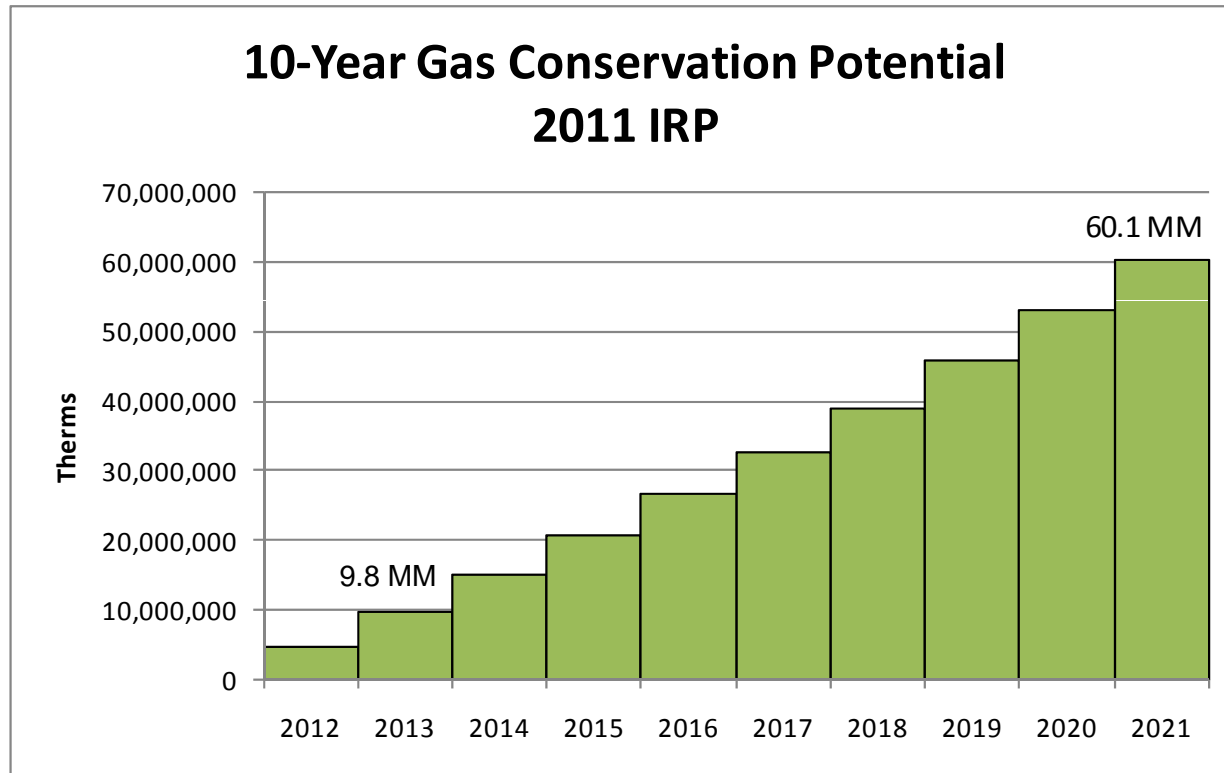


# 2-Year Electric Conservation Potential

	Generator Level Savings (MWh)	Generator Level Savings (aMW)		Meter Level Savings (MWh)	Meter Level Savings (aMW)
End Use Efficiency	703,831	80.3	Less: 6.7% Line Losses	659,636	75.3
Distribution Efficiency	19,555	2.2		18,327	2.1
Production Efficiency	5,445	0.6		5,445	0.6
<b>Total</b>	<b>728,831</b>	<b>83.2</b>		<b>683,407</b>	<b>78.0</b>



# Gas Conservation Potential



- 2-year potential is 9,765,657 therms
- 16% of 10-year potential
- All end use efficiency



## Cost-Effectiveness Considerations



**Applicable condition: K(10)(a)-(c)**

**Bill Hopkins**

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# Cost-Effectiveness Tests

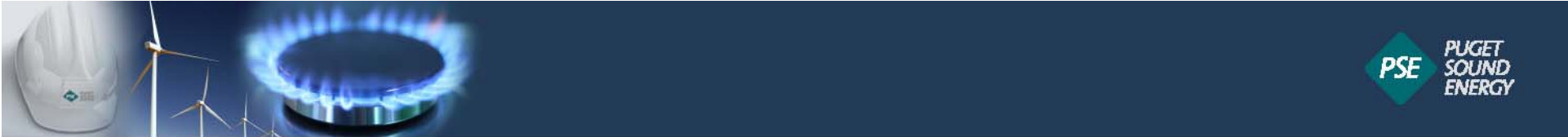
Test	Methodology	Application Level
Total Resource Cost	Council-modified	Portfolio & Program
Utility Cost	NAPEE	Portfolio; other as appropriate
Participant Cost	NAPEE	Portfolio; other as appropriate
Rate Impact measure	NAPEE	Portfolio; other as appropriate

- Methodology Reviews
  - WA State Conservation Working Group: TRC & avoided cost
  - 2010-11 Independent Third-Party Review: All tests & avoided cost

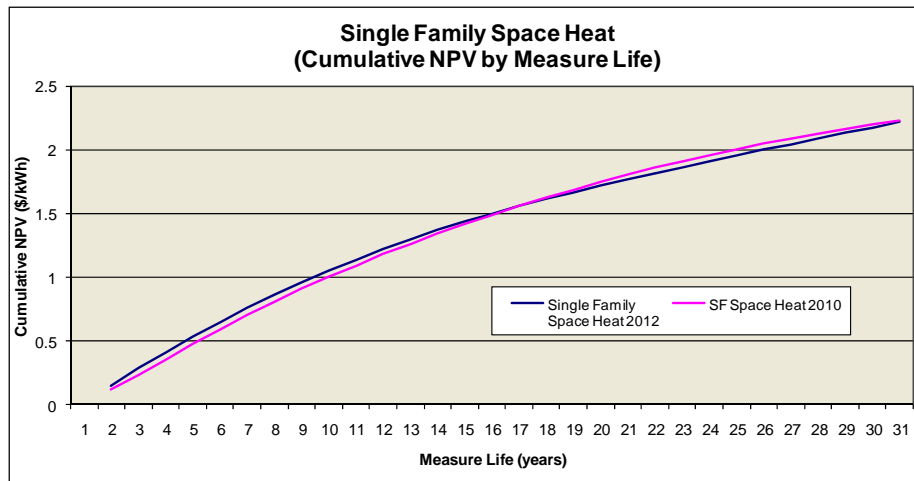


## 2012-13 Avoided Costs

- Generally lower than for 2010-11 (especially gas)
- More value concentrated on peaks
- Electric
  - Assumptions are consistent with 2011 IRP
  - Wholesale market prices lower than 2009 IRP projections
  - Peak capacity values higher than 2009 IRP
- Gas
  - Wholesale commodity prices lower than 2009 IRP; consistent with 2011 IRP
  - Pipeline capacity, other distribution charges are disaggregated rather than bundled like IRP

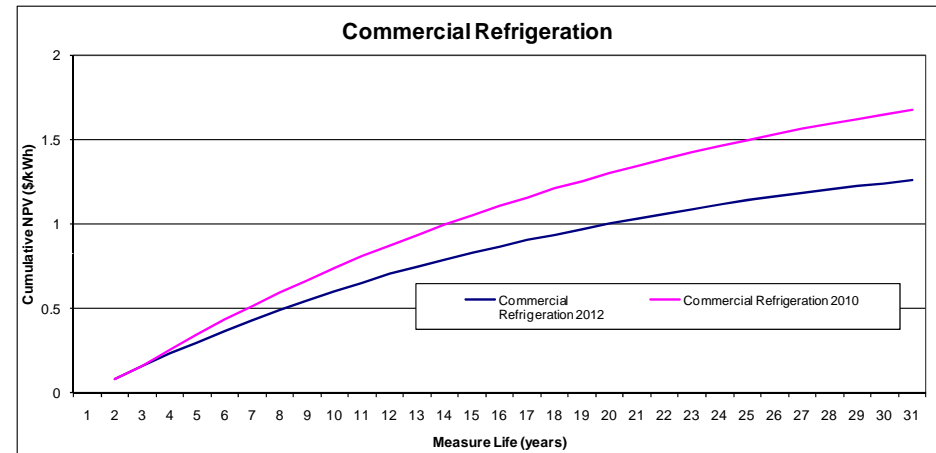


# Electric Avoided Cost Comparison



## Single-Family Space Heat

At 30 year life, 2012 avoided costs are down 0.4% from 2010-2011



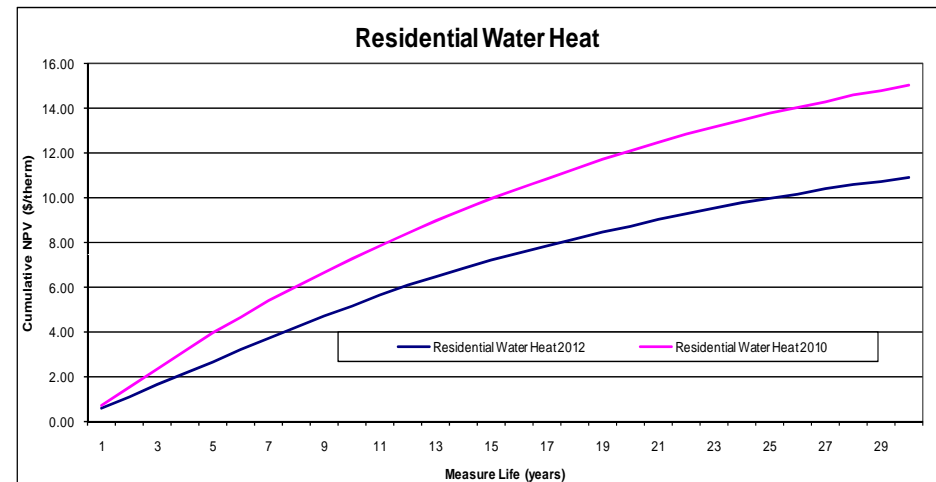
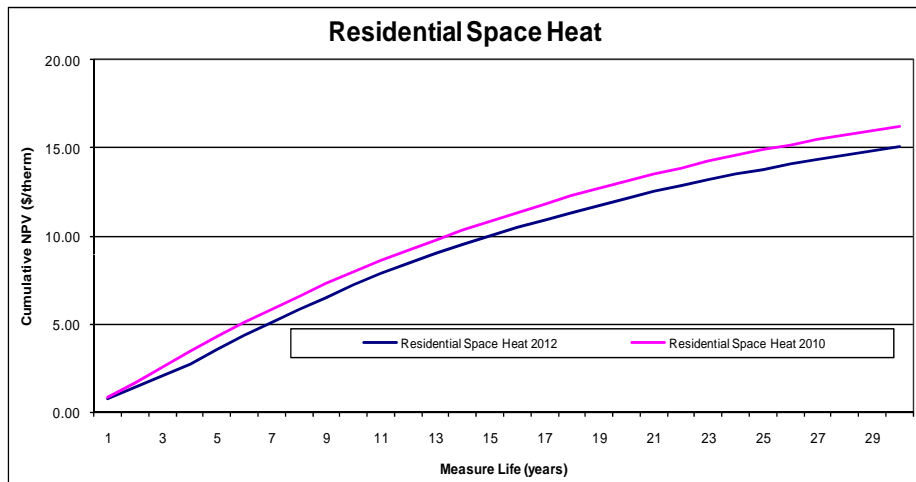
## Commercial Refrigeration

At 15 year life, 2012 avoided costs are down 21% from 2010-2011





# Gas Avoided Cost Comparison



## Residential Space Heat

Furnace, at 18 year life:  
2012 avoided Costs down 7.6%

Weatherization, at 30 year life:  
2012 avoided costs down 7.2%

## Residential Water Heat

Showerheads at 6 year life:  
2012 avoided costs down 31%

Storage Water Heaters at 12 year life:  
2012 avoided costs down 27%

Tankless Water Heaters at 20 year life:  
2012 avoided costs down 27%



## 2012-2013 Savings Targets



**Applicable condition: K(8)(f)**

**Bob Stolarski**

July 21, 2011 CRAG Meeting



## Market Trends - Portfolio Savings

- Avoided Costs / Cost Effectiveness Effects
- CFL Unit savings
- T12 Fluorescents Elimination
- Materials Costs Increases
- ARRA Bubble
- Energy Code Adoption



# 2012 & 13 Portfolio Savings

Program Name	MWH Savings	Therm Savings
<b>Residential Energy Management</b>		
<b>Low Income Weatherization</b>	<b>3,456</b>	<b>39,685</b>
<b>Single Family Existing (Subtotal)</b>	<b>227,111</b>	<b>2,208,933</b>
Residential lighting	134,468	0
Space heat	12,359	947,838
Water heat	1,709	0
HomePrint	8,100	0
Home Appliances	46,845	0
Showerheads	3,107	145,200
Weatherization	20,523	1,115,895
<b>Single Family New Construction</b>	<b>3,091</b>	<b>63,800</b>
<b>Fuel Conversion</b>	<b>7,852</b>	<b>0</b>
<b>Multi Family Existing</b>	<b>38,180</b>	<b>99,600</b>
<b>Multi Family New Construction</b>	<b>1,910</b>	<b>0</b>
<b>Pilots, excluding:</b>	<b>6,496</b>	<b>0</b>
Home Energy Reports	10,996	693,448
<b>Subtotal, Residential Programs</b>	<b>299,090</b>	<b>3,105,466</b>
<b>Business Energy Management</b>		
<b>Commercial / Industrial Retrofit</b>	<b>138,647</b>	<b>1,234,000</b>
<b>Commercial/Industrial New Construction</b>	<b>7,000</b>	<b>200,000</b>
<b>Resource Conservation Manager</b>	<b>38,500</b>	<b>1,800,000</b>
<b>Small Business Lighting Rebate</b>	<b>40,076</b>	<b>0</b>
<b>Large Power User - Self Directed Program</b>	<b>33,000</b>	<b>0</b>
<b>Commercial Rebates</b>	<b>54,837</b>	<b>3,107,000</b>
<b>Subtotal, Business Programs</b>	<b>312,060</b>	<b>6,341,000</b>
<b>Regional Efficiency Programs</b>		
<b>NW Energy Efficiency Alliance</b>	<b>38,829</b>	<b>0</b>
<b>Transmission, Distribution and Generation</b>	<b>16,157</b>	<b>0</b>
<b>Subtotal, Regional Programs</b>	<b>54,986</b>	<b>0</b>
<b>Portfolio Totals</b>	<b>666,136 MWH 76.0 aMW</b>	<b>9,446,466 Therms</b>



# Lunch







# Residential Energy Management 2012-2013 Savings Targets



**Jeff Tripp**

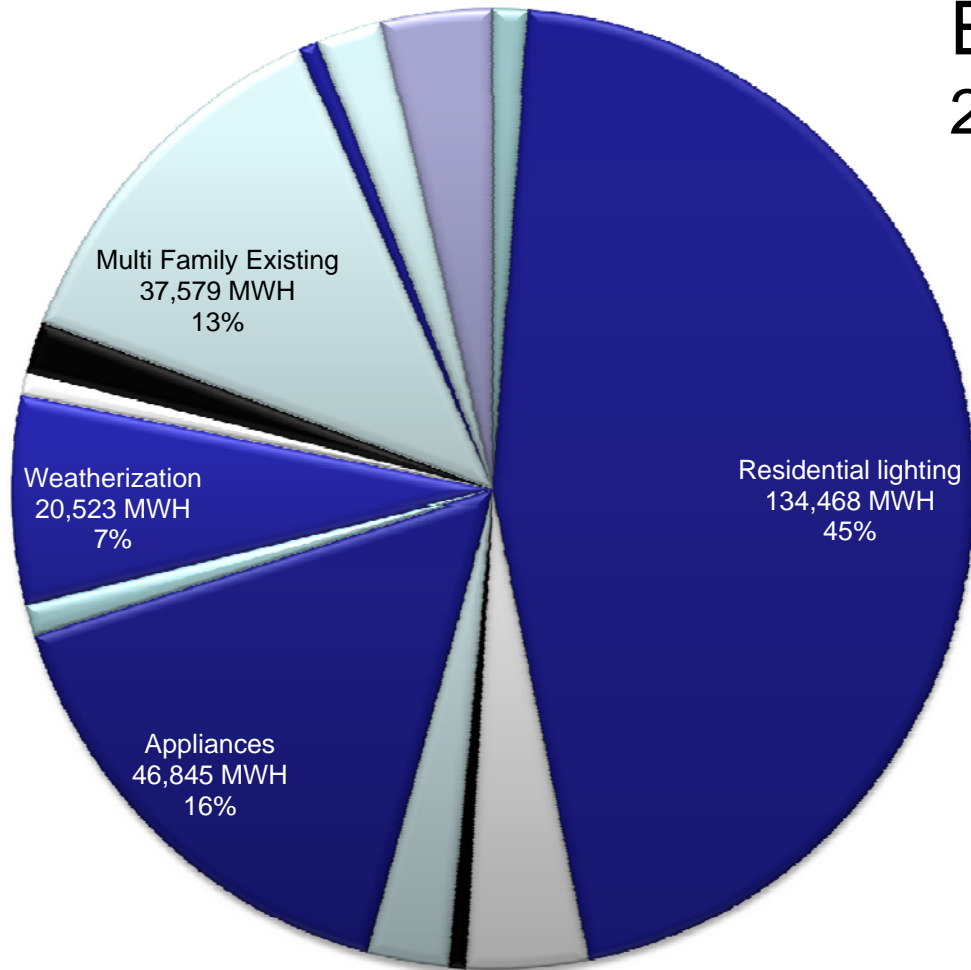
July 21, 2011 CRAG Meeting





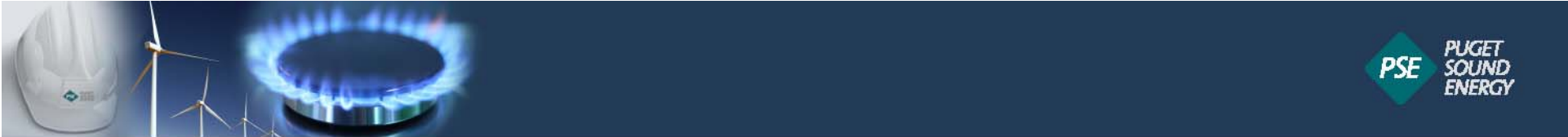
# Residential Energy Management 2012-2013 Targets

**Electric**  
295,526 MWH, 33.7 aMW



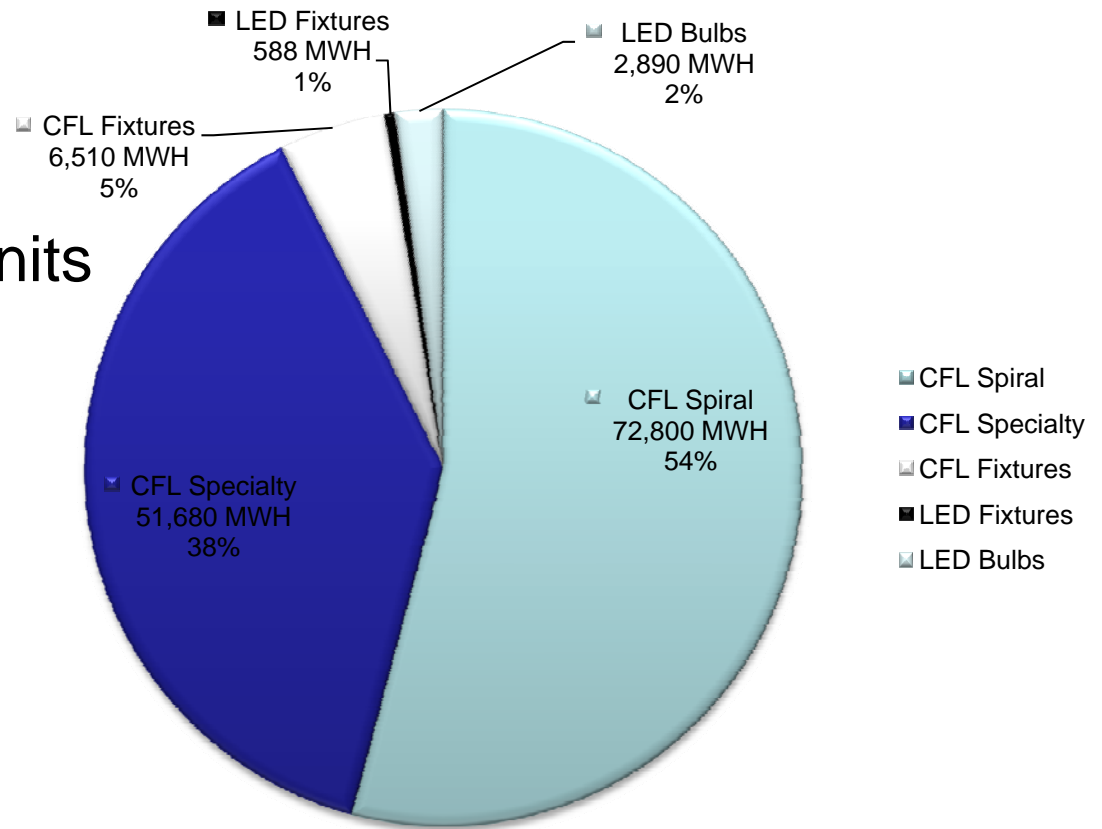
- Low Income Weatherization
- Residential lighting
- Space heat
- Water heat
- HomePrint
- Appliances
- Showerheads
- Weatherization
- Single Family New Construction
- Fuel Conversion
- Multi Family Existing
- Multi Family New Construction
- Pilots, excluding:
- Home Energy Reports

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# Residential Lighting – 134,468 MWH (15.4 aMW)

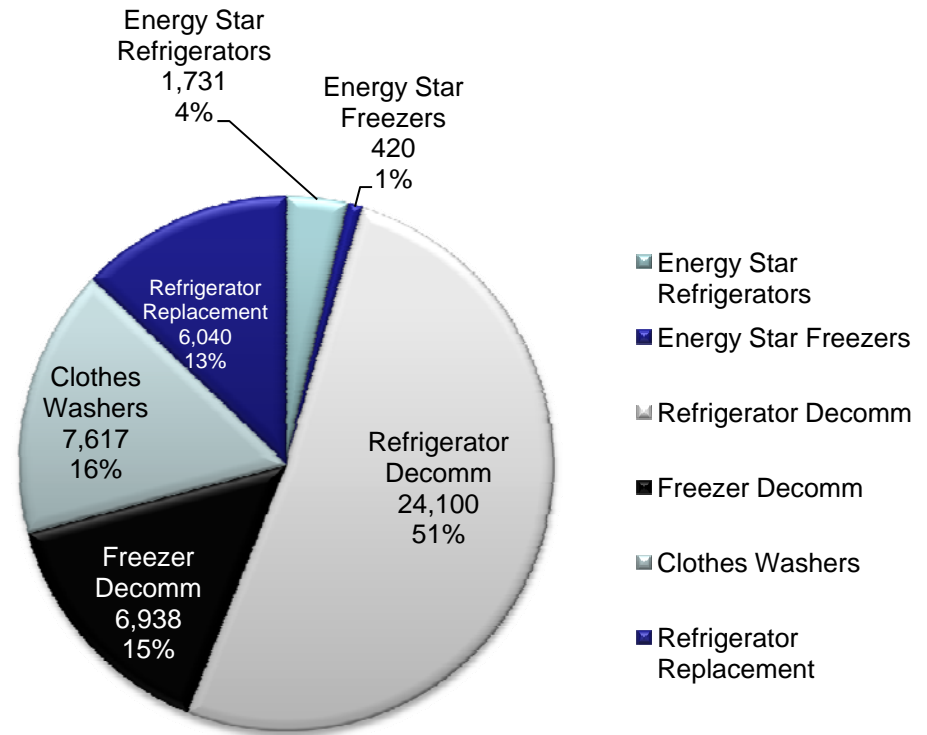
- CFLs
  - Additional units
  - Increased quality units
  - Specialty bulbs
- CFL Fixtures
- LEDs
  - Downlights
  - A-Line





# Home Appliances – 46,845 MWH (5.3 aMW)

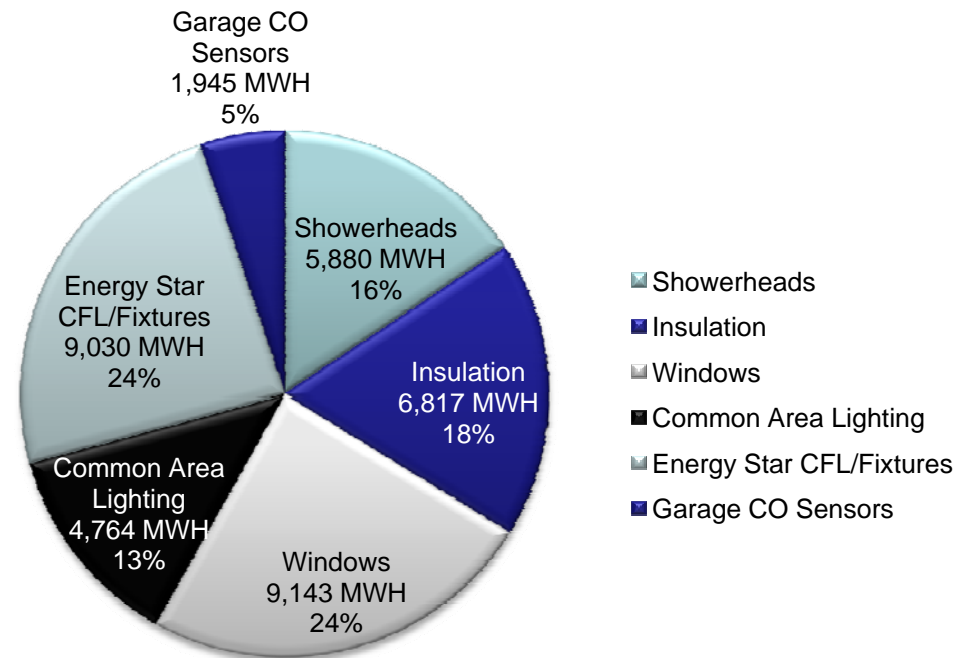
- Washing Machines
- Decommissioning
  - Refrigerators
  - Freezers
  - Primary and secondary
- Refrigerator Replacement
- Rebates
  - E\* Refrigerators
  - E\* Freezers

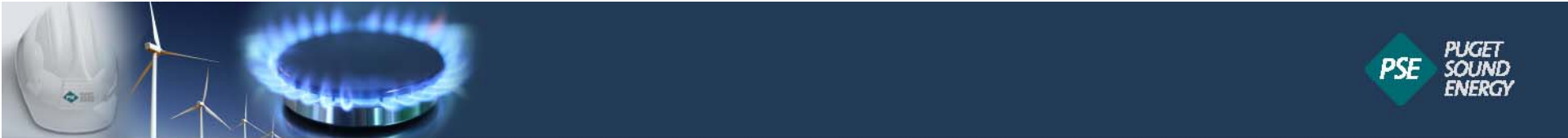




## Multifamily Existing – 37,579 MWH (4.3 aMW)

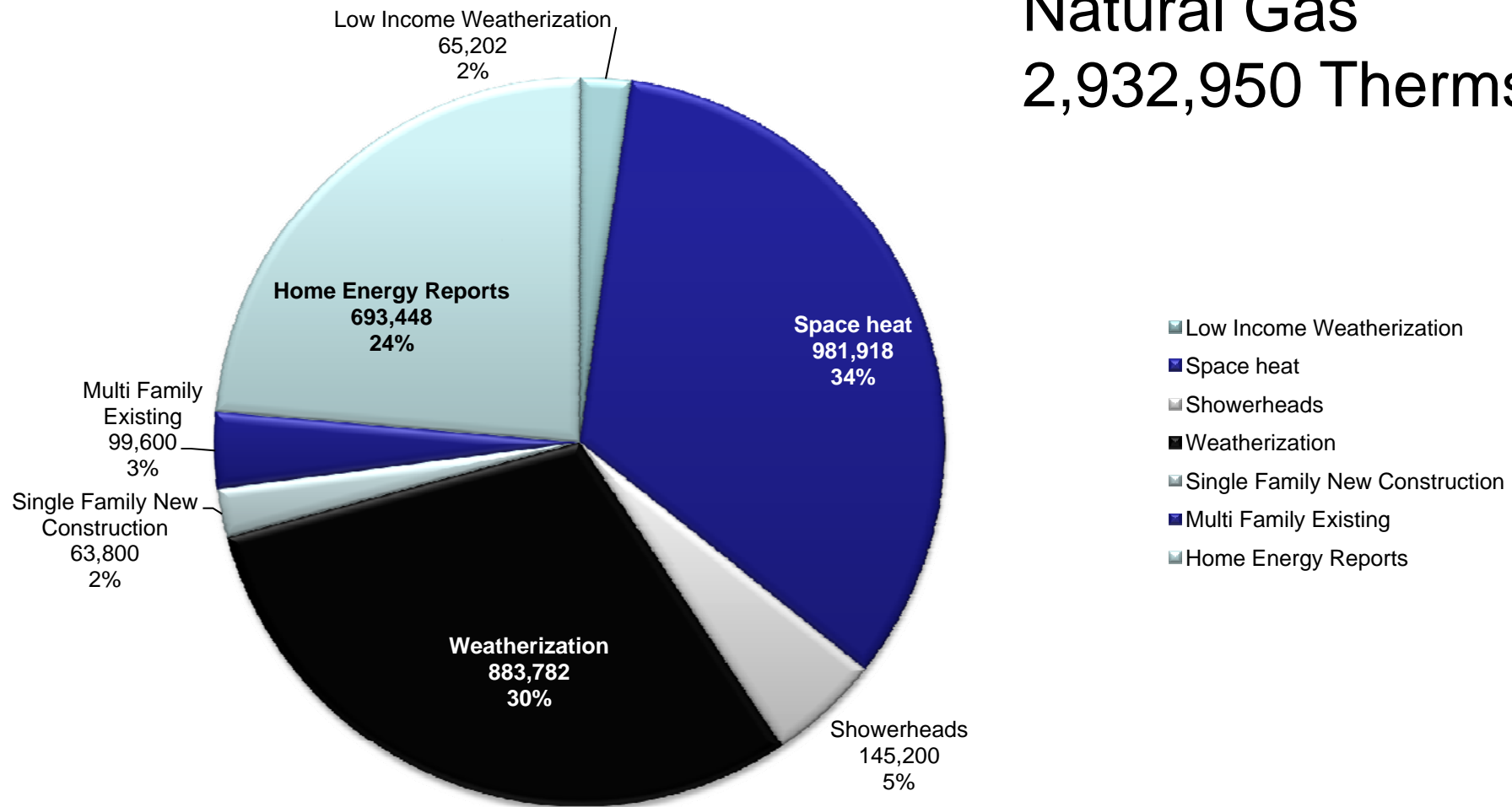
- Showerheads
- Insulation
- Windows
- Common Area Lighting
- CFL Bulbs/Fixtures
- Garage CO Sensors





# Residential Energy Management 2012-2013 Targets

## Natural Gas 2,932,950 Therms



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## Noticeably absent from REM Gas portfolio

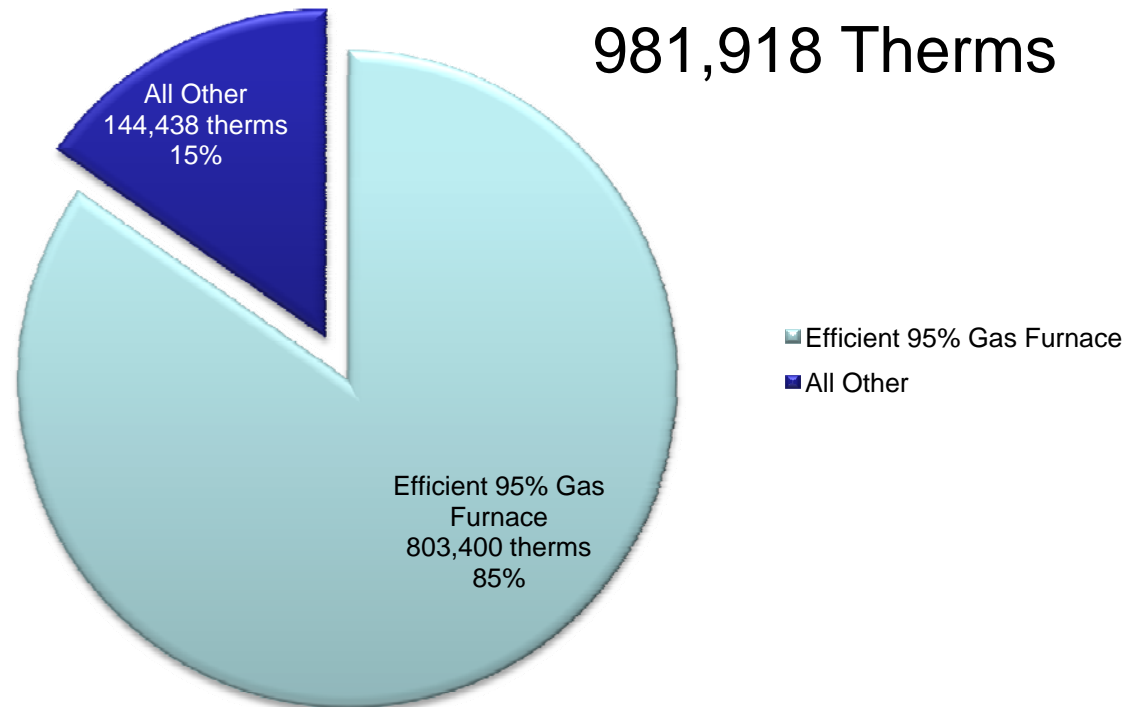
- Avoided cost of natural gas
- Cost effectiveness
  - TRCs < 1.0
- High Efficiency Tank Water Heaters
- Tank less Water Heaters
- Windows
- Prescriptive duct sealing
- Multifamily New Construction

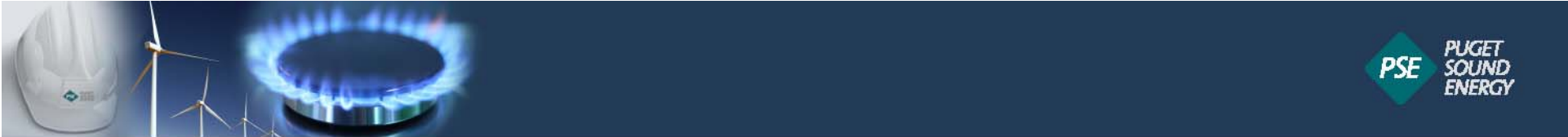




# Residential Natural Gas Space Heat

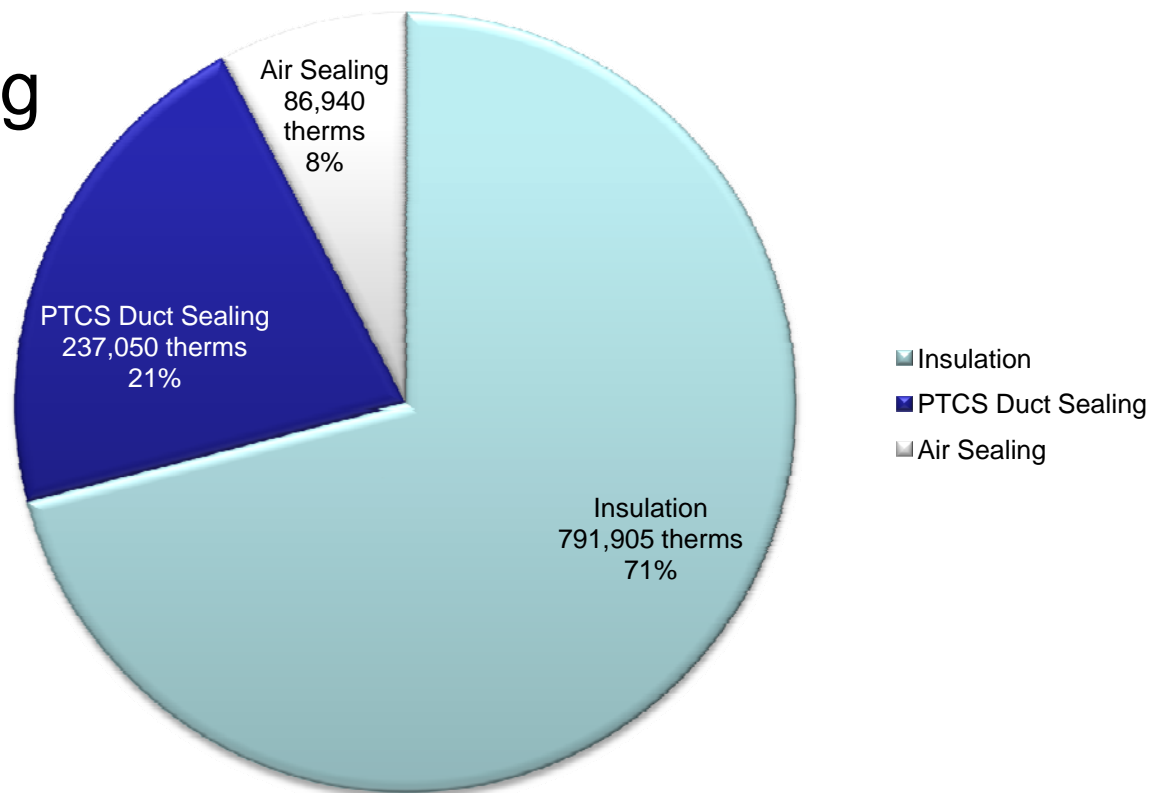
- 95% Furnaces
- Boilers
- Fireplaces
  
- New Measures
  - Integrated Space & Water Heat
  - Web Enabled T-Stats





# Residential Natural Gas Weatherization

- Insulation
- PTCS Duct Sealing
- Air Sealing



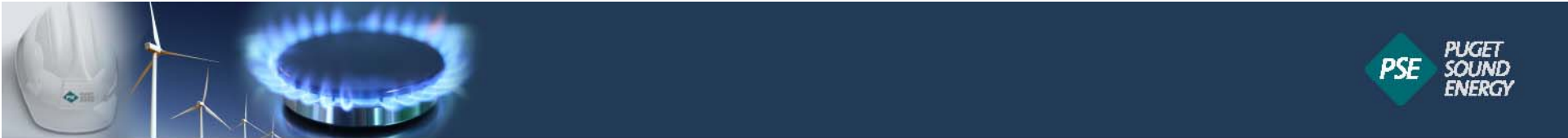


# Business Energy Management 2012-2013 Savings Targets



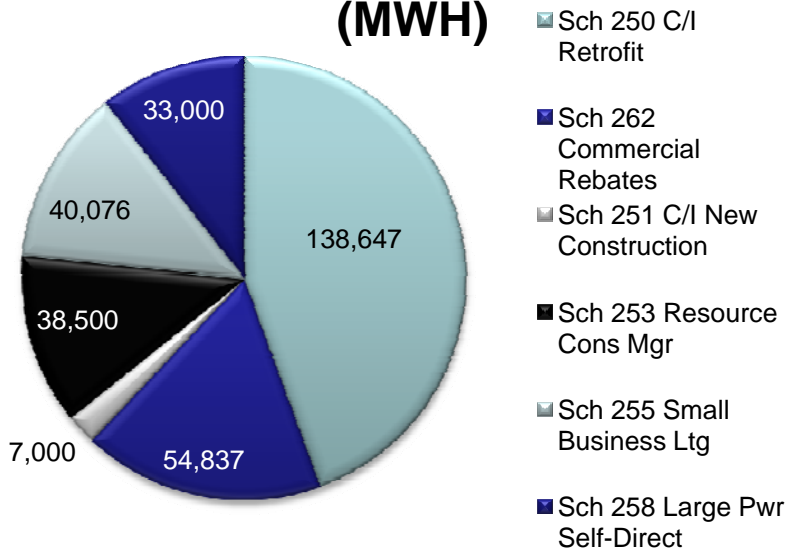
David Landers

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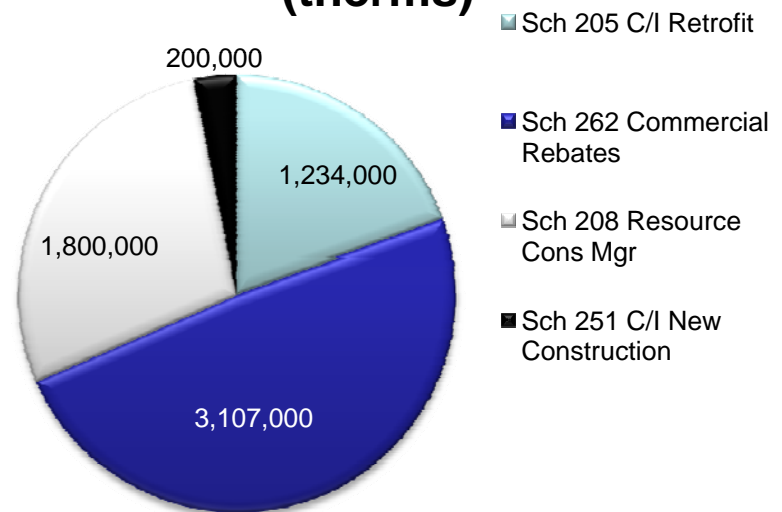
# Business Energy Management 2012-2013 Targets

## Business Energy Management 2012-2013 Electric Savings (MWH)

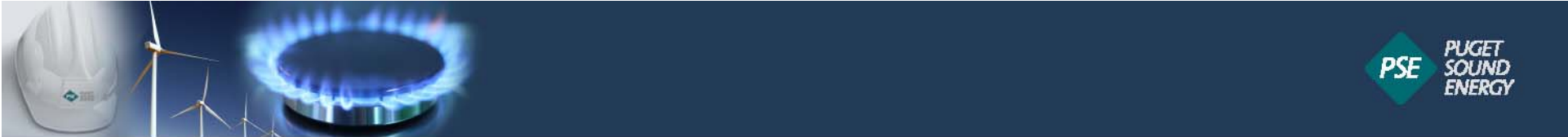


**312,060,000 kWh**  
**35.6 aMW**

## Business Energy Management 2012-2013 Natural Gas Savings (therms)

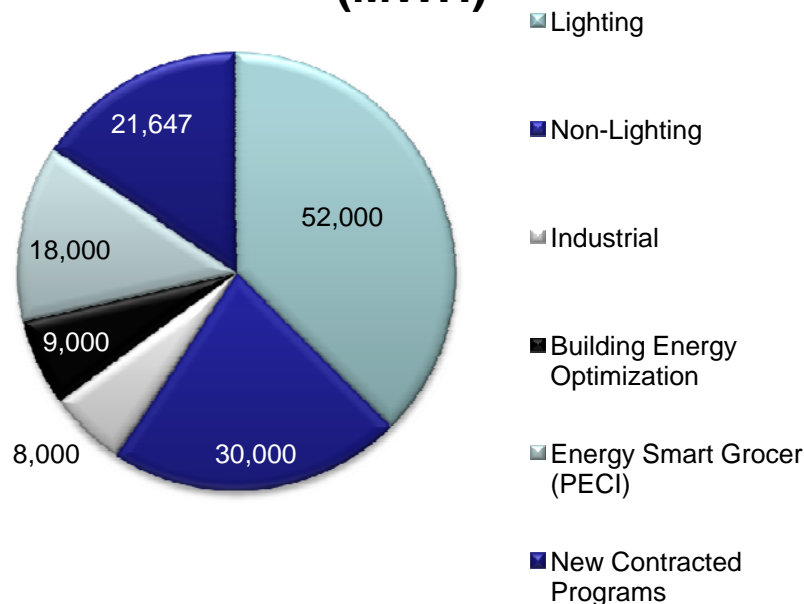


**6,341,000 therms**



# 2012-2013 E250 C/I Retrofit Electric Portfolio

**E250 C/I Electric Retrofit  
2012-2013 Savings Portfolio  
(MWH)**



- Most cost-effective lighting savings diminishing
  - Transitioning away from T12 retrofits
  - CFL baseline adjustment
- More operational efficiency
  - Existing building commissioning
  - Focused programs on industrial energy management
- High energy intensity sectors
  - Healthcare
  - Data centers

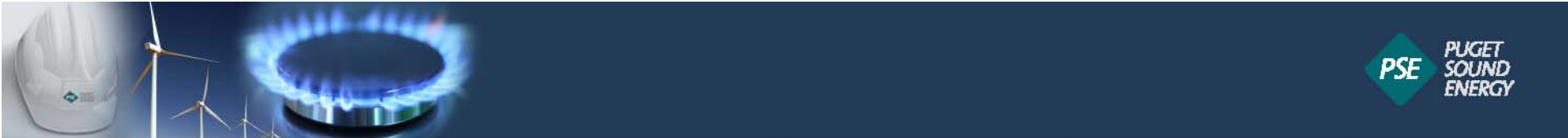
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## E250 C/I Retrofit Electric Portfolio (cont)

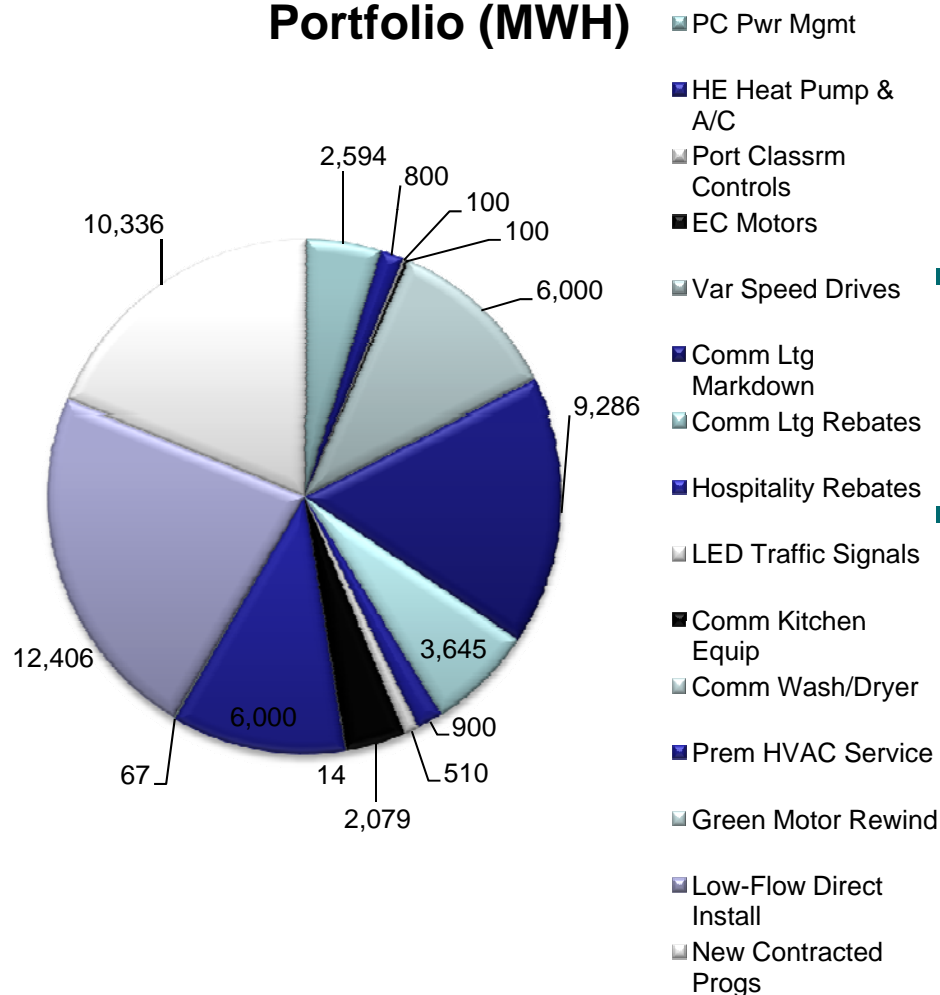
- Impacts of stimulus funding subsidizing
  - OSPI
    - Forecast 245 grant agreements with 30 school districts totaling \$3 million
      - 2011 savings – 6.6 million kWh; 150,000 therms
      - 2012 savings – 0.5 million kWh; 30,000 therms
  - Dept of Commerce
    - Forecast 80 grant agreements in place totaling \$2 million
      - 2011 savings – 2.9 million kWh; 200,000 therms
      - 2012 savings – 0.7 million kWh; 18,000 therms
  - ARRA
    - Currently have 9 grant agreements in place totaling \$580,000
      - 2011 savings – 1.2 million kWh; 29,000 therms
      - 2012 savings – no contracts





# 2012-2013 E262 Commercial Rebates Electric Portfolio

## E262 Comm Rebate Savings Portfolio (MWH)



- Variable Speed Drives
  - Smaller equipment
  - Constant volume AHU conversions
- Commercial Ltg Markdown
  - More LEDs
  - Low-watt T8s
- Premium HVAC Service
  - Flow plate requirement modified

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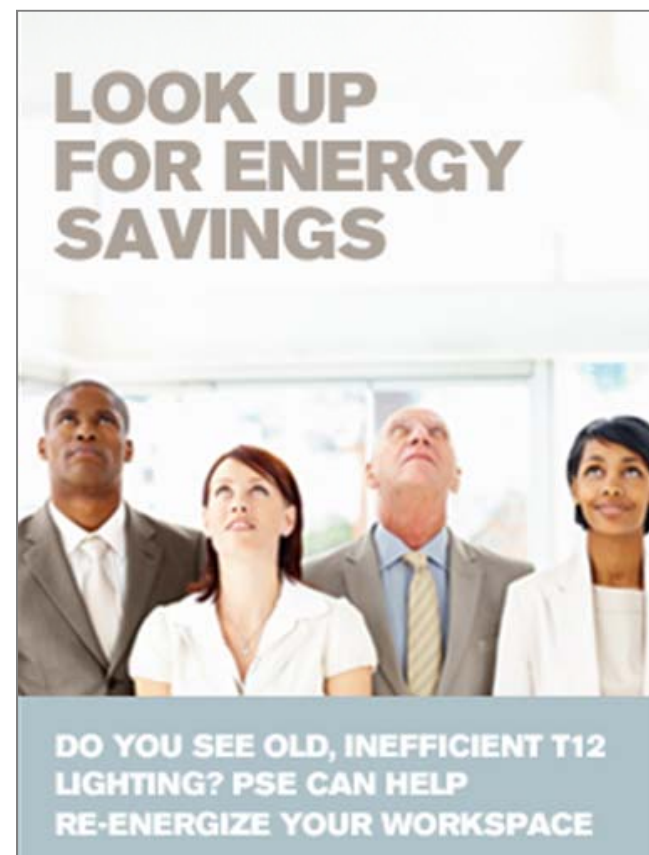
## E262 Commercial Rebates Electric Portfolio (cont)

- More pre-rinse spray heads
  - 0.65 gpm
  - Supplemented by aerators
- Small Business Direct Install
  - CFLs
  - Low-flow devices
  - Weatherization seals
  - Linear fluorescent retrofit
  - HVAC tune-ups
  - Refrigeration measures
  - Domestic hot water



## E255 Small Business Lighting

- Significant effort under way to encourage customer transitions to most-efficient options
- Project volume anticipated to remain high into 2012
- Savings expected to decline in 2013 as incentives diminish for T12 replacements
- Will promote “comprehensive” lighting upgrades for future program success





## 2012-2013 BEM Natural Gas Savings Targets

- **G250 C/I Retrofit**
  - Changes in avoided costs will require revision of AutoFund calculator for Custom Grant projects
  - Custom Grant savings will decline in 2012-2013
- **G262 Commercial Rebates**
  - Low flow pre-rinse spray heads, coupled with aerators, will make up large portion of rebates portfolio
  - Proposed direct install program contributes to increased natural gas savings in rebates portfolio
- **G208 Resource Conservation Manager**
  - Remains significant contributor to natural gas savings through continued efforts with existing clients



## Exhibit 1 Revisions

Information-oriented services discussion



**Applicable condition: K(3)(a)(vi)(1)**

**Grant Ringel**

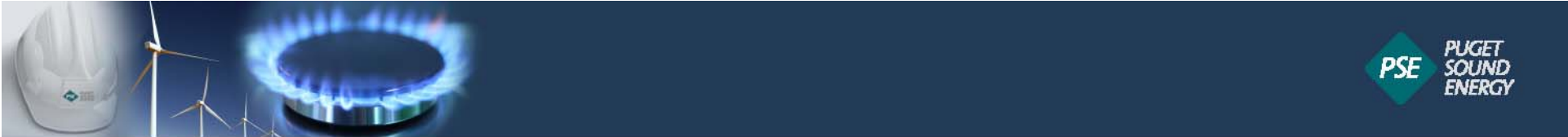
*Director, Customer Market Strategies*

July 21, 2011 CRAG Meeting



# Our Objective

- Update the EES budgeting and reporting system to be much more intuitive and transparent
  - Combine like items
    - Web experience and web tools
      - Former Information Services
      - Former Mainstreaming Green, Market Integration
  - Rename line items as needed
    - Energy Efficient Communities
    - Trade Ally Support
  - Report to CRAG meetings under new system



# Information-Oriented Programs and Activities

## Current Exhibit 1 Structure

- Residential Efficiency Programs
  - *Residential Energy Efficiency Information*
  - *Energy Education*
- Business Efficiency Programs
  - *Commercial Energy Efficiency Information*
- Efficiency Support Activities
  - *EES Market Integration*
  - *Energy Efficient (Green) Communities*
  - *Mainstreaming Green*
  - *Market Research*

CRAG Meeting  
July 21, 2011



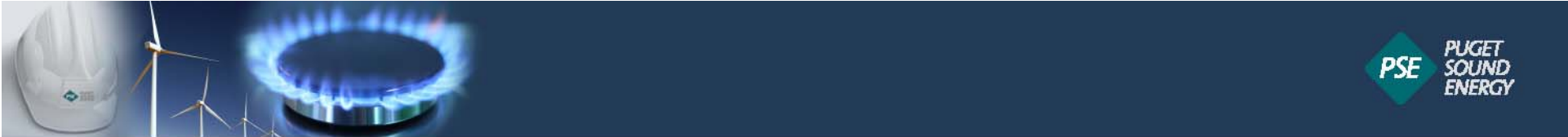


# What Elements Comprise EE Information?

## Current Structure<sup>1</sup>

Residential	Business
Energy Advisors	Energy Advisors
Events	Events
Brochures <i>(non-program specific)</i>	Brochures <i>(non-program specific)</i>
Online tools <i>(other than Mainstreaming Green)</i>	Online tools <i>(other than Mainstreaming Green)</i>
Enews	

<sup>1</sup> From the 2011 ACP (Schedules E200, E206 and E/G 260), each of these elements is assigned a separate order #.



# Information-Oriented Programs and Activities

## *(Proposed New Structure—Additional Line Item Detail<sup>2</sup>)*

- EES Portfolio Support
  - Customer Engagement and Education
    - *Energy Advisors, Events, Brochures, Educational Offerings*
  - Energy Efficient Communities
  - Web Experience
    - *Mainstreaming Green (EES web platform, content)*
    - *Market Integration (salaries for EES web platform, earned media)*
    - *(also will include Enews and online tools)*
  - Marketing Research
    - *Customer Research (segmentation, etc.)*
  - Trade Ally Support *(Formerly Local Infrastructure and Market Transformation)*

<sup>2</sup> Although this detail will be omitted from the filed version of Exhibit 3 in November, the order# detail will be outlined in the 2012-2013 BCP.



# Exhibit 1 Revisions

## Handouts

- Existing & Revised Exhibit 1



## 2011 Initiative Status Summaries



**Applicable conditions: K(3)(a)(i), K(6)(e), K(6)(g)**

**Bob,  
Bill**

July 21, 2011 CRAG Meeting



# EM&V Framework Update

- March 31<sup>st</sup> CRAG Mtg
  - Introduced PSE Draft (Avista basis; PSE customizing)
  - Assembled subcommittee:
    - Dan, Danielle, Dave, Mary, Stan, Stefanie, Syd, Tom
- Subcommittee meetings & deliverables
  - May 12<sup>th</sup> mtg - Added and updated definitions, clarified text
  - June 16<sup>th</sup> mtg – Comments & Attachments discussion
  - July 15<sup>th</sup> – Final draft comments in
- Next Steps
  - July 21<sup>st</sup> – Proposed Final draft & Attachments out
  - Aug 31<sup>st</sup> – Consensus on Final EM&V Framework



# **INDEPENDENT THIRD PARTY REVIEW OF PSE'S 2010-11 ELECTRIC CONSERVATION ENERGY SAVINGS – *Status***



**Applicable condition: K(6)(g)**

**Bill Hopkins**

*Manager, EES Strategic Planning & Research*

**David Nightingale**

*Senior Regulatory Engineer*



May 19, 2011 CRAG Meeting



## Project Status

- Project file review in progress
- Initial EM&V review is complete, pending review with PSE and UTC staff
- Preliminary avoided cost and cost-effectiveness reports completed, review and revision underway
- First report to CRAG in August





## Wrap-up and Next Steps



Dan

July 21, 2011 CRAG Meeting



## Wrap-up

- Unresolved questions?
- Meeting recap
- Follow up items and their owners
- Quality, value of meeting?



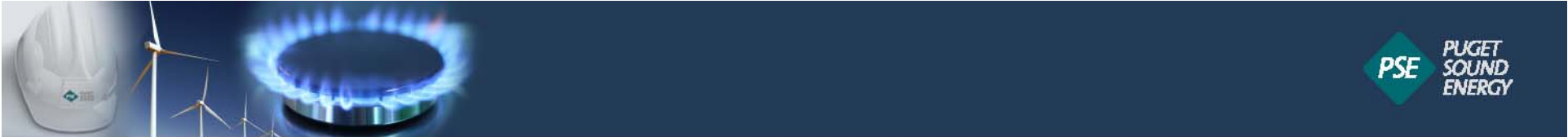
# Next Meeting

- August 25
  - Summit room
  - Draft topics:
    - Provide September 1 previews (draft program details and draft budgets)
      - Please select two specific programs to review during the meeting, so that we can have budget details available.
  - The EES Semi-annual report of conservation progress will also be available in hard-copy form.



# Handouts

- Existing and updated Exhibit 1, Portfolio view
- Updated CRAG calendar
- Updated CRAG Action Item list
- Updated Condition Compliance “Report Card”
- Schedule 258 cycle timeline & proposal
- Schedule 258 filing documents
- 2011 six-month views of information-oriented activity expenditures, electric & gas (preliminary!)
- 2011 six-month EES Tracking tables (preliminary!)



# Attendees

## **CRAG Members**

Danielle Dixon  
Chuck Eberdt  
Tom Eckman  
Stefanie Johnson  
Mary Kimball  
David Nightingale

## **Guests**

Christian Carlson (Public Counsel)  
Irion A. Sanger (ICNU)

## **PSE**

Cal Shirley  
Janet Kavran  
Grant Ringel  
Bob Stolarski  
Dan Anderson  
Eric Englert  
Bill Hopkins  
David Landers  
Jeff Tripp  
Andy Hemstreet

## **Facilitator**

Dune Ives

# **August 25, 2011 CRAG Meeting**

## **Summary Notes**

**Contents**

Contents ..... 2  
Attendees..... 3  
Meeting Topics ..... 4  
Discussion Highlights and Notes ..... 4  
    General Comments..... 4  
    EES program budget details..... 4  
Parking Lot & Questions ..... 7  
There were no issues captured in the parking lot..... 7  
Agreements, Decisions ..... 7  
EES Action Items..... 7



## Attendees

### **Facilitator**

Dune Ives

### **CRAG**

Danielle Dixon

Chuck Eberdt

Mary Kimball

David Nightingale

Paula Pyron

Irion Sanger

### **PSE**

Dan Anderson

Eric Englert

Andy Hemstreet

Bill Hopkins

David Landers

Grant Ringel

Cal Shirley

Bob Stolarski

Jeff Tripp

## Meeting Topics

1. Review agenda
2. Review ground rules and standing agenda items
3. In-depth discussion of 2012-2013 EES program budget details
4. Discuss PSE organizational modifications
5. Navigate the 2012-2013 Exhibit 1 Excel workbook
6. Wrap up and next steps

## Discussion Highlights and Notes

*(Only the topics above in which there was discussion. All questions or items that were captured in the "Parking Lot" are noted in the applicable sections below. Specific points are available in the PowerPoint slide PDF. Any resultant action items are captured below.)*

### General Comments

After introductions all around, the assembled reviewed CRAG-related activities that occurred since the last meeting. Earthquake safety tips were also reviewed in the safety moment. David Nightingale indicated that he would have a substitute attendee for the September 29 CRAG meeting (at the PSE Factoria office). Chuck Eberdt indicated that he would be unavailable for the September 29 meeting.

### EES program budget details

Bob provided an EES overview of the budget and savings figures, and reiterated the key challenges for 2012-2013.

### Residential Energy Management

Jeff Tripp provided general electric and gas budget and savings overviews, and provided detailed discussions for each Residential Energy Management program. There was some discussion around ending gas water heater incentives, due to a very low TRC in 2012. It was also emphasized that, although no REM pilots are planned for the next bienium, PSE will bring any potential new offerings before the CRAG for review and discussion. There was also some general discussion relative to higher material costs, market saturation, need for higher incentives, and a higher degree of retailer/trade ally engagement. Jeff also made the point that REM is expanding its portfolio in order to counteract the market conditions with more appliance-related services.

Bob clarified that PSE is not limiting the savings achievements with the planned distribution of CFL and appliance offerings. Jeff also expanded on the need to streamline the weatherization measures.

### **Business Energy Management**

David provided the group an overview of electric and gas savings and budget figures. He then reviewed the details of each BEM program. The group discussed the CI Retrofit proposed contracted programs, including Data Center, Building Tune-up and Industrial Systems Optimization. David emphasized that there will be a high degree of evaluation associated with these new programs. Although some REM programs will be retired in 2012, the funding formula in AutoFund will be revised within the next several weeks to ensure cost-effectiveness without too much of an impact on offerings.

### **Regional Programs**

Dan provided the attendees with the NEEA budget figures. Cal provided the group with some background on the NEEA funding formula that is applied for all participating utilities, their planning cycles and budget progression. There was also discussion about NEEA's potential work on gas efficiency initiatives and the need to account for electric funding and gas funding correctly. Current PSE contributions to NEEA fund only electric initiatives. PSE's share of NEEA funding is currently approximately 13 percent.

Bob provided an overview of the Generation, Transmission and Distribution section of the EES budget. Phase balancing and the need to evaluate the efficiency projects in the future were discussed. Bob shared some background as to how the 12 project sites were selected, as well as how these will be measured and monitored. Each is a PSE-owned facility and there was discussion as to whether projects should also include co-owned facilities. It was pointed out that NWEC feels that efficiency projects should also include items such as turbine change-outs; they will make this point to the Commission at the time of November 1 filing comments. Bob indicated that, during the state-wide working group discussions, the IOUs unanimously interpret 19.285 to NOT include these items. Bob agreed to provide a list of the generation sites included in the planning for the T&D / Generation budget line item - marked as DRAFT.

### **Customer Engagement**

Cal provided the group an overview of the recent re-organization involving Janet Kavran and Grant Ringel's departments, with an increased Company emphasis on better, more effective customer service. There was discussion on the types of information that would be communicated broadly versus that which would be shared only internally and with the CRAG. There is a high degree of sensitivity to employee perception as the process evolves.

### **Portfolio Support**

Grant reviewed the modifications made to Exhibit 1 (covered in and generally supported by the CRAG during the July 21 CRAG meeting) and provided background on the key drivers of the Portfolio Support major elements. There were no questions during this portion of the meeting.

### **Research & Compliance**

Bill provided an overview of the Conservation Supply Curves and Strategic Planning elements of this budget section. A question arose for bullet #1 at the top of page 72, “provide research and analysis to support IRP, regulatory filings, ....”. It was clarified that this applied primarily to I-937 related compliance reporting, statewide working group activities, etc., and represented Bill’s labor expenses.

Bob then provided an overview of the Evaluation budget item. He clarified that the note on page #73 (2012-13 Evaluation budgets near 2% of program costs) apply only to evaluation. The M&V study is ongoing and represents only Measurement & Verification expenses and activities. This study (by KEMA) is expected to be completed sometime in September and it is not part of the third-party savings review.

### **Other Electric Programs**

Dan provided some details on the Net Metering and Renewables Education budgets. Bob presented an overview of the CI Load Control program and indicated that the Residential Demand Response pilot is in the process of removing equipment from homes and will start its evaluation in the near future.

### **Exhibit 1 Navigation**

Andy provided the attendees with an overview of the Exhibit 1 workbook, which consists of over 80 pages. He illustrated the use of hyperlinks to navigate around the workbook, which will cut down on scrolling through page after page of program details.

Although measures are noted in the REM detail pages, 2012 measures aren’t archived in Measure Metrics yet (only active measures are tracked in Measure Metrics.)

### **Initiatives Update**

Bill provided highlights of the third-party savings review and indicated that it may be possible to make this a discussion point during the September 29 CRAG meeting, depending on other critical deliverables.

A question was asked relative to the distribution ratio of budgets across electric and gas. PSE will provide follow-up to that question.

### **Wrap-up**

Handouts of the first draft Exhibit 3 and four sample Exhibit 1 pages were distributed to attendees.

The next CRAG meeting is September 29 in the PSE Factoria office (please note this location change).

## **Parking Lot & Questions**

There were no issues captured in the parking lot.

## **Agreements, Decisions**

- 1) Exhibit 1 and Exhibit 3, along with the August 25 PPT, will be made available to the CRAG on the PSE CRS website (used before for very large files) on September 1. An email will provide CRAG members with the URL.
- 2) CRAG member agreed that it is important to review the two Exhibits and draft questions in advance of the September 29 CRAG meeting.
- 3) PSE agreed to keep the CRAG informed as organizational revisions evolve.
- 4) CRAG members are encouraged to contact Andy for any Exhibit 1 navigational questions.
- 5) PSE will look into what measure source of savings information can be provided before November 1 and at a minimum, by Q1 2012.
- 6) PSE will attempt to get an SBW savings review on the September 29 CRAG meeting agenda.
- 7) It was agreed that GoToMeeting® was effective, especially for the conference call participants.

## **EES Action Items**

- Correct the PowerPoint slide #6, which incorrectly indicates a UTC open meeting on August 25(Relative to Schedule 258's requested effective date.) The correct relevant UTC open meeting date is actually September 15.
- PSE will provide the CRAG with the evaluation results indicating a need to streamline the number of REM weatherization measures.
- PSE will keep the CRAG informed as organizational iterations transpire.
- PSE will provide the Residential Demand Response evaluation when it is available.
- PSE will use GoToMeeting® to facilitate conference participation for all future meetings.
- Provide clarification as to the proportion of budget allocations to electric versus gas programs.



# Conservation Resource Advisory Group

Energy Efficiency Services



August 25, 2011 CRAG Meeting





**Welcome!**



**Cal Shirley**

*Vice President, Energy Efficiency Services*

August 25, 2011 CRAG Meeting





# Today's Agenda

**Facilitator:** Dune Ives; President, Milepost Consulting

## Topic

Welcome!

*Meeting objective:*

*CRAG members will leave the meeting with a deep enough understanding of how to review the draft budget data and program details, which will be provided in total on September 1.*

*This will facilitate input and further discussion during the September 29 and October 20 CRAG meetings. The end goal is secure support of the November 1 UTC filing for program implementation on January 1, 2012.*

## Discussion Lead

**Cal Shirley**, Vice President, Energy Efficiency Services

Agenda review, ground rules, meeting objectives and calendar review

**Dan Anderson**, Manager, EES Budget & Administration

Safety moment

**Grant Ringel**, Director, Customer Market Strategies

2012-2013 Draft Budget Reviews:

*Ensure that CRAG members are familiar with the budget figures and how to navigate the Excel Exhibit 1 workbook.*

**Bob Stolarski**, Director, Customer Energy Management,

- Portfolio view
- Program-level views
- How to navigate the Exhibit 1 workbook
  - Deep-dive; programs details:
    - Residential Lighting
    - C/I Retrofit
    - Mainstreaming Green

**Jeff Tripp**, Manager, Residential Energy Management

**David Landers**, Manager, Business Energy Management

**Grant Ringel**

**Bill Hopkins**, Manager, Strategic Planning and Mkt. Res.

**Andy Hemstreet**, Program Manager, Compliance

Program Reviews and Updates:

*Ensure that current initiative updates are presented and understood.*

**Bill Hopkins**

- Third-party savings review
- Other

Wrap-up, next steps

*Meeting outcome achieved?*

**Dan Anderson**

August 25, 2011 CRAG Meeting



## Safety Moment



## Grant Ringel

*Director, Customer Marketing Strategies*

August 25, 2011 CRAG Meeting



## Standing Agenda Items



**Dan Anderson**

*Manager, EES Budget & Administration*

August 25, 2011 CRAG Meeting



## Summary of CRAG-Related Activities Since July 21, 2011

### E-mails:

- *August 16*: Notification of Schedule 258 and Semi-Annual Report filings
- *August 19*: EM&V Framework Final Draft to stakeholder team
- *August 23*: Sch. 258 Navigant evaluation information

### Meetings:

- *August 10*: NEEA special presentation to UTC, focus on EM&V and Market Transformation

### UTC Events/Filings:

- *August 15*: 2011 EES Semi-Annual Report
- *August 16*: Schedule 258 for UTC open mtg. **August 25<sup>th</sup>** **September 15**



## Action Items Status Since July 21, 2011

### PSE Completed:

- Schedule 258 portion of Navigant CI Retrofit study provided August 23.

### PSE Open:

- PSE to provide any available 2009 generating facility efficiency studies.
- Ongoing, as available; PSE to provide additional information on the evolution of the WashWise program.

*The complete 2011 PSE Action Item table is part of today's handouts.*

August 25, 2011 CRAG Meeting



# Planning Milestones

*(All dates are “by”)*

Provide information on:



- *August 1:* Ten-year potential and two-year target presented to CRAG. (CRAG mtg. 7/21)
- *September 1:* Draft program details and budgets. (CRAG mtg. 8/25)
- *October 1:* Draft program tariff Schedule changes. (CRAG mtg. 9/29)
- *November 1:* Completed Biennial Conservation Plan filed with WUTC. (CRAG mtg. 10/20 & 11/17 if needed)
- *January 1: 2012 Program implementation.*

August 25, 2011 CRAG Meeting





## 2012-2013 Draft Budget Overview



**Applicable Sections:**

**F(11),**

**Applicable conditions:**

**K(4), K(7)(c), K(7)(d), K(8)(f)**

**Bob Stolarski**

*Director, Customer Energy Management*

August 25, 2011 CRAG Meeting

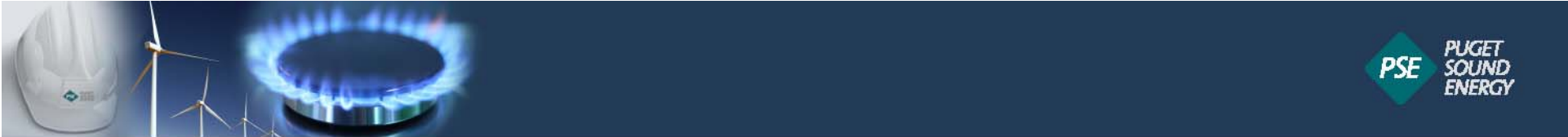




## Market Trends - Portfolio Savings

- Avoided Costs / Cost Effectiveness Effects
- CFL Unit savings
- T12 Fluorescents Elimination
- Materials Costs Increases
- ARRA Bubble
- Energy Code Adoption





# Proposed 2012 and 2013 Portfolio

	Electricity	Gas	Budget \$
2-Year Proposed	76 aMW	9.5 million	\$221 million
Annualized	38 aMW	4.7 million	\$110.5 million
2011 Budget	38.8 aMW	4.8 million	\$110 million

Note: The 2012-2013 BCP Exhibit 1 will include a 2012-specific view.



# 2012-2013 Portfolio Plan Overview

- Demand Response Program Included
  - \$2.5 million budget
- T&D and Generation Facilities Included
- Programs Evaluation
  - Added \$1.1 million
- Administration Costs
  - Residential - Lower costs with added positions to bring the implementation of 2 programs in-house, added promotion spending
  - Business – Higher 3<sup>rd</sup> party admin costs with significantly lower customer incentives
  - Others basically flat

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# 2012-2013 Draft Program Details

## Residential Energy Management



**Jeff Tripp**

*Manager, Residential Energy Management*

August 25, 2011 CRAG Meeting



## Residential Energy Management 2012-2013 Programs

- **E201/G203 Low Income Weatherization**
- **E214/G214 Single Family Existing**
  - Residential Lighting
  - Home Appliances
  - Showerheads
  - Space and Water Heat
  - Weatherization
  - HomePrint
  - Home Energy Reports
- **E215/G215 Single Family New Construction**
- **E216 Fuel Conversion**
- **E217/G217 Multifamily Existing**
- **E218/G218 Multifamily New Construction**

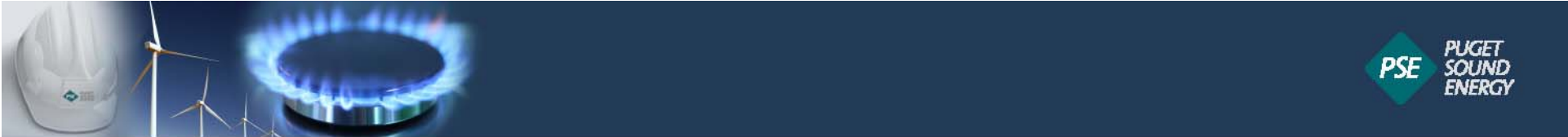
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# Residential Energy Management 2012-2013 Draft Budget

Electric Program	Budget	Target MWh	% of Budget
Residential lighting	\$ 25,008,982	140,350	29%
Home Appliances	\$ 16,753,085	54,624	20%
Multi Family Existing	\$ 13,689,740	33,571	16%
Weatherization	\$ 8,420,241	20,524	10%
Low Income Weatherization	\$ 5,577,203	3,842	7%
Space heat	\$ 5,351,337	12,038	6%
HomePrint	\$ 3,590,954	8,100	4%
Single Family New Construction	\$ 2,231,613	3,091	3%
Fuel Conversion	\$ 1,641,609	5,195	2%
Multi Family New Construction	\$ 1,277,858	1,910	2%
Water heat	\$ 638,545	1,709	1%
Home Energy Reports	\$ 430,901	10,996	1%
Showerheads	\$ 392,490	3,107	0%
<b>Total</b>	<b>\$ 85,004,557</b>	<b>299,057</b>	<b>100%</b>

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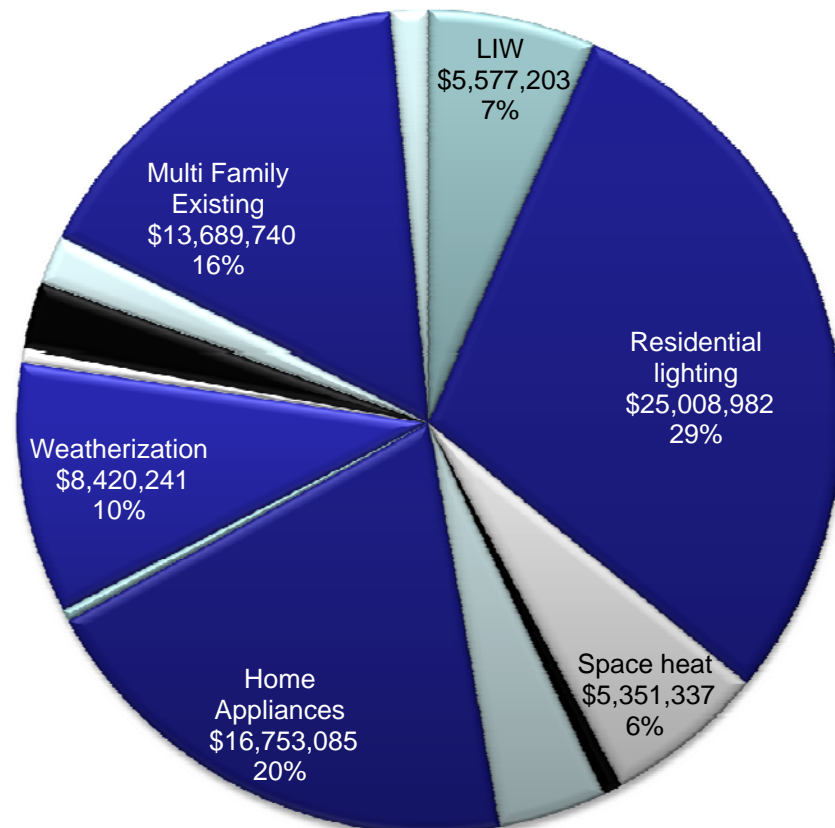
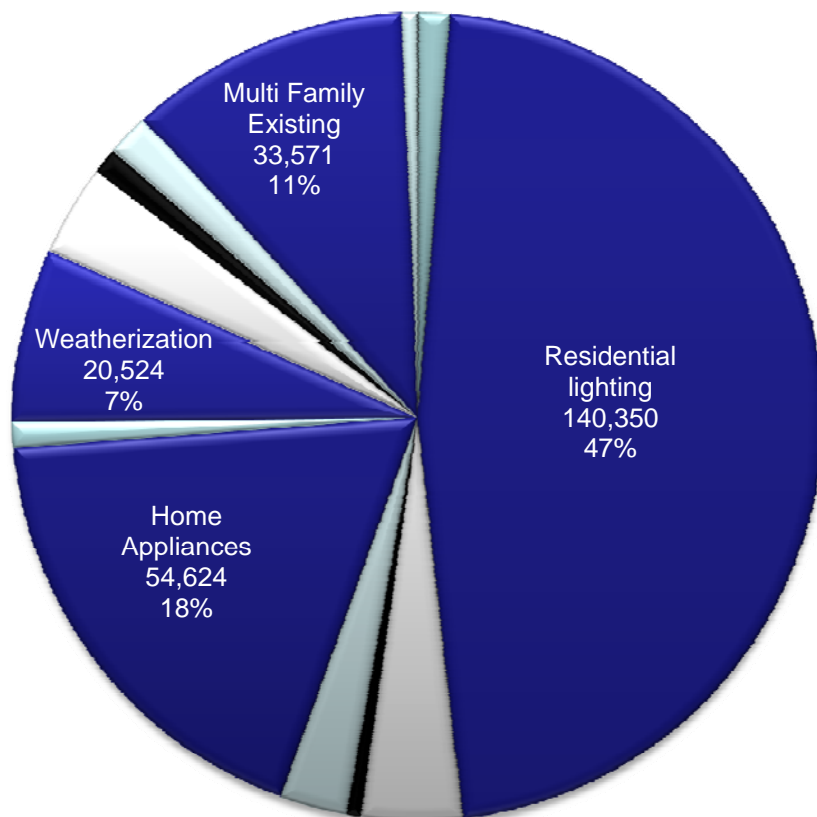
# Residential Energy Management 2012-2013 Targets

## Electric Savings

299,057 MWH, 34.1 aMW

## Budget

\$85,004,557



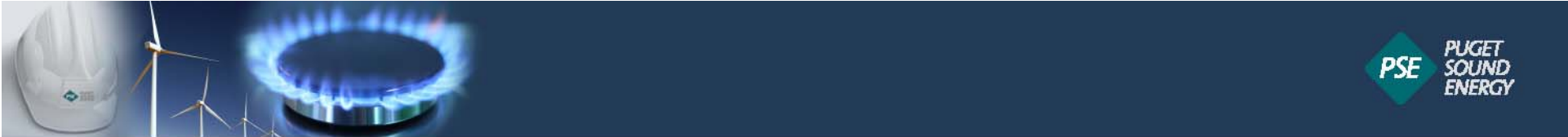
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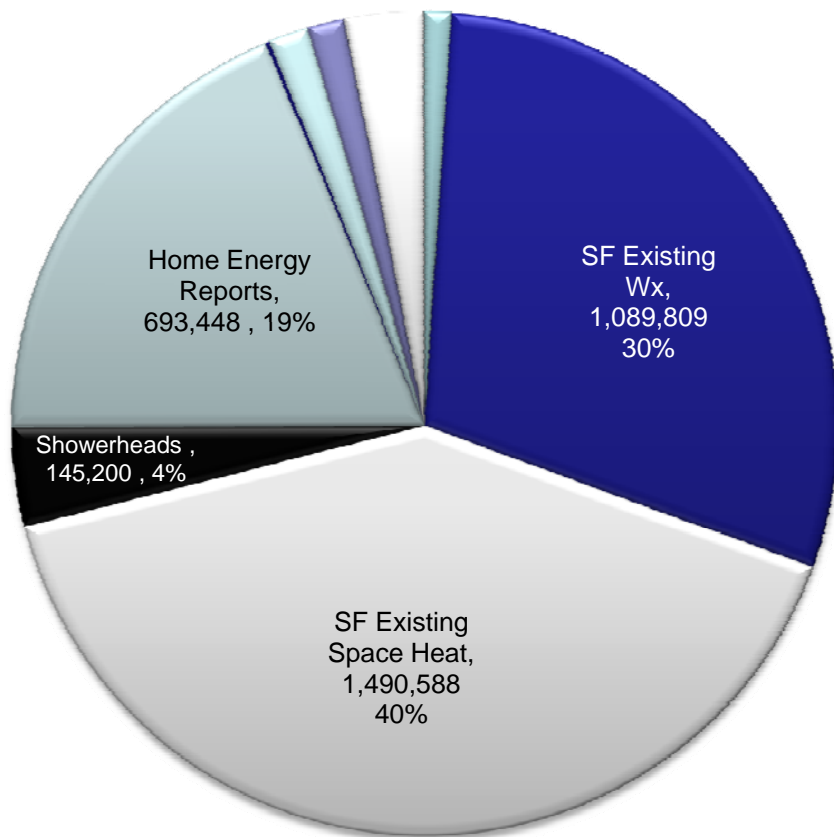
# Residential Energy Management 2012-2013 Draft Budget

Natural Gas Program	Budget	Target Therms	% of Budget
SF Existing Wx	\$ 5,928,619	1,089,809	42%
SF Existing Space Heat	\$ 4,258,219	1,490,588	30%
Low Income Weatherization	\$ 1,255,534	39,685	9%
Single Family New Construction	\$ 688,845	63,800	5%
Home Energy Reports	\$ 627,689	693,448	4%
Multi-Family Retrofit	\$ 476,469	52,600	3%
Residential Showerheads	\$ 451,686	145,200	3%
Multi-Family New Construction	\$ 379,018	113,618	3%
<b>Total</b>	<b>\$ 14,066,079</b>	<b>3,688,748</b>	<b>100%</b>

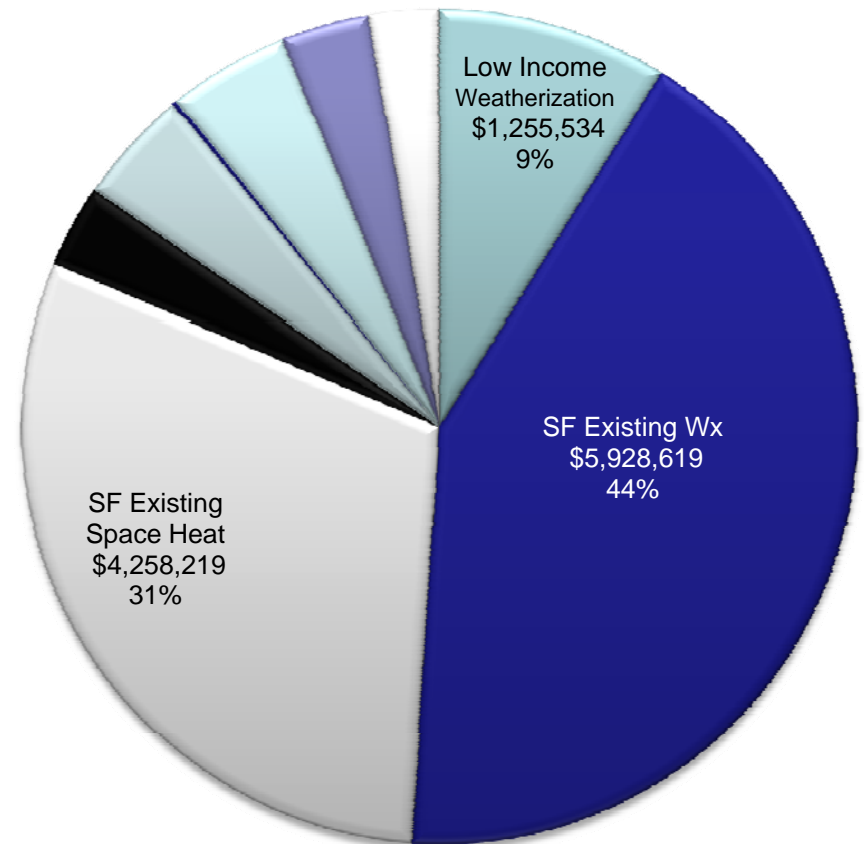


# Residential Energy Management 2012-2013 Draft Budget

**Gas Savings**  
3,688,748 Therms



**Budget**  
\$14,066,079





## Residential Energy Management 2012-2013 Draft Budget

- Notables
  - TV turn-in in Home Appliances
  - LEDs in the Residential Lighting
  - Multifamily Air Sealing
  - No Natural Gas Water Heat
  - No Pilot Programs budgeted

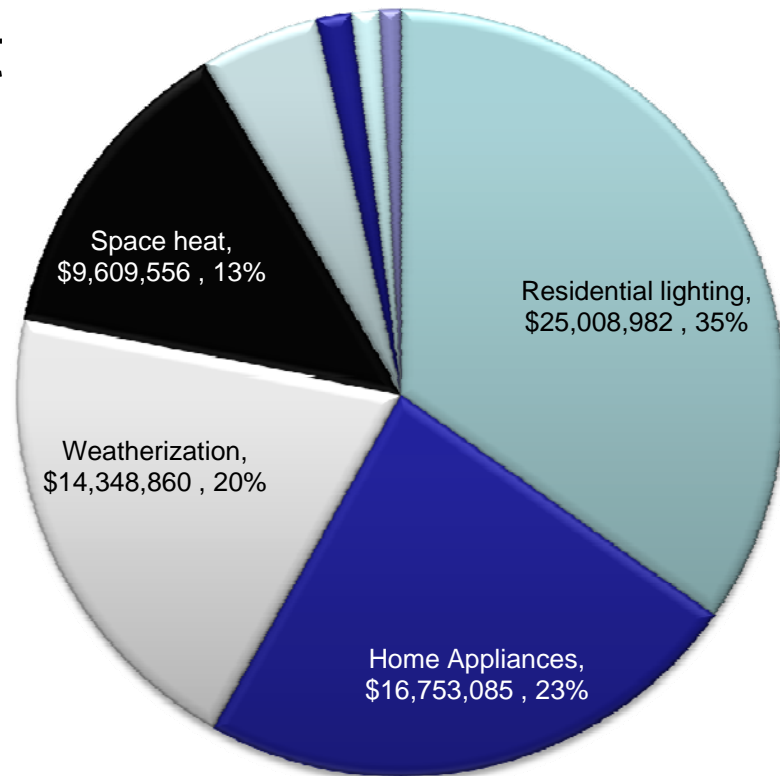
## Low Income Weatherization E201/G203

- Production is based on post-ARRA funding with anticipated decreases in State and Federal funding.
- Budgets do not reflect additional funding sources made available to PSE low income customers in the 2010-11 program (2010: Enron and 2011 REC electric).
- PSE funding is based on supporting continued production while maintaining electric and gas program cost effectiveness.

**\$6,832,737 - 7% of budget**  
\$5,577,203 - 3,842 MWh  
\$1,255,534 - 39,685 Therms



- Single Family Existing – E214/G214
  - Residential Lighting
  - Space and Water Heat
  - HomePrint
  - Home Appliances
  - Showerheads
  - Weatherization
  - Home Energy Reports



- Single Family Existing - E214 - Residential Lighting

- Outside Services

- More stores to service
    - More products to merchandise
    - More products to process rebates

**\$25,008,982 - 140,350 MWh**  
**25% of Budget**

- Labor

- More back-end management of data and implementation with rebate processing and field service contractors
    - More management of partners and with their various depts. (appliances, lighting, new technology, haul-away, and plumbing, etc)







## Single Family Existing - E214 - Residential Lighting

- Promotional activity
  - More promotional efforts in boosting awareness to customers of the new rebated products and programs
  - Update consumer messaging for all individual measures and integration of these messages through EES dept
  - More and new POP and promotional materials need to be created



**SAVING MONEY IS RE-ENERGIZING**

LIGHTING COUPON EXPIRES 01/14/12

**UP TO \$12 OFF**

On ENERGY STAR® qualified compact fluorescent light fixtures

**PSE PUGET SOUND ENERGY**

CHOOSE FOR THE BETTER WITH ENERGY STAR

**ECO OPTIONS**

9815 3000 0006 8395 3394 1377 27

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## Single Family Existing - E214 - Residential Lighting

- Incentives
  - Retailers are now stocking more affordable but still expensive ENERGY STAR qualified LED bulbs and fixtures – PSE’s rebate needs to be up to \$10 LED bulbs and up to \$20 LED fixtures to move the market on this measure.
  - CFL spiral savings has dropped 33%, from 24 to 16 kWh, to achieve the same savings target for this measure, 2012-13 units had to increase by 12%.
  - Promo CFL spiral and specialty bulbs incentives is higher to counter what MFGs are estimating to be a \$0.25-0.50 per bulb retail price increase due to China’s rare minerals market situation.



- Single Family Existing - E214 – Home Appliances

**\$16,753,085 - 54,624 MWh**  
**17% of Budget**

- Incentives

- Refrigerator/Freezer Decommissioning
- Refrigerator Replacement
- Retail Refrigerator/Freezer Decommissioning
- Introduction of a new program, TV Turn-In



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## Single Family Existing – E214/G214 - Space Heat

**\$9,609,556 - 10% of Budget**  
\$5,351,337 - 12,038 MWh  
\$4,258,219 - 1,490,588 Therms

- The de-emphasis in the Federal Energy Tax Credit, and elimination of ARRA stimulus money.
- Increased rebates to achieve the same level of energy savings.
- Modest increase in administrative costs due to increase marketing, training, processing, and associated staff time.



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## Single Family Existing – E214/G214 - Home Print

- Site savings associated with DI CFLs were reduced 60%, resulting in unit increase and an enhanced product mix, added leave behind showerheads, to recoup lost savings.
- Increased incentive by \$10/unit to align with market conditions and rising service fees.



**\$3,590,954 - 8,100 MWh**  
**4% of Budget**



## Single Family Existing – E214/G214 - Weatherization

- Rising material costs for insulation
- Reduction of federal assistance programs
- Streamlined measure mix to base savings on average heating type
  - reduces administrative cost for PSE / third party contractors
- Addition of Electric windows at \$750 max incentive
- Increased Mobile Home Duct Sealing units by 23%
- Retooling of duct sealing program reduced incentive \$100 unit

**\$14,348,860 - 14% of Budget**  
\$8,420,241 - 20,524 MWh  
\$5,928,619 - 1,089,809 Therms



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## Single Family New Construction – E215/G215

- Code changes coupled with lower gas avoided costs reduced gas program cost effectiveness, thus restricting ability to offer storage water heaters, tank less water heaters, and duct sealing, among other measures.
- Labor reduction of one FTE decreases gas/electric program labor overhead.

**\$2,920,457 - 3% of Budget**  
\$2,231,613 - 3,091 MWh  
\$688,845 - 63,800 Therms



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- Multifamily Existing - E217/G217
  - Reduced RTF savings on CFLs coupled with pursuing similar savings goals results in higher cost-to-savings ratio.
  - New air sealing measures contains contractor program implementation and savings evaluation costs in addition to PSE admin.
  - Incentive increase for windows (\$1.00/sq.ft.) and insulation (\$0.25/sq.ft.) helps offset increased contractor L&M costs while securing increased customer participation.



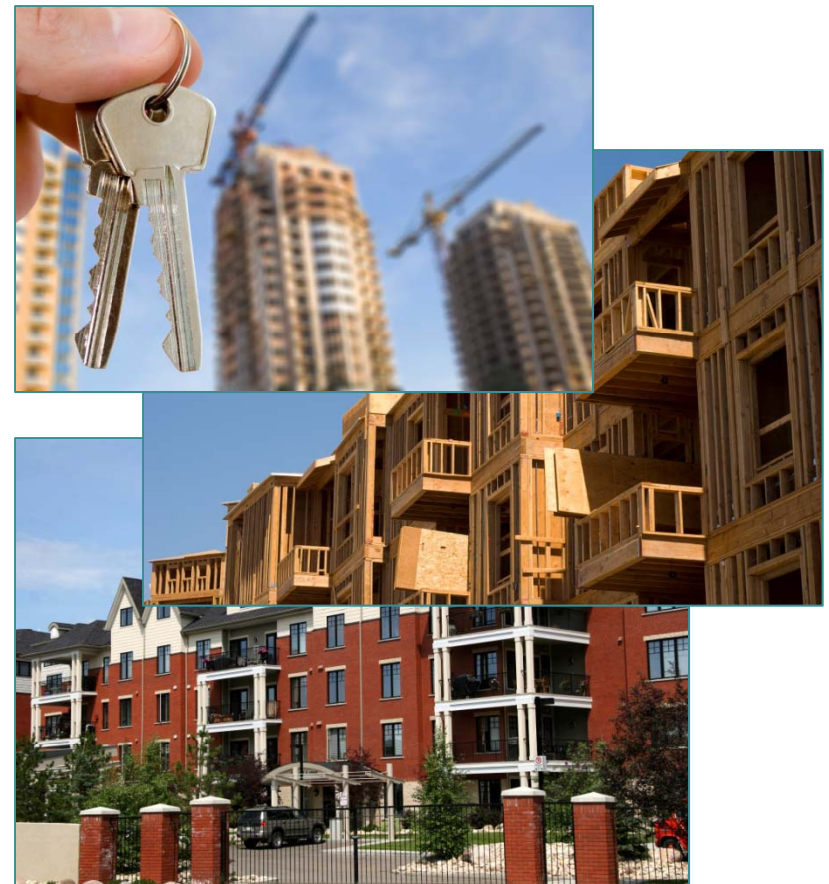
**\$14,166,210 - 14% of Budget**  
\$13,689,740 - 33,571 MWh  
\$476,469 - 52,600 Therms



## Multifamily New Construction – E218/G218

- Reduced kWh savings also due in part to conservation measures retired in 2011 with the increased stringency of the state energy code.
- Custom measure requests for condensing boilers, condensing water heaters, and showerheads is expected to increase.
- 2011-12 grants that are now in construction and will be completed and paid over the 2012-13 cycle.

**\$1,656,876 - 2% of Budget**  
\$1,277,858 - 1,910 MWh  
\$379,018 - 113,618 Therms





# 2012-2013 Draft Program Details

## Business Energy Management



**David Landers**

*Manager, Business Energy Management*

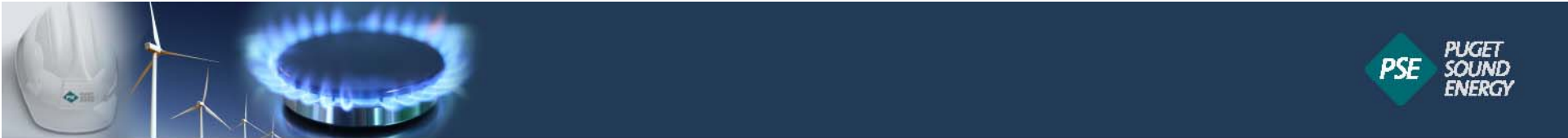
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# Business Energy Management 2012-2013 Electric Efficiency Programs

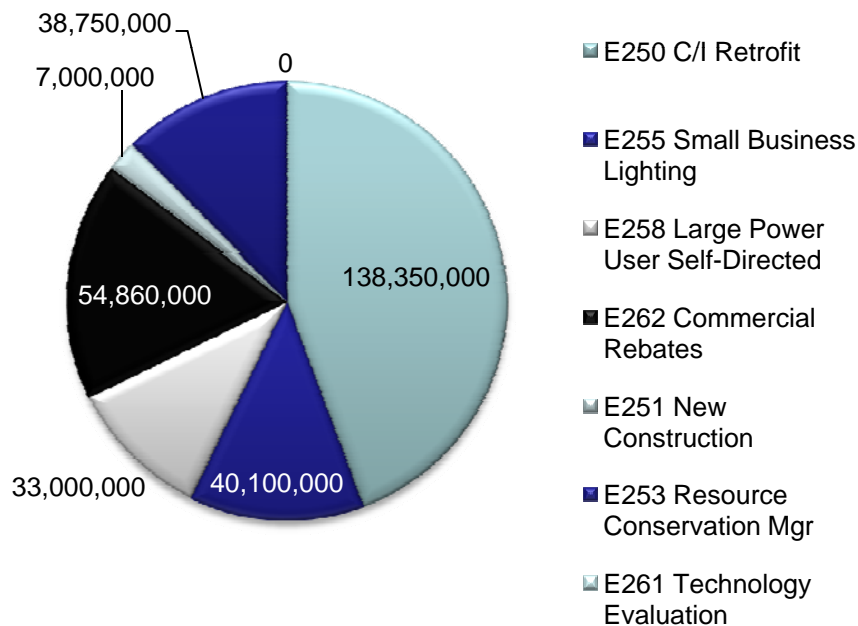
- **E250 C/I Retrofit**
  - Energy Smart Grocer
  - Data Center Efficiency
  - Industrial Systems Optimization
  - Building Tune-Up & Tracking
- **E262 Commercial Rebates**
  - Small Business Direct Install
- **E253 Resource Conservation Manager**
- **E255 Small Business Lighting**
- **E251 C/I New Construction**
- **E261 Energy Efficient Technology Evaluation**
- **E258 Large Power User Self-Directed**





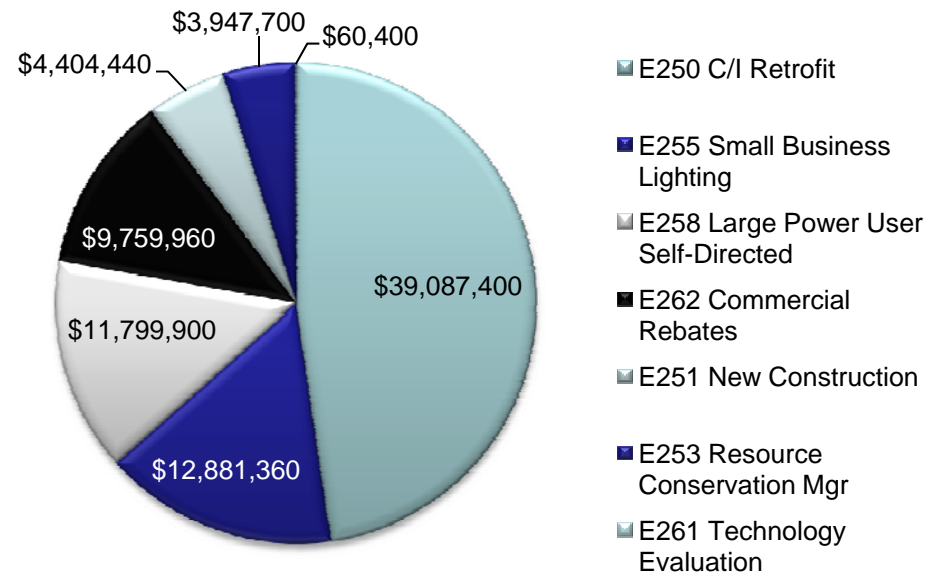
# Business Energy Management 2012-2013 Electric Efficiency Programs

**C/I Electric Efficiency Programs Savings (kWh)**



**312,060 MWh  
35.6 aMW**

**C/I Electric Efficiency Programs Budget**



**\$81,941,160**

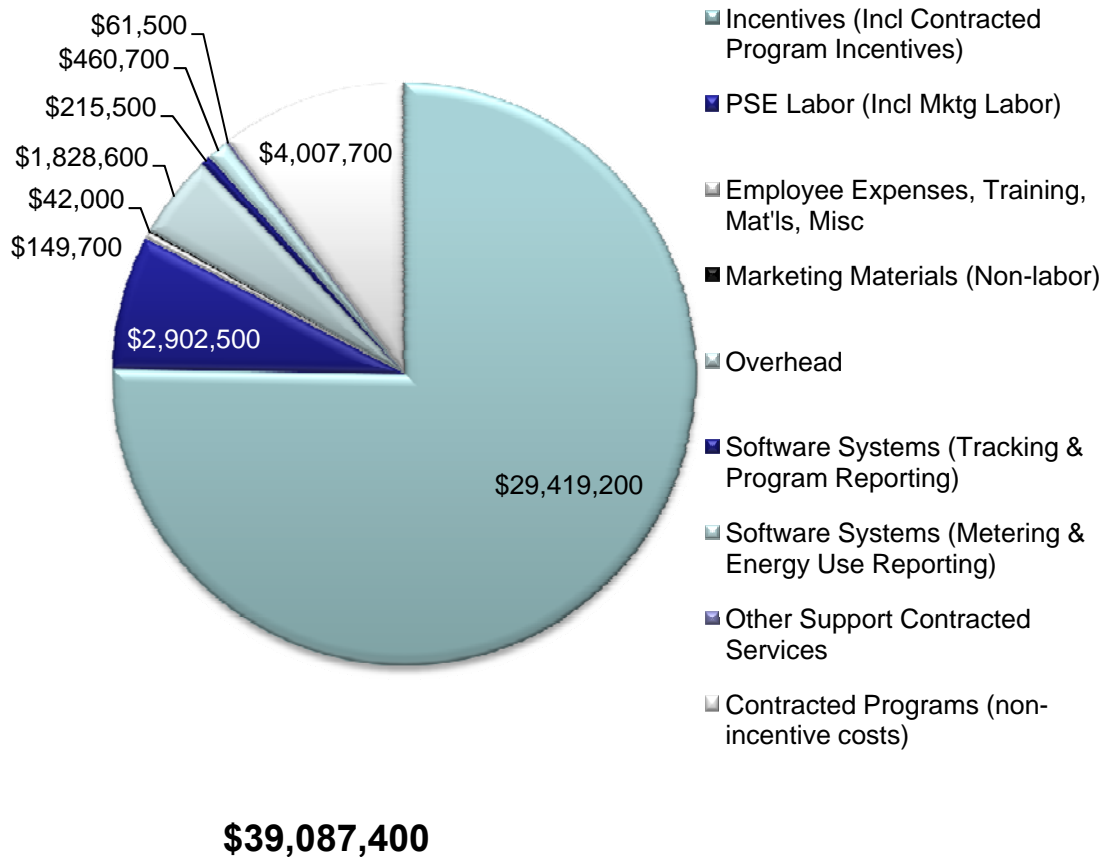
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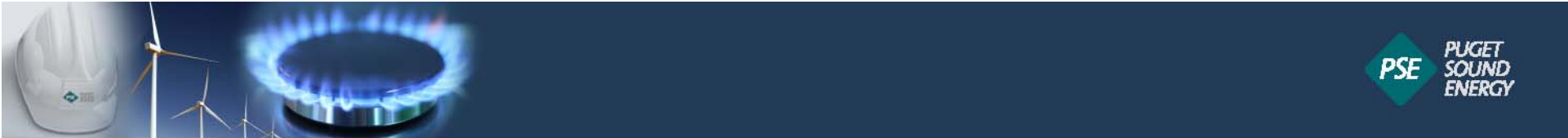
# E250 C/I Electric Retrofit

**C/I Electric Retrofit Programs Budget**



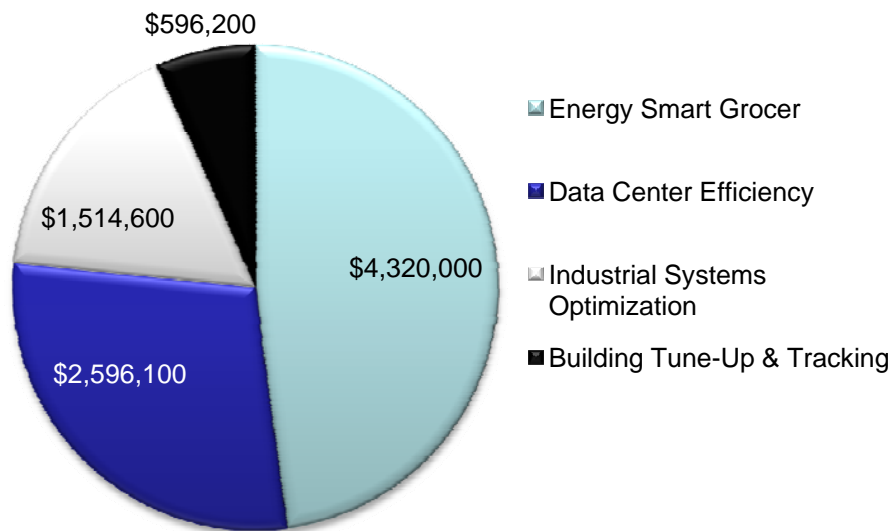
- 19 EMEs/Supervisors
- 800+ Custom Grant Projects Annually
- Average 40+ projects/EME/year
- 3 Engineering Supervisors
- 10 QC Reviewers
- Additional EME Duties
  - Savings analysis tools development
  - Program marketing
  - Process improvement
  - Professional development (PEs, CEMs, LEED AP)

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# C/I Electric Retrofit Contracted Programs

**C/I Electric Efficiency  
Contracted Program Costs**



**\$9,026,900**

≈23% of C/I Electric Retrofit Program Budget

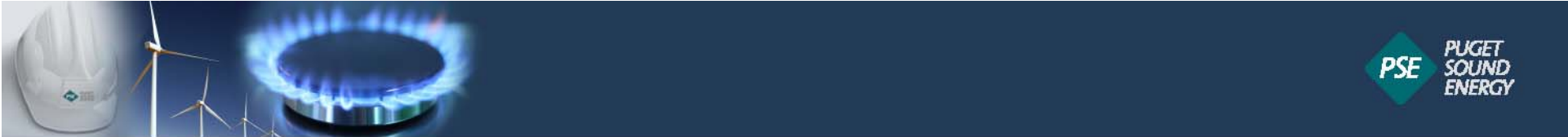
- Continuation of successful Energy Smart Grocer program
- Support customer success in regional & national efficiency initiatives



**NWFP**  
Energy Roadmap

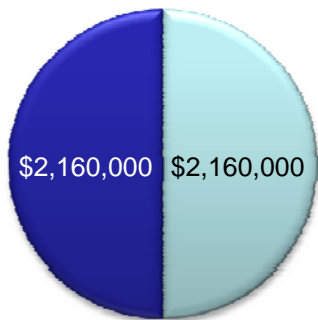


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# Energy Smart Grocer

## Energy Smart Grocer Contract Costs



- Cash Incentives to Customers
- Audits, Direct Installs, & Program Admin

**\$4,320,000**

**\$4,320,000 Contract Amount**

**18 million kWh savings**



## Program Deliverables

- No-cost energy audit
- Customized Energy Savings Report
- Installation of low-cost CFLs & beverage cooler controls for instant savings
- Dedicated on-site Field Energy Analyst to provide project guidance
- Contractor bid reviews
- Financial incentives



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# Data Center Efficiency

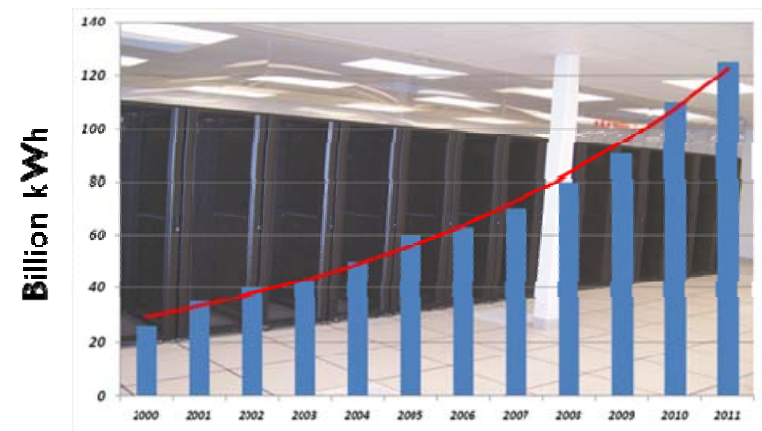
## Significant Opportunity in Mid Size Data Centers

Table A4-2. Projected US Installed Base of Volume Servers by Space Type, Historical Trends Scenario, 2007 to 2011

Volume Servers in:	2007	2008	2009	2010	2011	of 2011 total
Server Closets	1,873,000	1,971,000	2,079,000	2,190,000	2,271,000	12%
Server Rooms	2,408,000	2,731,000	3,088,000	3,745,000	3,918,000	<b>56%</b>
Localized data centers	2,067,000	2,351,000	2,665,000	3,005,000	3,385,000	
Mid-tier data centers	1,867,000	2,123,000	2,407,000	2,714,000	3,057,000	
Enterprise-class data centers	3,652,000	4,154,000	4,709,000	5,310,000	5,980,000	32%
<b>Total Volume</b>	<b>11,867,000</b>	<b>13,330,000</b>	<b>14,948,000</b>	<b>16,964,000</b>	<b>18,611,000</b>	<b>100%</b>

EPA report to Congress on Server and Data Center Energy Efficiency - 2007

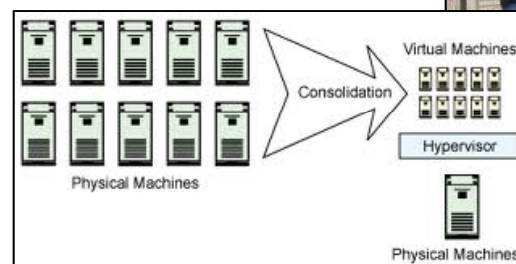
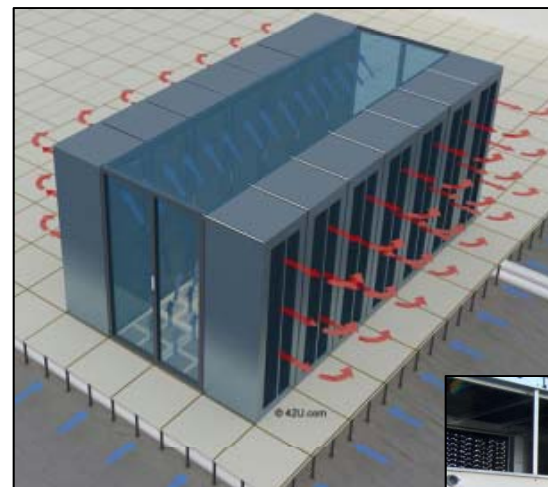
US Data Center Energy Use

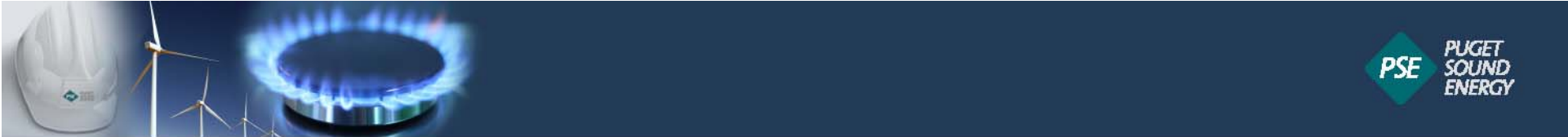




# Data Center Efficiency (cont.)

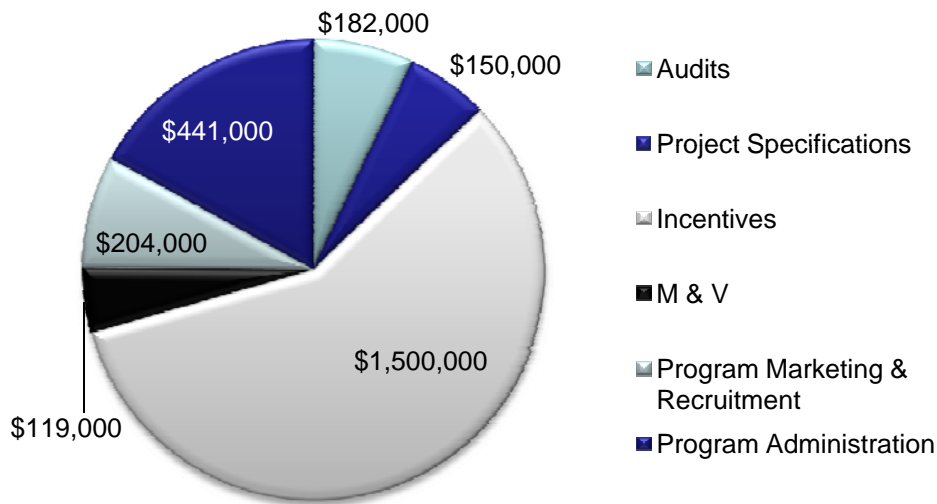
- **Tier 1 – Common Measures**
  - Lighting
  - Variable Speed Drives
- **Tier 2 – System Optimization**
  - Server Consolidation/Virtualization
  - Hot/Cold Isle Containment
  - HVAC Optimization
  - Power Distribution Equipment
- **Tier 3 – Cooling System Upgrades**
  - Chiller Efficiency Improvements
  - Air/Water Side Economizers
  - Removal from Main Building HVAC Systems





# Data Center Efficiency (cont.)

## Data Center Efficiency Contract Costs



## Program Deliverables

- Data Center Audits
- Sub-metering and Data Logging
- Comprehensive Approach
- Tiered Incentive Structure
- Project Technical Support
- Facilitated Implementation
- Performance Monitoring

**\$2,596,100 Contract Amount**

**8 million kWh savings**

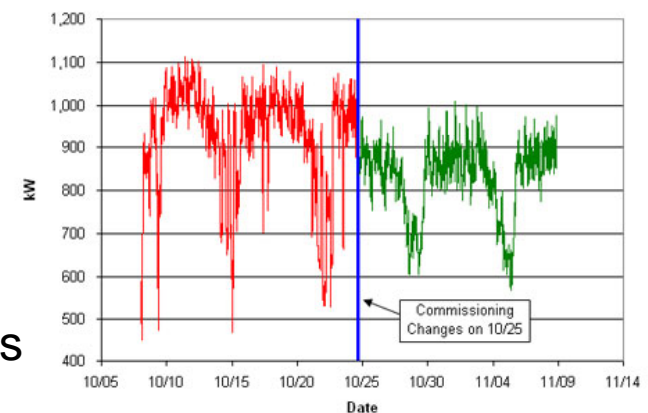
Up to 40 server rooms, localized, and mid-tier data centers (>1,500 ft<sup>2</sup>) in the PSE service territory

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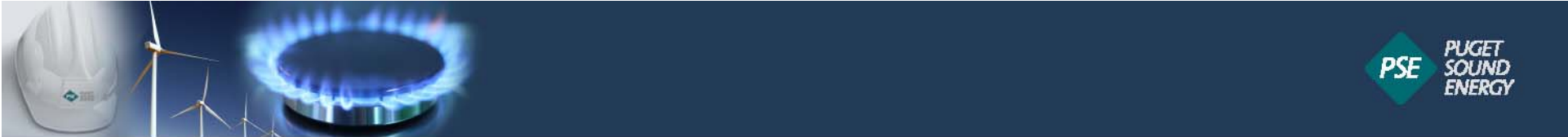


# Industrial Systems Optimization

- **Provide Financial & Technical Assistance**
  - Help industrial customers “do the little things well”
  - Track energy savings over multi-year horizon
- **Project Scoping**
  - Determine baseline energy use
  - Identify low-/no-cost “action items” & energy savings
  - Identify Performance Tracking System (PTS) plan
- **Implementation**
  - Install PTS
  - Perform on-site tune-up
  - Utilize PTS for measurement & verification
  - Annual review of PTS results for sustained savings

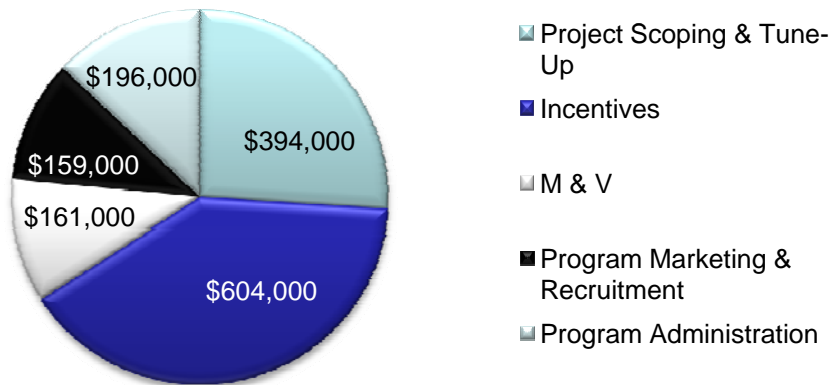


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# Industrial Systems Optimization (cont.)

## Industrial Systems Optimization Contract Costs



**\$1,514,600 Contract Amount**

**12 million kWh savings**

Target 21 projects, average 20 “action items” per project focusing on refrigeration, compressed air, pumps, fans & lighting.

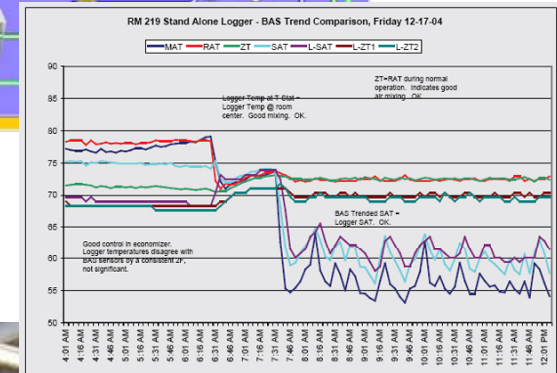
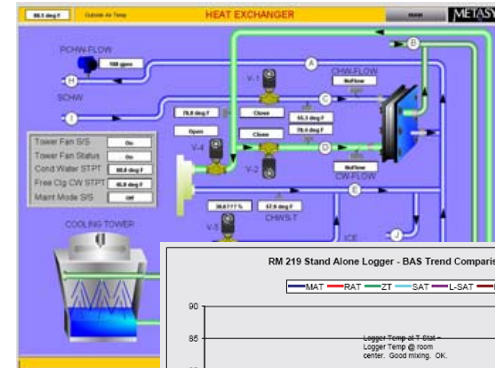
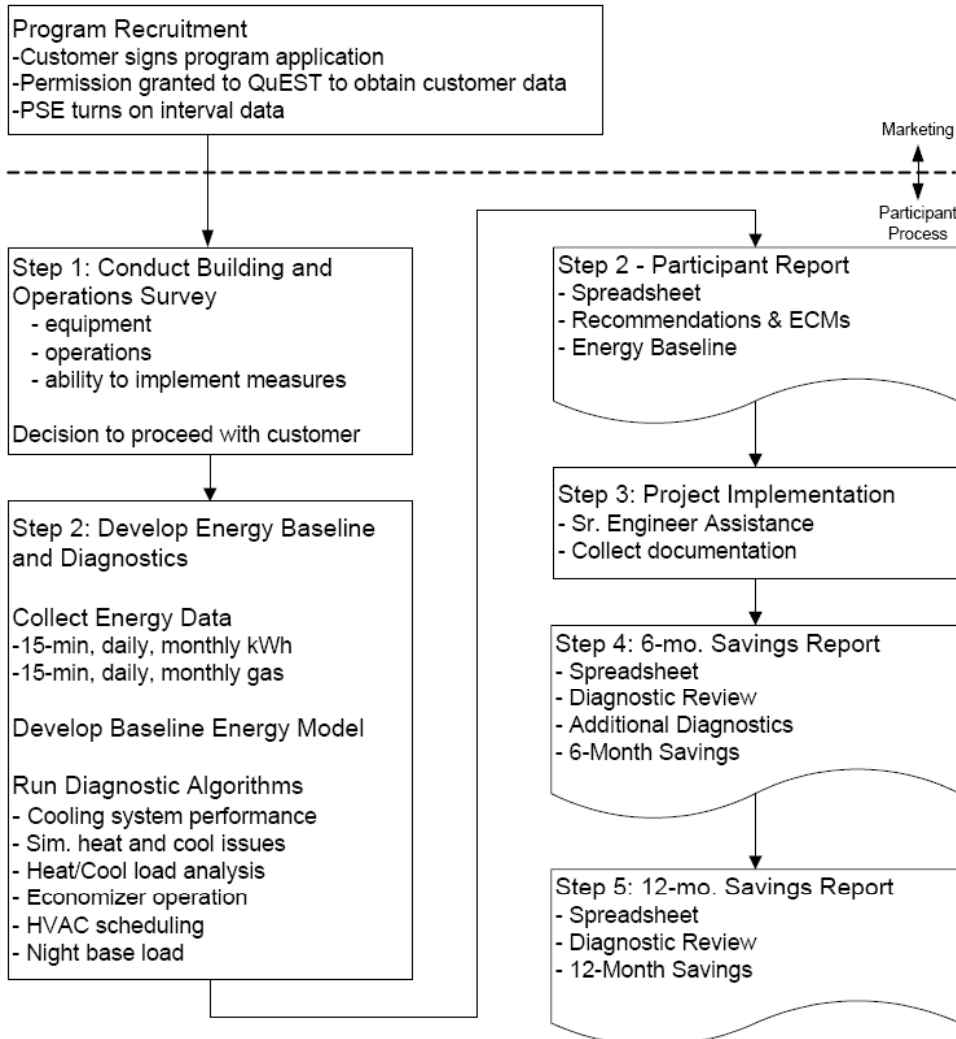
## Program Deliverables

- Project Scoping
- Performance Tracking System (PTS)
  - Meter upgrades
  - Instrumentation
  - Control system integration
- Systems Optimization Tune-Up Event
- Implementation Support
- Low-cost action item implementation
- Sustained Savings Verification





# Building Tune-Up & Tracking



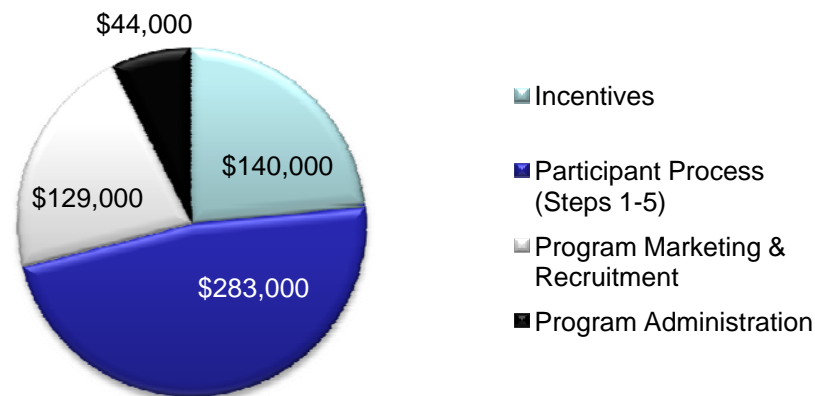
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## Building Tune-Up & Tracking (cont.)

### Building Tune-Up & Tracking Contract Costs



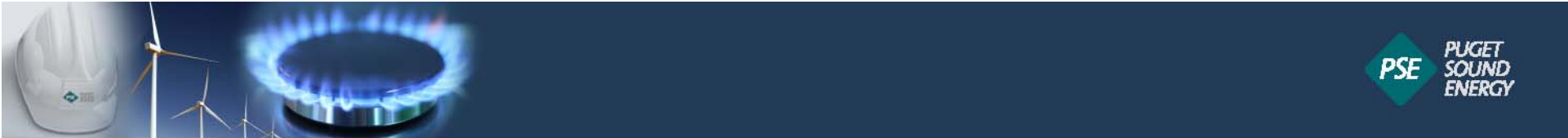
**\$596,200 Contract Amount**

**3.3 million kWh savings**

Target of 75 buildings, energy diagnostics twice per customer, prominent role in recruitment, optional ENERGY STAR™ rating for participants.

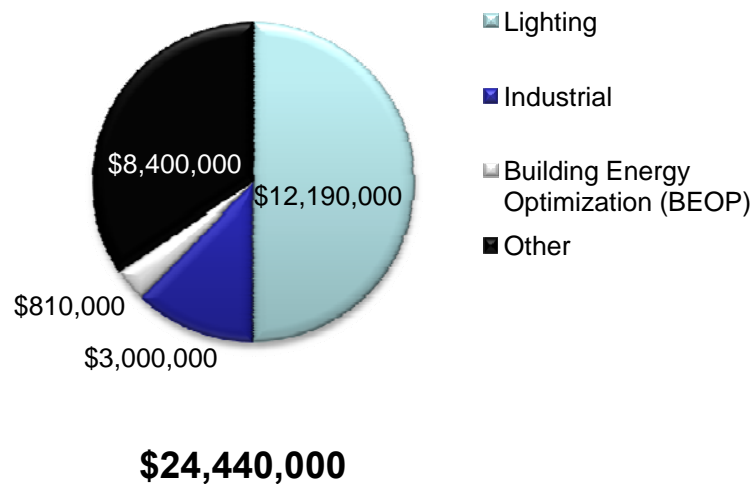
### Program Deliverables

- Building & Operations Survey
- Energy Baseline & Diagnostics (optional ENERGY STAR™ benchmarking)
- Energy diagnostics & report
- Project implementation assistance
- Six-Month Savings Report
- Twelve-Month Savings Report
- Savings incentives

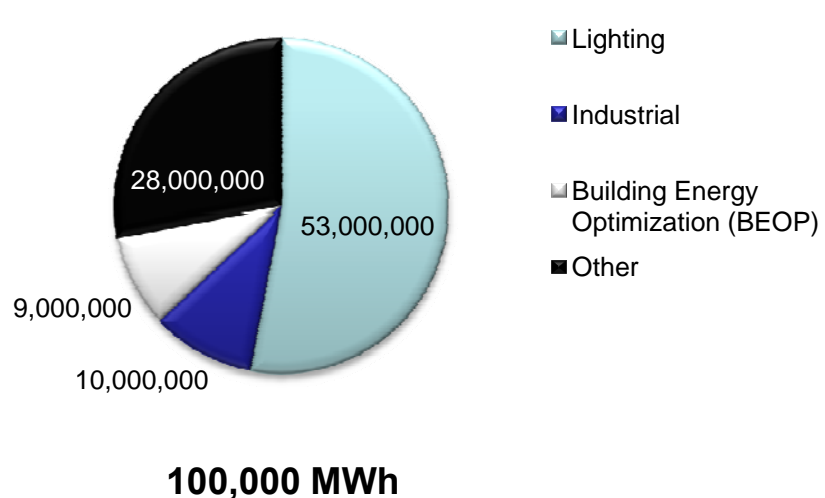


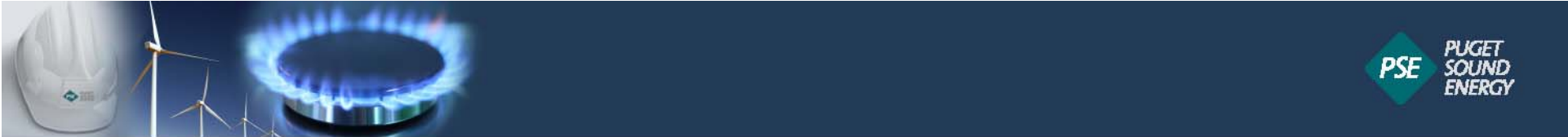
# C/I Electric Retrofit In-House Programs

## In-House Program Custom Grant Incentives



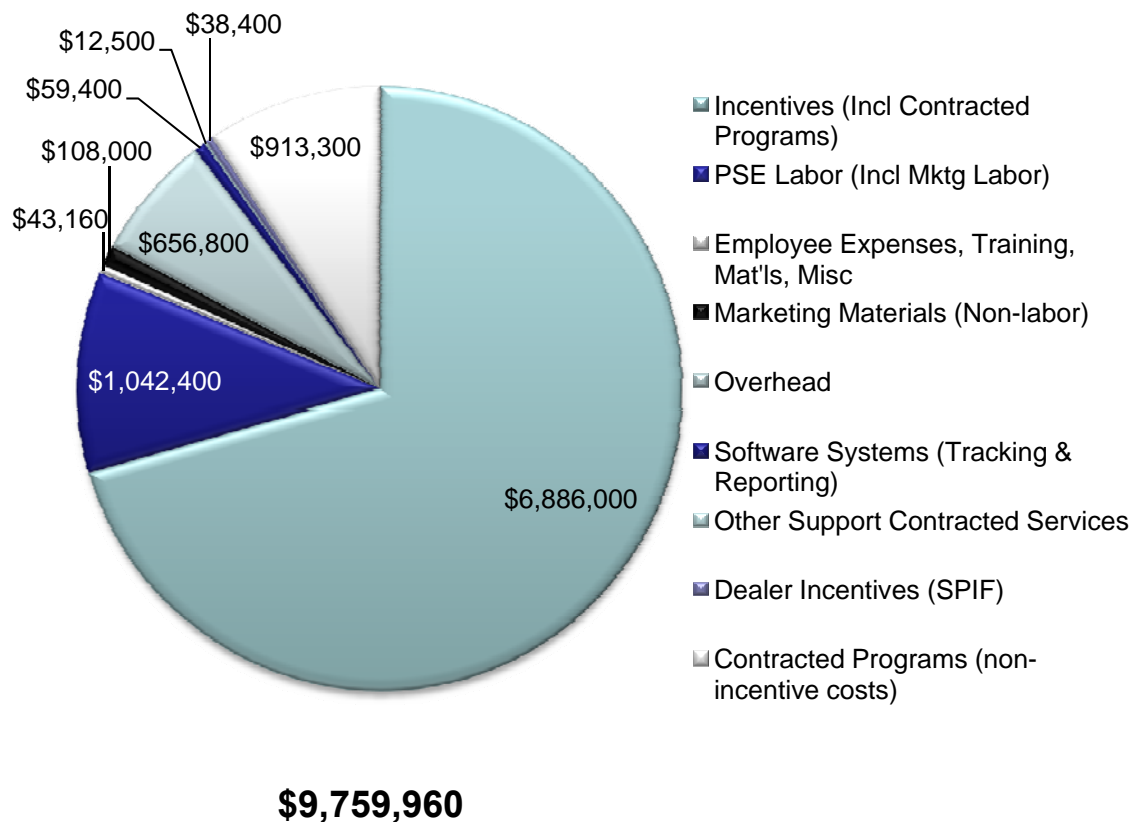
## In-House Program Custom Grant Savings (kWh)





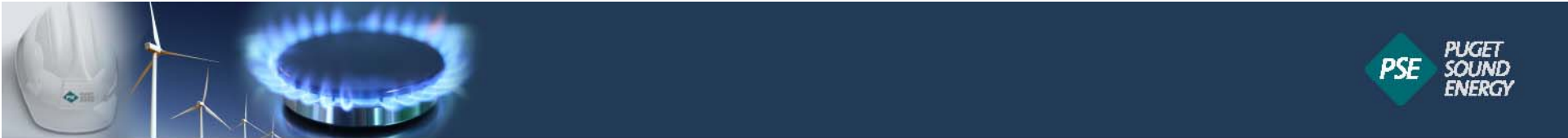
# E262 Commercial Rebates

**E262 Commercial Rebates Program Budget**



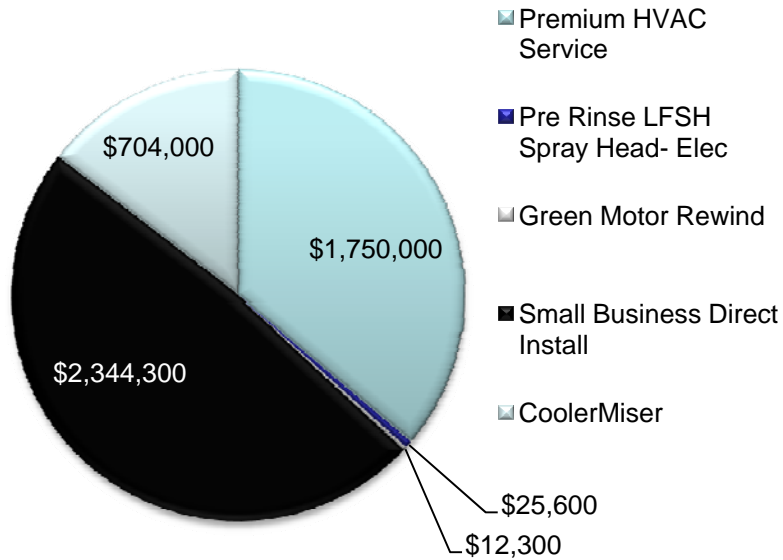
- All prescriptive rebate offerings continue
- LED traffic signals (E257) absorbed into E262
- Increased efforts in the following sectors:
  - LED Lighting
  - Commercial Kitchen Equipment
  - Hospitality & Lodging
- Contracted programs support the following measures:
  - Premium HVAC Service
  - Commercial Lighting Point-of-Sale Incentives
  - Low flow pre-rinse spray heads and aerators
  - Green motor rewinds
  - CoolerMiser direct install
  - Small Business Direct Install Program

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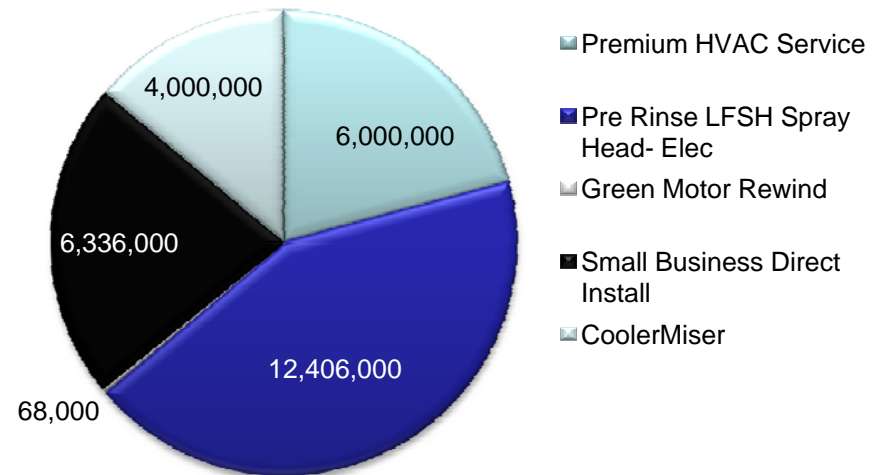
# Commercial Rebates Contracted Programs

**E262 Commercial Rebates Contracted Programs**



**\$4,836,200**  
**(50% of Program Budget)**

**E262 Commercial Rebates Contracted Programs**



**28,810 MWh**

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# Small Business Direct Install Program

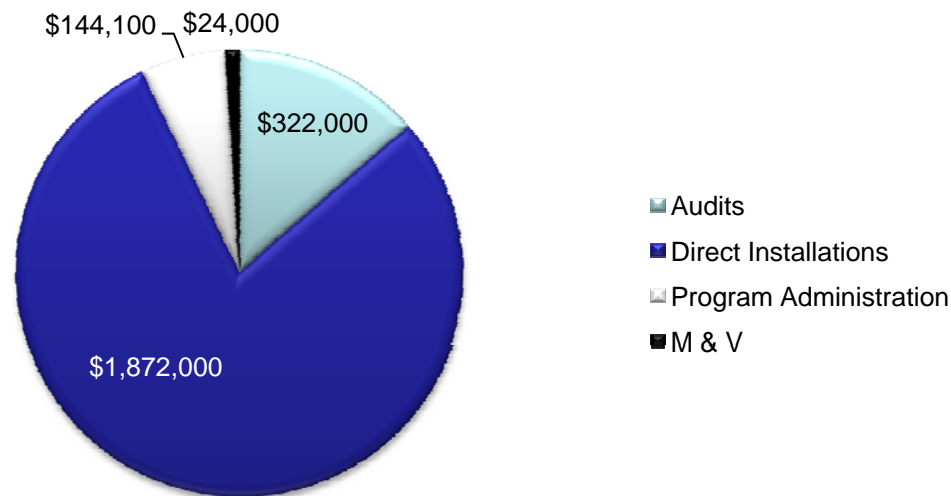
- **Targets small business customers  $\leq 50\text{kW}$**
- **Provides a no-cost energy audit**
  - Identifies operational and retrofit measures
- **Direct installation of common measures**
  - T12 to T8 linear fluorescent lighting
  - HVAC tune-ups
  - CFLs
  - Refrigeration measures
  - Hand washing sink aerators
  - Pre-rinse spray heads
  - Weatherization seals
- **Many measures installed at no cost to customer**
- **Customer contribution required on more expensive improvements**





# Small Business Direct Install (cont.)

**Small Business Direct Install  
Contract Costs**



**\$2,362,100 Contract Amount**

**6.3 million kWh savings**

Also 22,000 therms at \$17,800 (< 1% of contract cost)

Target of 4,000 audits & 2,800 installations impacting lighting, air conditioning, water heating, refrigeration & space heat

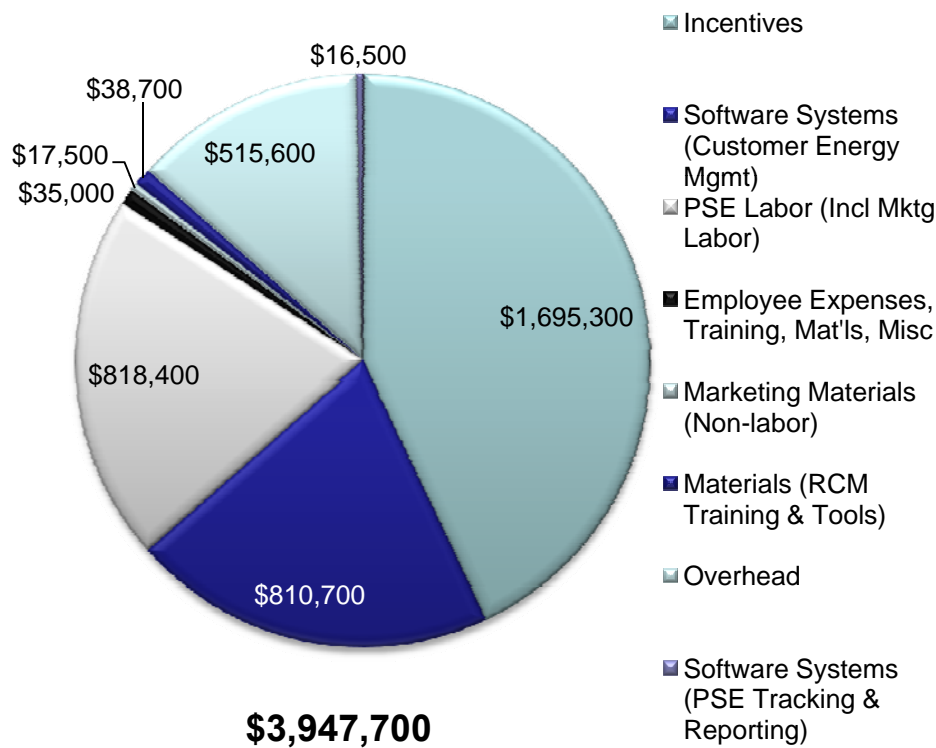
- Provides cost-effective Energy Audits to small business customers
- Targets 40,000 customers “too small” for effective Custom Grant participation
- Utilizes many RTF deemed savings measures for savings quantification
- Leverages community-level relationships to “warm the door” for implementation team
- Drives future program participation





# E253 Resource Conservation Manager

**E253 RCM Program Budget**



**Indirect Incentives (current values)**

Value-Added Services	Term	Value
Resource Accounting Software	3 yrs	\$ 7,500
Utility Manager Database Setup	1 yr	\$600
Software Maintenance & Technical Support	2 yrs	\$ 2,800
Historical PSE Billing Data	1 yr	\$ 300
Monthly Data Downloads	3 yrs	\$ 1,080
Annual Savings Analysis	3 yrs	\$ 360
Energy Interval Services	3 yrs	\$ 18,000
Energy Center – Online Materials	3 yrs	\$ 840
Three for Free – Technical Audits	1 yr	\$ 1,420
RCM Training Series	3 yrs	\$ 800
<b>Total (per customer)</b>		<b>\$ 22,800</b>



## E255 Small Business Lighting

Customer Incentives	\$ 11,027,500
PSE Labor (Incl Mktg)	\$ 1,021,000
Other Prog Admin Costs	\$ 53,160
Overhead	\$ 643,200
Tracking & Reporting Software	\$ 136,500
<b>Total</b>	<b>\$ 12,881,360</b>

**2012-2013 Savings: 40,100 MWh**

- Increased emphasis on comprehensive projects, including:
  - Lighting controls
  - Exterior lighting
  - High-efficiency T8
  - LED



## E251 C/I New Construction

Customer Incentives	\$ 3,500,000
PSE Labor (Incl Mktg)	\$ 474,200
Other Prog Admin Costs	\$ 30,940
Overhead	\$ 298,800
Contracted Services Costs	\$ 100,500
<b>Total</b>	<b>\$ 4,404,440</b>

**2012-2013 Savings: 7,000 MWh**

- Whole Building Prescriptive Approach eliminated (based on WSEC 2006 Edition)
- Funding for up to 100% of incremental measure cost where cost-effective
- Increased emphasis on commissioning

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## E261 Energy Efficient Technology Evaluation

PSE Labor	\$ 9,000
Other Expenses	\$ 51,400
<b>Total</b>	<b>\$ 60,400</b>

- Identify new technologies that are available and suitable for C/I programs.
- Monitor progress of technologies.
- Gain confidence in energy analysis & savings.
- Not intended for basic research or product development.



## E258 Large Power User Self-Directed

Customer Incentives	\$ 9,240,000
Market Transformation (NEEA deduct)	\$ 1,462,800
Program Admin.	\$ 1,097,100
<b>Total</b>	<b>\$ 11,799,900</b>

- Budget & savings per August 16, 2011 Schedule 258 filing.

**2012-2013 Savings: 33,000 MWh**

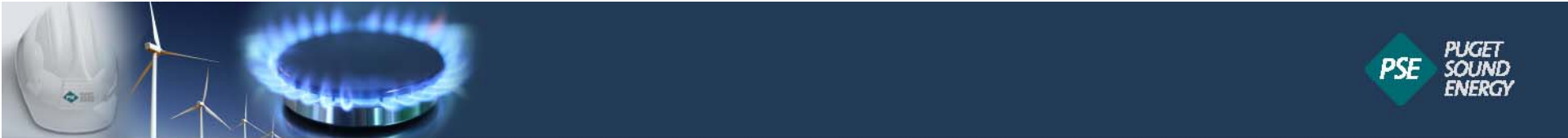


# Business Energy Management 2012-2013 Natural Gas Efficiency Programs

- **G205 C/I Retrofit**
- **G208 Resource Conservation Manager**
- **G262 Commercial Rebates**
- **G251 C/I New Construction**
- **G261 Energy Efficient Technology Evaluation**

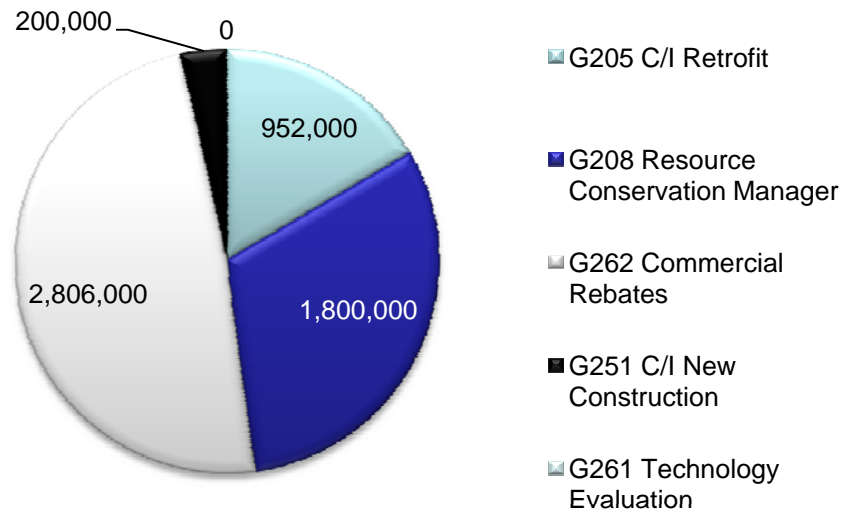


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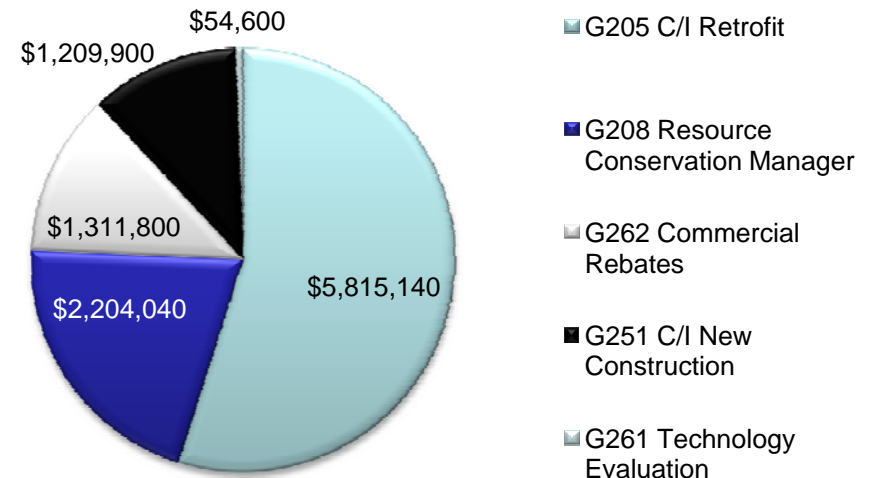
# Business Energy Management 2012-2013 Natural Gas Efficiency Programs

**C/I Natural Gas Efficiency Programs  
Savings (therms)**



**5,758,000 therms**

**C/I Natural Gas Efficiency Programs  
Budget**

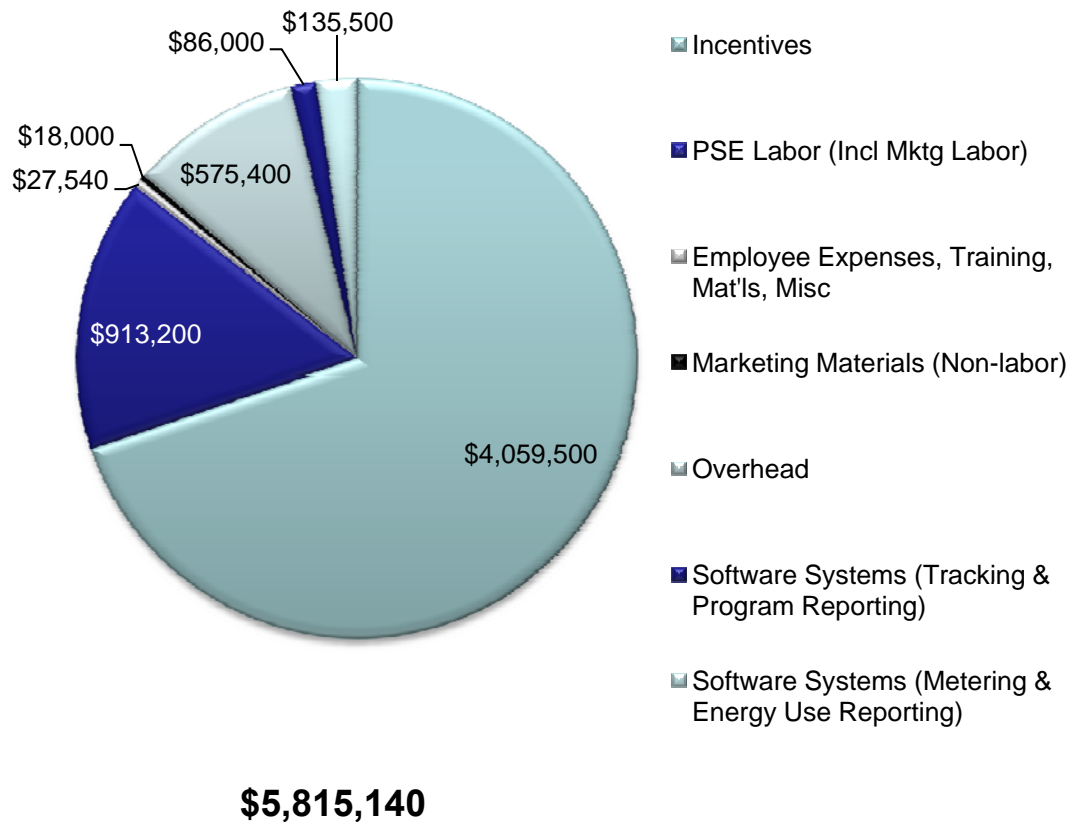


**\$10,595,480**



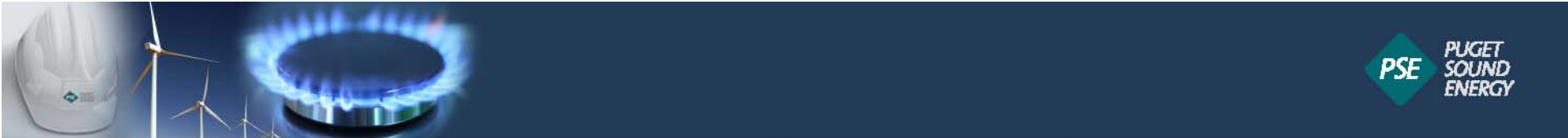
# G205 C/I Natural Gas Retrofit

**C/I Natural Gas Retrofit Programs Budget**



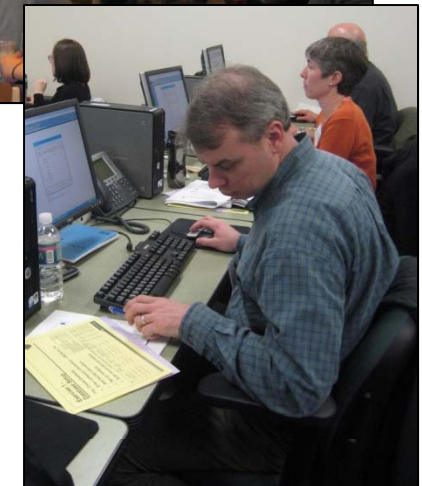
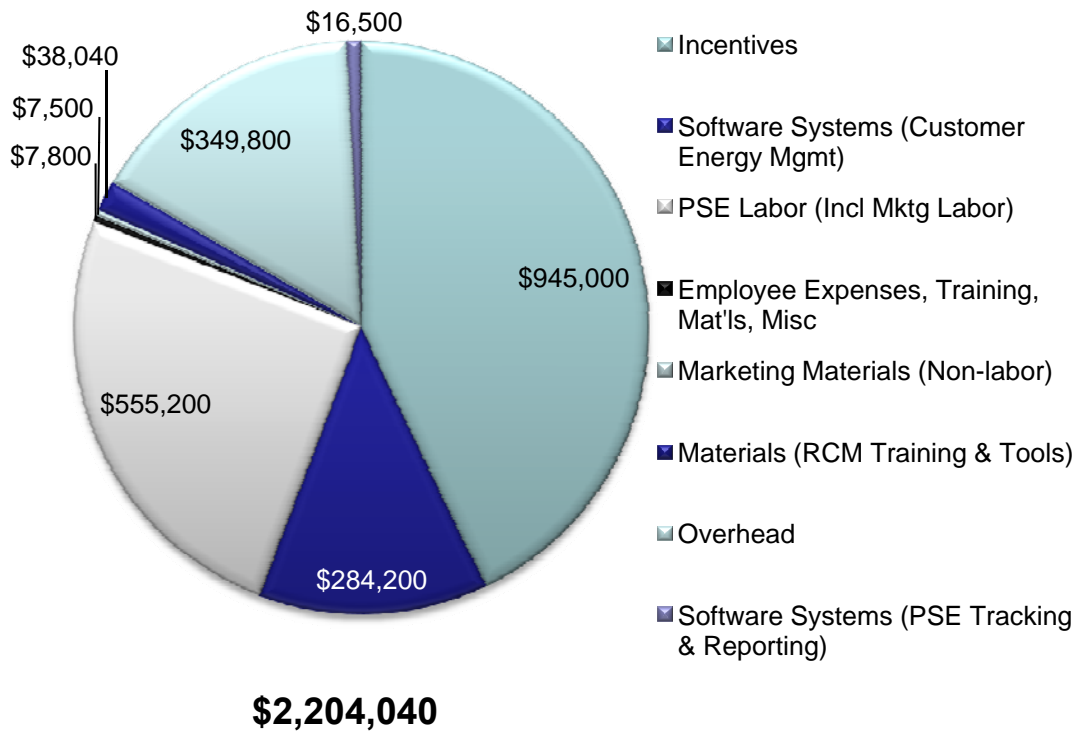
- EMEs implementing 800+ electric custom grants also implement 100+ natural gas measures
- Labor requirements greater for natural gas efficiency projects (analysis & verification more complex)





# G208 Resource Conservation Manager

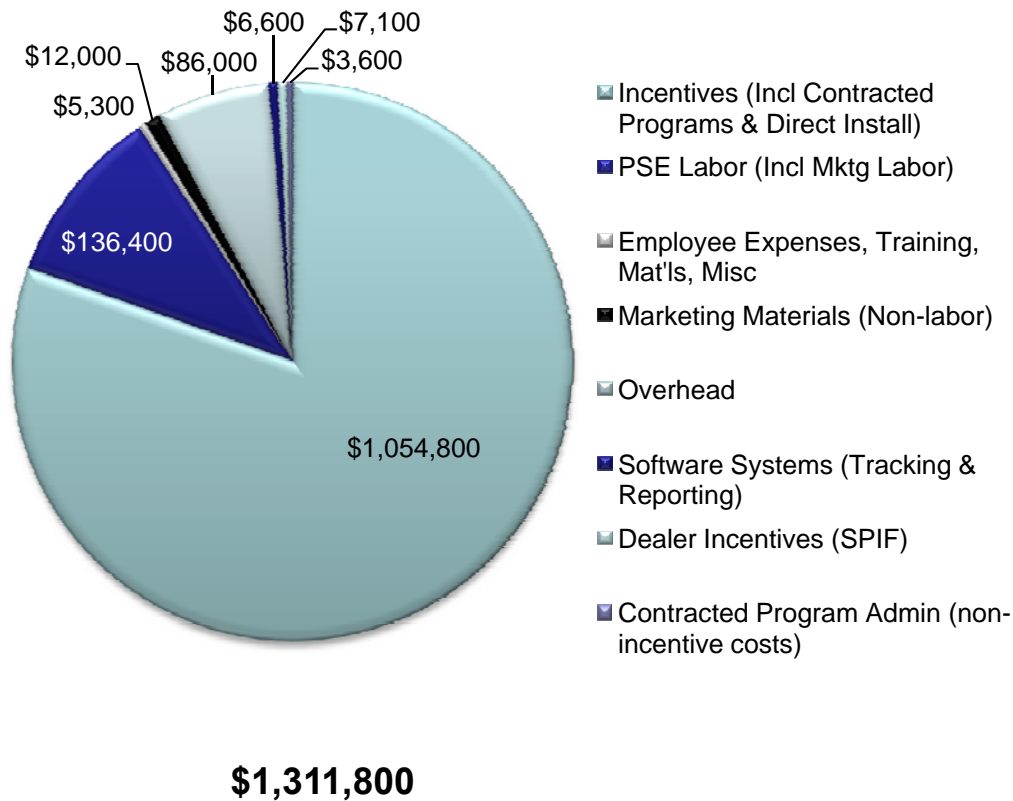
**G208 RCM Program Budget**

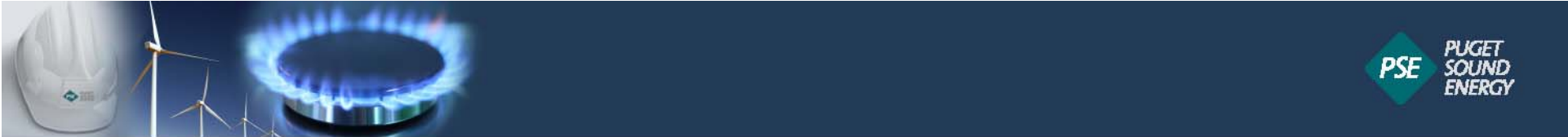


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# G262 Commercial Rebates

**G262 Commercial Rebates Program Budget**





# G251 C/I Natural Gas New Construction

Customer Incentives	\$ 640,000
PSE Labor (Incl Mktg)	\$ 315,400
Other Prog Admin Costs	\$ 27,200
Overhead	\$ 198,800
Contracted Services Costs	\$ 28,500
<b>Total</b>	<b>\$ 1,209,900</b>

- Whole Building Prescriptive Approach eliminated (based on WSEC 2006 Edition)
- Funding for up to 100% of incremental measure cost where cost-effective

**2012-2013 Savings: 200,000 therms**

# G261 Energy Efficient Technology Evaluation

PSE Labor	\$ 9,000
Other Expenses	\$ 45,600
<b>Total</b>	<b>\$ 54,600</b>

- Identify new technologies that are available and suitable for C/I programs.
- Monitor progress of technologies.
- Gain confidence in energy analysis & savings
- Not intended for basic research or product development



## **2012-2013 Draft Budgets** **Regional Programs**



**Dan Anderson,**  
**Bob Stolarski**

August 25, 2011 CRAG Meeting



# Northwest Energy Efficiency Alliance

- Budget based on contracted amount, less Schedule 258's 10 percent contribution.
- “Deemed” savings were based on 75 percent of current NEEA net market effect estimates, due to actual reporting lag.
- Working with NEEA to establish consistent reporting across utilities.



## T&D and Generation Facilities

- 12 Substations
  - Conservation Voltage Regulation (CVR) and
  - Phase Balancing
- 8 Generation Plants
  - Capital Projects - mainly lighting
- Incremental, non-capital costs charged to Rider
  - \$1.63 million capital investment
  - Up to \$623,000 in Rider budget





# 2012-2013 Draft Budgets and Program Details

## Portfolio Support



**Grant Ringel**

August 25, 2011 CRAG Meeting



# Portfolio Support

- *Customer Engagement & Education*
  - Energy Advisors
    - Staffing at 12 positions in 2011 (no change in 2012-13)
      - 8 in Bellevue EE central office
      - 4 in Regional offices
        - Kitsap, Whatcom, Thurston, Whidbey Island
        - 110k+ phone inquiries, events, walk-in customers
  - Events
    - Maintaining current events level (@200)
    - Adding van for display and event equipment handling storage and transportation



# Portfolio Support

- *Customer Engagement & Education (continued)*
  - Brochures
    - Multi-program needs
    - Paper and on-line versions
  - Education
    - Continue relationship with Hopelink, Independent Colleges of Washington
    - Target English as second language households



# Portfolio Support

- *Web Experience*
  - Mainstreaming Green
    - Web Development
      - Reduced focus as tool development phasing down
      - Second phase tools
        - Dashboards, personalized rebates, coupons
    - Web Content, Maintenance, Analytics
      - More focus as tools utilized, updated
      - Create more original content with new media and video applications.
      - Analytics capability ramping up



# Portfolio Support

- *Web Experience*

*(continued)*

- Online Tools

- Aclara
    - No significant budget or tools changes

- E-News and E-blasts

- Continue tailored e-mail newsletters and program alerts to specific homeowners, business owners, homebuilders, and contractors/trade allies

- Market Integration

- Same FTE count



## Portfolio Support

- *Energy Efficient Communities*
  - Continue ARRA efficiency coordination
  - Further community channel development to increase program participation
- *Trade Ally Support*
  - Communication with and financial support for critical program allies





# Portfolio Support

- *Marketing Research*
  - *No significant program changes*
  - *Understand customer perceptions and barriers to program participation*
  - *Increased integration into marketing and program planning*



# 2012-2013 Draft Budgets & Program Details

## Research & Compliance



**Bob Stolarski**

August 25, 2011 CRAG Meeting



## Conservation Supply Curves

- Develops electric & gas conservation potential assessments for IRP
  - Used as guidance for EE target setting and program planning
  - Basis for I-937 compliance
- Similar scope to 2010-2011
- Total budget \$770,000
  - Consultant to develop achievable technical potentials (Cadmus Group)
  - Internal PSE labor (1.5 FTE from Resource Planning group)



## Conservation Strategic Planning

- Provides research & analysis to support IRP, regulatory filings, other strategic initiatives for EE
- New line item for 2012-13
  - Previously combined with Market Research
- Total budget \$683,000
  - Consultants to update customer characteristics and end use equipment saturations used in conservation potential assessments
  - Internal PSE labor (1.5 FTE from EES)



# Evaluation

- EM&V Framework & Protocols completed – Thank You!
- Proposed 4-yr Plan – Evaluation cycle covering all programs and spending
- Added \$1.1 million - Condition requires spending of 1-3%
  - 2012-13 Evaluation budgets near 2% of program costs
- Evaluation Report Response process now standard practice



# Program Support

- Tracks EES/CEM program staff support labor
- Nominal 2.2 FTEs support:
  - Biennial Program Planning
  - Program-wide RFP management
  - Targeted BEM / REM program support needs
  - Regional (RTF, NWRG, NEEA) support needs
  - Programmatic M&V development/implementation support
  - Benchmarking, Best Practices & Continuous Improvement
  - Trade Ally Support
- 2012-2013 Budget (2-yr) projection: \$890,000





# 2012-2013 Draft Budgets & Program Details

## Other Electric Programs



**Bob Stolarski**

August 25, 2011 CRAG Meeting



# Customer Small-Scale Renewables

- Net Metering
  - Adding one FTE to support continued ramp-up of customer-initiated small-scale renewable projects.
  
- Renewable Energy Education
  - Scaling back labor and demonstration projects (phasing out by 2013).



## Demand Response

- **C/I Pilot completed spring 2011; 25 customers**
  - Impact Evaluation – 5 MW winter & summer
- **Completing Residential DR Pilot; 500+ customers**
  - Impact Evaluation underway – 0.5 MW
- **New C/I Demand Response Program**
  - IRP identified cost-effective peak resource potential
  - \$2.5 million budget - Actual spending depends on responses to RFP's
  - Commercial program to deliver up to 20 MW by 2012
  - 2012-13 (2-yr) budget projection: \$2.8 million



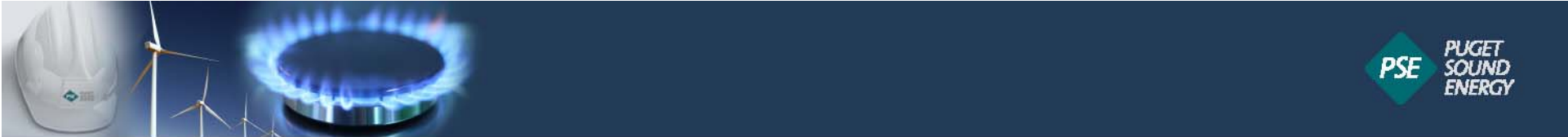
## Navigating Exhibit 1 in Excel



**Andy Hemstreet**

*Program Manager, Energy Efficiency Services*

August 25, 2011 CRAG Meeting



# Navigating the Exhibit 1 Workbook

- Exhibit 1 focuses on 2012 -2013 program budget and savings
- Several Improvements made since 2011 ACP
  - A single workbook, enabling users to trace a budget amount from its macro-to-micro form
  - Hyperlinks to aid in navigation


*Demonstration using Excel 2007*



# Navigating the Exhibit 1 Workbook

After launching the file:

- Page tabs are numbered to correspond to the 2012-2013 BCP binder pages
- Tabs are color coded to indicate detail pages associated with a particular budget grouping
  - For instance, Single Family Existing, Portfolio Support/Customer Engagement & Education

 Start on “1) Portfolio View”

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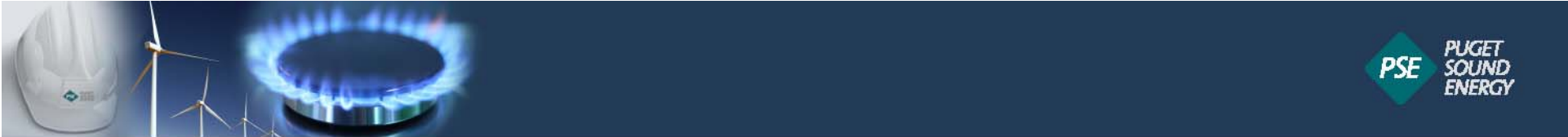
# Portfolio View

Column Headers are Hyperlinks...

EES Conservation Rider/Tracker Savings Goals and Budgets, 2012 - 2013						
Last revised: 8/22/11 3:36 PM						
Schedule Nos.	Program Name	<a href="#">MWH Savings</a>	<a href="#">Electric Rider Budget</a>	<a href="#">Therm Savings</a>	<a href="#">Gas Tracker Budget</a>	Total Tariff Budget
Residential Energy Management						

...that will take you to the Sector Views, tabs 2) *Electric* and 3) *Gas*

**WHY HYPERLINKS? THERE ARE OVER 80 TABS!**



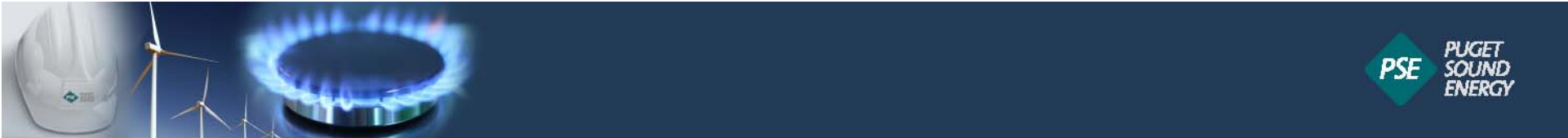
# Sector View

This Hyperlink will return you to the Portfolio view

Electric Programs		Last revised
		<a href="#">Return to portfolio view</a>
Schedule	Description	Order Number (Click on the order# below to jump to the detail page)
Residential Energy Management		
E201	Low Income Weatherization TE	<a href="#">18230611</a>
E214	HomePrint - Electric	<a href="#">18230625</a>
E214	SF Existing Water Heat - Electric	<a href="#">18230626</a>
E214	SF Existing Wx - Electric	<a href="#">18230627</a>
E214	SF Existing Space Heat - Electric	<a href="#">18230628</a>
E214	Refrigerator Replacement Program	<a href="#">18230409</a>
E214	Home Appliances	<a href="#">18230432</a>
E214	Residential Showerheads Elect	<a href="#">18230435</a>

Order numbers are Hyperlinks...

...that will take you to the detail tabs 3) through 53)



# Sector View -- BEM

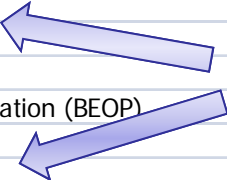
<b>Order Number: 18230711</b>
<b>Conservation Incentives</b>
<a href="#">In-House Programs</a>
<a href="#">Contracted Programs</a>
<b>Labor (Incl Mgr, Dir, VP, and Budget &amp; Admin Assessments)</b>
EES Staff, Maj Accts, CSY Support
Marketing
<b>Employee Expenses</b>

*This Hyperlink will send you to tab no. 54 or no. 55, BEM savings and incentives.*



<b>Annual Energy Savings (kWh)</b>
<a href="#">In-House Programs</a>
Lighting
Industrial
Building Energy Optimization (BEOP)
Other
<a href="#">Contracted Programs</a>
Energy Smart Grocer (PECI)

*These Hyperlinks will send you to tab no. 54 or no. 55, BEM savings and incentives.*





# Detail View

Each detail page is formatted (*almost!*) the same.

This Hyperlink will return you to the Sector (Electric or Gas) view

There is a separate 2012 Portfolio view that pulls values from the 2012 line in each budget detail page.

<a href="#">Back to Rollup</a>				
Tariff	E214			
Order Number	18230628			
Order Name	SF Existing Space Heat - Electric			2011
Program Manager				2012
	Dennis Rominger			2013
	Dealer Channel			2012-13 TOTAL
	PROVIDE BUDGET DETAILS		FILL THESE TWO COLUMNS	
CURRENT	BUDGET			
2011	Budget Category	2012	2013	12-13 Total

Each page contains both 2012 and 2013 values.

Every page contains a hyperlink for easier navigation



## 2011 Initiative Status Summaries



**Applicable conditions:  
K(3)(a)(i), K(3)(d), K(6)(e), K(6)(g)**

**Bob,  
Bill**

August 25, 2011 CRAG Meeting



# **INDEPENDENT THIRD PARTY REVIEW OF PSE'S 2010-11 ELECTRIC CONSERVATION ENERGY SAVINGS – *Status***



**Applicable condition: K(6)(g)**

**Bill Hopkins**

*Manager, EES Strategic Planning & Research*

**David Nightingale**

*Senior Regulatory Engineer*



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# Third Party Review Project Status

- Project file assessment
  - Over 300 individual files reviewed
  - Key program implementation processes studied
  - Responses to follow-up questions nearly complete
- Report to CRAG in September
  - Review of 2010 savings based on tracking system and sample project files
  - 2010 cost-effectiveness & avoided cost review
  - EM&V review
  - Recommendations for further in-depth review
- 2011 semi-annual results review to start soon

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## Wrap-up and Next Steps



Dan Anderson

August 25, 2011 CRAG Meeting



## Wrap-up

- Unresolved questions?
- Meeting recap
- Follow up items and their owners
- Quality, value of meeting?
- The full versions of draft budget and program details will be made available on the PSE CRS website on September 1.



# Next Meeting

- September 29
  - **Factoria** (we're back to their office, since this is the *fourth* Thursday of the month!)
  - Draft topics:
    - Provide October 1 Tariff revision drafts
    - Discuss questions arising from CRAG review of draft budget and program details
    - Review 2012 calendar and set CRAG meeting dates



# Handouts

- EES portfolio view of 2012-2013 budgets
- Detail pages for Residential Lighting, C/I Retrofit ~~xxx~~ and ~~xxx~~ Mainstreaming Green programs
- 2011 EES Semi-Annual Report
- Draft Exhibit 3, Program Details



# Attendees

## Facilitator

Dune Ives

## CRAG Members

Danielle Dixon (via conf. call)  
Chuck Eberdt (via conf. call)  
Stefanie Johnson (possible conf. call)  
Mary Kimball  
David Nightingale  
Paula Pyron (via conf. call)  
Irion Sanger

## Guests

## PSE

Cal Shirley  
Janet Kavran  
Grant Ringel  
Bob Stolarski  
Dan Anderson  
Eric Englert  
Bill Hopkins  
David Landers  
Jeff Tripp  
Andy Hemstreet



# September 29, 2011 CRAG Meeting

## Summary Notes

**Contents**

Contents ..... 2  
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Meeting Topics ..... 4  
Discussion Highlights and Notes ..... 4  
    General Comments..... 4  
    2012-2013 Tariff Schedule Revision Discussion ..... 4  
Parking Lot & Questions ..... 10  
There were no issues captured in the parking lot..... 10  
Agreements, Decisions ..... 10  
EES Action Items..... 11

## Attendees

### **Facilitator**

Dune Ives

### **CRAG**

Danielle Dixon

Tom Eckman

Stefanie Johnson

Mary Kimball (conference call, PM)

Chuck Murray

Vanda Novak (delegate for David Nightingale)

Paula Pyron (conference call)

Irion Sanger

### **PSE**

Dan Anderson

Eric Englert

Syd France

Andy Hemstreet

Bill Hopkins

David Landers

Bob Stolarski

Jeff Tripp

Bobbi Wilhelm

### **Guests**

Bing Tso, SBW Consulting, Inc.

Karen Maoz, KEMA

## Meeting Topics

1. Review agenda
2. Review ground rules and standing agenda items
3. Discussion of 2012-2013 Tariff Schedule revisions
4. In-depth discussion on avoided costs calculations and cost-effectiveness tests
5. Review revisions to September 1 CRAG documentation presentation
6. Discuss savings for NEEA and Home Energy Reports
7. Review first interim third-party savings review report
8. Wrap-up and next steps

## Discussion Highlights and Notes

*(Only the topics above in which there was discussion. All questions or items that were captured in the “Parking Lot” are noted in the applicable sections below. Specific points are available in the accompanying PowerPoint slide PDF. SBW’s presentation, “Independent Third-Party Review, Puget Sound Energy Electric Conservation Energy Savings, 2010 INTERIM REPORT” is also provided separately. Any resultant action items are captured below.)*

### General Comments

Guests and David Nightingale’s delegate, Vanda Novak were introduced. The safety moment was a discussion of natural gas safety tips. The assembled then reviewed CRAG-related activities that occurred since the last meeting.

### 2012-2013 Tariff Schedule Revision Discussion

Andy provided a review of WAC rule relative to tariff filings and provided highlights of new, cancelled and revised Schedules. It was agreed by the attendees that, although condition K(8)(f) indicates a deliverable date of October 1 (Saturday), an October 3 presentation is acceptable. Only those Schedules that are going to be revised will be provided, in Word document form, on the CRS website (commonly used for large files provided to the CRAG). The whole Schedule will be provided for context—not just the specific tariff sheet being revised<sup>1</sup>. Of the cancelled Schedules, the specific *services* are not being cancelled; they’re either being portioned out to different sectors or included in different programs.

---

<sup>1</sup> In the November 1 filing, however, only the revised tariff sheet will be provided. The filed documents will not be “mark-up” versions. For instance, in Schedule 83, there is a potential that only 83, 83-a and 83-e are filed.

Relative to a new Schedule; 292 (Generation and Distribution Efficiencies), there was discussion relative to the term “transmission” and the implications for EES. There is a docket (UE-111701) that is dealing with transmission definitions. We may want to include language that addresses feeders & substations—a new definition may exclude those and affect efficiency plans.

### **Avoided Costs Discussion**

Bill Hopkins led a discussion that outlined the details of how PSE bases its avoided cost calculation on Council methodology. Referencing the September 29 CRAG meeting slides on the topic (which provide a fair amount of detail); there was discussion on the timeframe used for establishing the amount of energy savings to apply to peak capacity value. PSE applied end use load shapes over the peak December hours for a specific calendar year (2005) in order to determine the proportion of annual energy savings that occurs during peak periods. Several other factors were also used, including net present value calculations, measure lives, etc. to determine the percent of savings over a period of hours. 2005 was year used because that was the latest that had the applicable load shape data and would align with weekday data when overlaid. This was the data used to extrapolate the 2011 IRP. Tom Eckman noted that the Council would also like to have more updated data, but such data would come at a very high cost.

In the cost-effectiveness discussion, there was a question to Tom about whether present value calculations should discount to the beginning of year 1 or the end of year 1. Tom indicated that the Council discounts to the beginning of year 1 to maintain historical consistency. Whether PV is calculated back to the beginning of year one or the end of year one is acceptable, as long as the calculation is consistently applied. PSE will be discounting to beginning of year 1 to be consistent with the Council’s methodology.

PSE indicated that it is generally calculating TRC cost-effectiveness at the measure level, but had to make an exception for C/I programs. For calculating cost effectiveness of planned C/I programs, the C-E analysis was based on “typical” program measure mix and corresponding load shapes and measure lives, since there was inadequate load shape information about the mix of measures within programs. This method was used only for the 2012-2013 filing looking forward for estimating CE and applies to planning only, not reporting actuals. More precise historical data will be available for reporting.

A question, “Were there any programs that were deemed not cost-effective that WOULD have been cost-effective if Non-energy Benefits (NEBs) had been factored in?” was asked. None of the gas programs that were cancelled for 2012-2013 would have been cost-effective even with NEBs factored in; the TRC was so low. In fact, there are not any quantifiable NEBs that apply to most of those measures.

PSE only used quantifiable non-energy benefits (NEBS) that were conclusively verifiable, which consisted of the structural repairs in the Low Income Weatherization program.

It was decided to exclude the use of NEBs in calculating the TRC for other programs until a protocol for calculating and applying them is agreed upon. Agreement on the protocol for NEBs is needed to avoid difficult audit questions, such as “how did you determine that this was a benefit?”, and “where is your proof that this is a NEB?” etc. The RTF is working on a set of rules that outline the use of NEBs which PSE and the CRAG may consider. PSE indicated that it will continue to be clear in its CE calculations relative to the consideration of incorporating NEBs.

The 10 percent adder requirement was also discussed and clarified. The adder is above and beyond quantifiable NEBs, or environmental costs. The 10 percent adder is only used for the electric TRC CE test.

The Low Income Weatherization TRC exemption (ed.—LIW program TRC can be 0.667, as indicated in Schedule 83) was also discussed at this point during the meeting. It was clarified that this provision applies to the overall program TRC without considering NEBs. PSE considers NEBs to be strict application of economic theory; as a “cost”, we apply the price that a customer pays for installation of a CO detector, insulation, door sweeps, etc., as indicative of the value of the benefits that customer receives. We do not try to monetize the price of a customer’s increased happiness or lost days from work, decreased hospital costs, etc. Environmental costs are included in the avoided cost calculations.

Although PSE calculates the TRC for each measure, it is only required to pass the TRC at the portfolio level. It is understood that there may be measures within a program that are slightly less than a 1.0 benefit/cost (B/C) ratio, but the entire package of measures for the program will be cost-effective.

The methodologies for calculating all cost effectiveness tests are consistent with the Power Council (for TRC) or the National Action Plan for Energy Efficiency best practices manual (all other tests). The 2010 Settlement Term conditions require PSE to use a net-to-gross ratio of 1.0, so gross savings are used in the calculations.

The two new CE tests; Participant Cost Test (PCT) and Ratepayer Impact Measure (RIM) require a forecast of retail rates, which is inherently very uncertain because it requires guessing on many assumptions. The PCT requires a 30-year rate forecast, to match the maximum measure life used to calculate cost-effectiveness. The RIM test uses a three-year rate forecast, which matches the assumed period between rate cases, when savings from 2012-13 programs would result in lost revenues (rates are theoretically trued up to account for 2012-13 program savings after that). A question was asked “‘revenue requirements per kWh’ or ‘rates’?” PSE calculated the average revenue requirement per kWh.

The Standard Practice Manual is silent on the use of NEBs for the PCT. Bobbi Wilhelm contacted the SPM author, who indicated that “...it would probably be a good idea to include them”.

The rate forecast drives the entire outcome of the PCT and RIM tests, which for all intents and purposes, renders the tests very difficult to interpret. As an indicator of program design, they may be useful, within the limitations of the rate forecast. Otherwise, they are not very beneficial. They do not inform customer decisions as to whether an efficiency measure should be purchased or not, nor are they truly a measure of the impact on utility customers. The tests do not require a significant amount of time to perform (estimating the 30-year rate DOES require a significant amount of time for both the EES Evaluation Team and the PSE Rates department, however). They are, though, very inaccurate insofar as determining cost-effectiveness.

The group was unable to recall why these two tests were included in the 2010 Settlement Term conditions. Vanda agreed to review this issue with David Nightingale and Deborah Reynolds in-depth.

It was acknowledged that, pursuant to Condition K(10)(c), no further work was required by the CRAG to try and estimate the two new tests at the measure or program level, and it was inappropriate to evaluate measure and program-level cost-effectiveness.

### **Revisions to Contents of September 1 Presentation Package**

Andy reviewed four minor changes to the program details (Exhibit 3—one change to the Introduction section’s table of Exhibits) and budget details (Exhibit 1—2012-only page, three changes. These, and any other revisions, will be reflected in the November 1 BCP filing. It was emphasized that all questions—especially significant ones—need to be provided to PSE before the November 1 filing. There was general discussion relative to a few REM savings questions that were pending from Public Counsel (ed.—questions received late Thursday, 9/29.)

### **Savings Targets, Relative to NEEA and Home Energy Reports**

Bob presented scenarios in which NEEA savings and savings from Home Energy Reports (HER) could be excluded from the 2012-2013 targets. One scenario involved filing a range of savings. Such a filing presents potential for interpretation of penalties and was generally agreed not the most optimal option. It was pointed out that even if the group decided to not claim saving for the HER program, PSE could still offer it, under the “10% without savings” grouping.

The attendees reviewed the concept of NEEA deemed savings, where (1) actual savings data isn’t available until well after PSE files its annual report—usually July, (2) any over-achievement by NEEA should not “help” PSE’s savings achievement and (3) any under-performance by NEEA should not penalize PSE’s savings achievement. In the current biennium, the NEEA savings figure is deemed (based on 75% of the NEEA initial savings estimate less programs not operated in PSE territory). . It was also mentioned that the State-wide working group agreed that there is a need for consistency.



There was general discuss as to the history of NEEA savings claims. It was generally agreed that utilities should not be held liable for circumstances beyond their control, and that the CRAG expectation was that PSE would file the NEEA savings as part of their target and claim the estimated amount.

It was pointed that as some point, the CRAG (ed.—as a whole) must decide whether to accept HER savings or not. This will have an impact on the savings target that PSE files on November 1. There is still an open question with the CRAG as to the issue of double-counting CFL savings, and lack of customer surveys. There is still a fair amount of uncertainty there. Jeff indicated that he is going to submit a proposal outlining the protocols that PSE will use to determine HER savings. PSE is confident of CRAG support after reviewing the proposal. Jeff will also provide a comprehensive list of HER questions/answers received to date early the first week of October. Two outstanding questions are related to the total cost of customer engagement and the distribution of savings by customer groups.

### **Third-party Review of 2010 Electric Savings**

Bing Tso from SBW presented summary information (ed.—contained in the first interim report, provided to the CRAG the week of September 26). CRAG participation in the sub-group and CRAG review throughout the process was discussed.

Bing summarized the presentation by indicating that PSE's savings claims for 2010 were accurate and its cost-effectiveness calculation methodology was in compliance with the Council's methodology. It was also acknowledged that most of the recommendations for improvement within the SBW report were already identified and are in the works by PSE management. It was agreed by the attendees that PSE has completed the first half of condition K(6)(g).

There was general discussion relative to the lack of site visits during this phase of the study. It was pointed out that the first phase SOW for SBW intentionally excluded site visits, but they are proposed for the detailed review phase of the study. SBW presented a proposal for conducting more detailed verification that included several different options for site visits. It was pointed out by sub-group members that site visits were not inexpensive, and should be utilized in a targeted fashion.

A question was raised relative to a comment in the interim report related to documentation of verification of third party processes. Bing clarified that SBW received some level of third party process documentation, but didn't completely understand that documentation. He indicated that SBW will clarify that in the second phase of the study.

Bing pointed out that RTF deemed savings numbers were not excluded from the evaluation. During the discussion of Evaluation planning and application, a question arose relative to the 34% figure noted in the presentation, page 20. Several CRAG members suggested that this percentage be expressed both with and without RTF-deemed savings included.

A discussion ensued, touching on the range of studies completed over the past biennium and studies currently underway. It was pointed out that the PSE evaluation staff helped influence the revised RTF CFL savings in 2009, in addition to other studies and observations conducted prior to the test period. Bing discussed the idea of an evaluation-consulting company determining “best practices” recommending additional evaluations, and the potential appearance that this could be “self-serving” (ed.’s words). Bing reassured the attendees that SBW is sensitive to that issue and is careful to avoid any potential conflict.

Bing affirmed that “best practices” does not necessarily correlate to the amount of money spent on evaluations. During the general discussing, it was pointed out that the RTF is not a “doer” of evaluations. Rather, it depends on utilities to perform them.

There was also general discussion relative to the percent of evaluations performed by PSE and the percentage planned for the upcoming biennia, which is substantially more. Karen Maoz presented the results of and led a discussion of PSE cost-effectiveness calculations methods, including generic data versus specific, line losses relative to busbar figures, avoided costs, etc.

Bing then went on to review the potential costs and strategies for the second phase of the study, which are enumerated in pages 31 to 37 of the SBW PowerPoint presentation. CRAG members voiced their requests for areas that they’d like SBW to focus on. These included (but aren’t limited to): measure installation verification, verification of third party processes, scaling the study appropriately, ensuring that the number of site visits are sufficient enough to inform results. Bing pointed out that any study performed would not be of the type to indicate true savings realization rates. Any study would not be one where SBW could say (paraphrasing) “is PSE 90% of claims or 94% of claims....” Rather, SBW would be able to say “there’s a problem with program X”. A point was made that we need clarification of the various study types as they relate to this review. The point of the “V” in EM&V is not just are the savings claims justified. Rather, it’s “was the number of widgets claimed actually installed?”

In a round-table discussion, members of the CRAG had an opportunity to express their thoughts about the findings and recommendations from the first phase of this project. Overall, the group was interested in seeing the follow-up work include on-site verification and that other proposed work on database linkages may be of a lesser priority. In particular, there was interest in seeing on-site verification of third-party-administered programs. Also, there was a request for SBW to reconsider including single-family on-site verification, which had been omitted due to cost considerations.

The group was also interested in seeing a more detailed sampling plan for the proposed site visits.

### **Wrap-up**

Handouts were provided to attendees.

The next CRAG meeting is October 20 in the PSE Building's Summit Conference Room (please note this location change).

### **Parking Lot & Questions**

There were no issues captured in the parking lot.

### **Agreements, Decisions**

- 1) The CRAG indicated that, since the Tariff Schedule revision draft deliverable date (October 1) is a Saturday, PSE would still be in compliance with the requirement of K(8)(f) if the drafts were provided by EOD Monday, October 3.
- 2) PSE will remove the word "Transmission" from the title of Schedule 292. PSE will use terms that are in or align with the Power Act.
- 3) Tom Eckman agreed with Bobbi Wilhelm's outline of PSE's avoided costs calculations methodology and indicated that PSE is consistent with the Council's methodology.
- 4) PSE made it clear that NEBs are NOT included in TRC calculations (except for documented repairs in Low Income), but are CONSIDERED. PSE agreed that we will inform the CRAG if a program (not measure) is being retired without NEBs factored into the decision.
- 5) PSE is not required to re-calculate the cost effectiveness of the portfolio when a new measure is added.
- 6) In general, a program's overall TRC B/C ratio must be above 1.0. It is understood and accepted that there may be measures within the program that are less than that.
- 7) The attendees agreed that the RIM and PCT tests were not beneficial as indicators of cost-effectiveness. It is likely that they should not be carried forward into the next biennium and no further work was required to estimate at a measure or program level.
- 8) Vanda Novak agreed to review the issues and conclusions discussed during the meeting with David Nightingale and Deborah Reynolds.
- 9) The avoided cost and cost-effectiveness discussion completes PSE's requirement under condition K(10)(b), and section E(10).

- 10) CRAG members will provide their questions about any aspect of the BCP prior to the November 1 filing. (It is understood that CRAG members may ask questions all the way up to the December open meeting, of course.)
- 11) There was general agreement among CRAG members that the Exhibit 1 budget detail workbook exceeded expectations relative to ease of use and level of information provided.
- 12) The CRAG agreed that NEEA savings should remain deemed until NEEA and the State-wide working group can develop a better/more timely/accurate system of reporting savings claims.
- 13) The issue of HER savings claims will be resolved by the next CRAG meeting on October 20.
- 14) SBW will propose various scenarios of their second phase of savings review, which will include some level of site visits.
- 15) SBW will clarify the components of the 34% figure noted on page 20 of their presentation.
- 16) PSE has completed and is in compliance with the first half of condition K(6)(g).

### **EES Action Items**

- Delete the word “Transmission” from the title of Schedule 292
- PSE will include detailed avoided costs and cost effectiveness test definitions in Exhibit 2 of the 2012-2013 BCP.
- PSE will attempt to locate the IRPAG PowerPoint slide that discusses the impact of lower costs on conservation.
- PSE will provide the CRAG with the carbon cost calculations from the IRP.
- PSE will clarify how customers are provided Residential showerheads and how PSE determines the appropriate classification of savings claim.
- PSE will investigate ways of evaluating and substantiating the veracity of the showerhead savings.
- PSE will provide a complete list of questions and answers received for HER.
- PSE will provide a PDF of SBW’s PowerPoint presentation in the October 3 email with the tariff revision links
- SBW will clarify the components of the 34% figure noted on page 20 of their presentation.
- The EES Evaluation team will investigate and provide a summary of studies performed within the latest cycle, including 2010-2011.
- SBW will construct a SOW for the second phase of the study that ensures that there is no overlap with the KEMA M&V, and/or the C/I retrofit evaluation site visits study. PSE will consider moving up the timing of the RCM evaluation in its four-year evaluation cycle.
- The CRAG and PSE need to provide feedback on SBW’s Third-party draft report by October 14.



# Conservation Resource Advisory Group

Energy Efficiency Services



September 29, 2011 CRAG Meeting





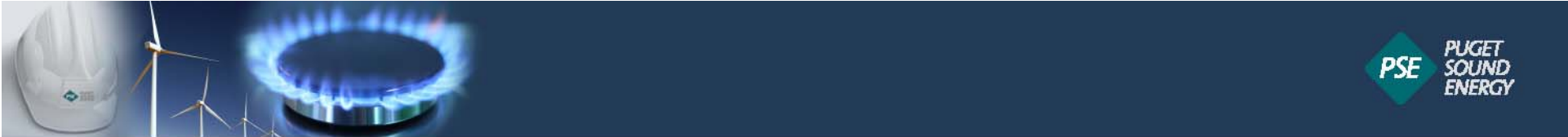
**Welcome!**



**Cal Shirley**

*Vice President, Energy Efficiency Services*

September 29, 2011 CRAG Meeting



# Today's Agenda

**Facilitator:** Dune Ives; President, Milepost Consulting

## Topic

Welcome!

Agenda review, ground rules, meeting objectives, compliance status, and 2012-2013 planning milestones

Safety moment

2012-2013 Draft Tariff Schedule Revisions

- Cancelled
- New
- Revised

Avoided costs calculations & Cost-Effectiveness Tests

2012-2013 Savings Target Setting

CRAG Follow-up:

*Program details, budget, savings questions or follow up*

Third-Party 2010 Electric Savings Review

Wrap-up

## Discussion Lead

**Cal Shirley**, Vice President, Energy Efficiency Services

**Dan Anderson**, Manager, EES Budget & Administration

## Undecided

**Andy Hemstreet**  
Program Manager, Compliance

**Bill Hopkins**, Manager, Strategic Planning & Market Research

**Bob Stolarski**, Director, Customer Energy Management

## Various

**Bill Hopkins**  
**Bing Tso**, SBW Consulting, Inc.  
**Karen Maoz**, KEMA

**Dan Anderson**





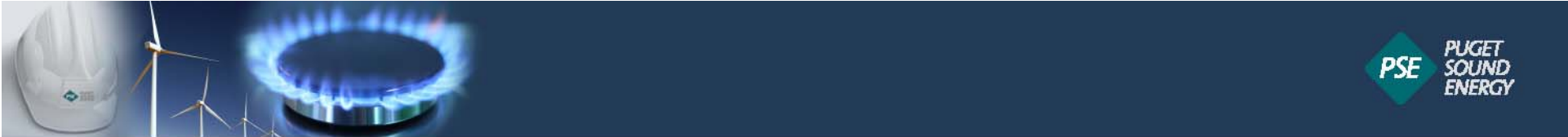
## Standing Agenda Items



**Dan Anderson**

*Manager, EES Budget & Administration*

September 29, 2011 CRAG Meeting



## Summary of CRAG-Related Activities Since August 25, 2011

### E-mails:

- Sept. 1: Provided updated CRAG meeting slide deck, correcting one page.
- Sept. 14: Provided prescriptive measures list, and EMI's Incentive-Setting Study.
- Sept. 22: Provided interim report on the Independent Third Party Review of PSE's 2010-2011 Electric Conservation Energy Savings .
- Oct. 3: *Home Energy Report savings proposal to be provided to the CRAG.*

### Meetings:

- Sept. 2: First meeting to discuss Home Energy Reports (H.E.R) program.
- Sept. 21: Second meeting to discuss H.E.R. (*next mtg. scheduled for Oct. 5*).

### UTC Events/Filings:

- Sept. 1: Condition K8(f) - provided draft Program and Budget details.
- Sept. 16: Open Mtg. – revised Schedule 258 allowed to become effective.



## Action Items Status Since August 25, 2011

### PSE Completed:

- Provided clarification as to the proportion of budget allocations to electric versus gas programs.
- Correct August 25 PPT slide #6, which indicated that the WUTC open meeting with Schedule 258 as a topic was August 26, when in fact, it was September 16.

### PSE Open:

- PSE will provide the Residential Demand Response evaluation when it is available.
- PSE will provide the CRAG with the evaluation results that indicate a need to streamline the number of REM weatherization measures.

*The complete 2011 PSE Action Item table is part of today's handouts.*



# Planning Milestones

*(All dates are “by”)*

Provide information on:



- *August 1:* Ten-year potential and two-year target presented to CRAG. (CRAG mtg. 7/21)



- *September 1:* Draft program details and budgets. (CRAG mtg. 8/25)



- *October 1 (email on Oct. 3<sup>rd</sup>):* Draft program tariff Schedule changes. (CRAG mtg. 9/29)

- *November 1:* Completed Biennial Conservation Plan filed with WUTC. (CRAG mtg. 10/20 & 11/17 [if needed])

- *January 1: 2012 Program implementation.*



## Safety Moment



September 29, 2011 CRAG Meeting





## 2012-2013 Draft Tariff Schedule Revisions

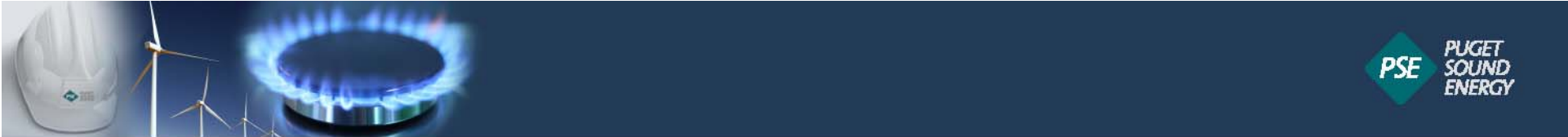


**Applicable conditions:**  
**K(3)(a)(v), K(3)(c), K(8)(f)**

**Andy Hemstreet**

*Program Manager, Compliance*

September 29, 2011 CRAG Meeting



# What is a Tariff?

WAC 480-80



**480-80-030:**

A document that sets forth terms and conditions of *regulated service, including rates, charges, tolls, rentals, rules, and equipment and facilities, and the manner in which rates and charges are assessed for regulated services provided to customers, and rules and conditions associated with offering service.*

**480-08-101:**

(1) A utility that is required to have a tariff on file with the commission must file and maintain its tariff(s) as required in the RCW and WAC.

(2)(a) A utility that provides more than one kind of service, such as gas, electric, or water, must file a separate tariff for each service type.

(b) Each tariff must have an official designation number, printed as WN U-number. Subsequent tariff designations must be sequentially numbered in ascending order.





# What is a Tariff?

## 480-80-105:

(4) **Tariff symbols.** Each time a tariff sheet(s) is revised, a utility must code all changes with the tariff symbol that best reflects the purpose and effect of the change. A utility:

(a) Must locate the symbols on the right hand side of the changed text directly across from the change;

(b) Must use the following list of symbols to signify:

**D** - discontinued rate, service, regulation, or condition;

**N** - new rate, service, regulation, condition, or sheet;

**I** - a rate increase;

**R** - a rate reduction;

**C** - changed condition or regulation;

**K** - that material has been transferred **to** another sheet in the tariff.

(A footnote is required on the tariff sheet to identify the material's new sheet number);

**M** - that material has been transferred **from** another sheet in the tariff. (A footnote is required on the tariff sheet to identify the material's former sheet number);

**T** - a change in text for clarification;

**O** - no change. (This symbol is discretionary unless specifically requested by the commission); and

(c) May use additional symbols for other purposes when it has identified the symbols in its tariff as provided for in WAC [480-80-102\(3\)](#).

Twelfth Revision of Sheet No. 83-c  
Canceling Eleventh Revision  
of Sheet No. 83-c

WN U-60

PUGET SOUND ENERGY  
Electric Tariff G

SCHEDULE 83  
ELECTRICITY CONSERVATION SERVICE  
(Continued)

s. Performance Basis refers to the Company determining energy savings through direct measurement of energy usage and/or the use of efficiency indicators. (N)  
(N)

t. Prescriptive Basis refers to the Company using a standard energy savings amount for a Measure rather than individually calculating energy savings for each specific installation. Prescriptive Basis rebates and incentives are funding levels. Incentive funding levels are set at a standard amount based on Prescriptive Basis energy savings. (M)(T)  
(M)

u. Process Efficiency Improvement refers to operational and/or equipment changes to improve the energy efficiency of industrial and commercial processes, not including building lighting, comfort conditioning or retail refrigeration. (N)

v. Quantifiable Benefits (or Costs): Non-energy benefits of undertaking energy efficiency improvements, as determined by society or the utility. Benefits (or Costs) may include, but are not limited to: water usage savings or maintenance savings that may be quantified in dollar value. The Company may use these Quantifiable Benefits (or Costs) to demonstrate cost-effectiveness based on the Total Resource Cost Test. (K)  
(N)

w. Reporting Rights is the right to report the ownership of accrued and accumulated Environmental Attributes and energy savings to any agency, authority or other party, without limitation, or under any past, present or future international, foreign, federal, state or local government or voluntary regulation or trading program, exclusive ownership of the Environmental Attributes. (N)  
(T)

x. Simple Payback is the estimated installed cost of the energy efficiency Measure divided by the estimated annual dollar savings to the Customer from the Measure. (T)  
(T)

y. Site-Specific Basis refers to the Company calculating energy savings using the engineering savings determined for each site. (T)  
(T)

z. Total Resource Cost is the cost to the Customer and/or other party costs to install or have installed approved Measures plus Utility Costs and minus Quantifiable Benefits (or Costs). (T)  
(C)  
(K)

(M) Transferred from Sheet No. 83-b, (K) Transferred to Sheet No. 83-d  
Issued: November 30, 2009 Effective: January 1, 2010  
Advice No.: 2009-31

Issued By Puget Sound Energy  
By: Tom DeBoer Title: Director, Federal & State Regulatory Affairs

Comment [JK1]  
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September 29, 2011 CRAG Meeting



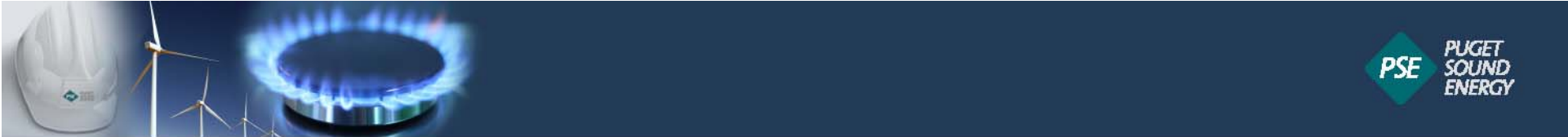
# What is a Tariff?

**480-80-132:**

The commission will reject any tariff change that reflects retroactive rate treatment. The commission may reject any tariff change that does not comply with commission rules.

**480-80-134:**

When discontinuing a service or services, a utility must file to cancel the applicable tariff sheets in the same manner as required by tariff filing instructions set forth in WAC [480-80-105](#). The commission will handle discontinuation filings in the same manner and in accordance with the same provisions governing all other tariff filings.



## Cancelled Tariff Schedules

- E/G 200 (REM), E/G 260 (BEM): Information Services

Individual components are now represented in Portfolio Support and Research & Compliance.

- E/G 270: Local Infrastructure & Market Transformation

This program is not geared for customers. Program title being revised to Trade Ally Support, which is a more accurate representation of its activities.

- E257: LED Traffic Signals

Very low volume over the last two years and program achieve greater administrative efficiencies when managed within the Business Rebates program. This service is added as a suite of measures to Schedule 262.





# New Tariff Schedules



- E 271: Demand Response program
  - Schedule 249A will remain active until all remaining expenses are paid.  
(Modifications will be made to show that no new pilots will be accepted.)
  - New demand response programs will fall into the “270s” range.
  
- E 292: Generation, Transmission & Distribution Efficiencies

This new Schedule will be referenced in several areas of Schedule 83.



# Tariff Schedule Revisions

Generally, a few, minor--  
grammar  
& punctuation,  
clarification  
improvements were  
made.

Additional  
notable revisions:

- E 83, G 183: Overview

- Updated budget section (No. 10), clarified some services.
- (83 only) Added paragraph in Section 5, discussing Generation, T&D, and referencing Schedule 292.

The screenshot shows the Puget Sound Energy website's "Electric Rate Schedules" page. The browser title is "Electric Rate Schedules - Windows Internet Explorer provided by Puget Sound Energy". The URL is [http://pse.com/aboutpse/Rates/Pages/Electric-Rate-Schedules.aspx?Schedule\\_x0020\\_Description=Index%20and](http://pse.com/aboutpse/Rates/Pages/Electric-Rate-Schedules.aspx?Schedule_x0020_Description=Index%20and). The page features a navigation menu with links for "Accounts & Services", "Safety", "Savings & Energy Center", "In Your Community", and "About PSE". A "Sign In" box is present on the right. The main content area is titled "Electric Tariffs & Rules" and includes a section for "Currently effective electric rate tariffs". A "Schedule Type" dropdown menu is set to "Conservation", with "Submit" and "Reset" buttons below it. The page lists "A. Conservation Schedules" with links to "Electric Schedule 083 - Electricity Conservation Service - 09/16/2011 - REVISED" and "Electric Schedule 121 - Electricity Conservation Incentive Mechanism - 04/01/2009".

September 29, 2011 CRAG Meeting



# Tariff Schedule Revisions

## Residential Notables

- **E 216: Fuel Conversion**

Removed sentence regarding varying customer eligibility by structure & added sentence excluding structures in Multifamily campuses.

- **E/G 217: Multifamily Existing, E/G 218: MF New Construction**

Added “campus” definition to Availability section, added language to Funding section to account for custom grants

- **G 203: Low Income Weatherization**

Section 3 was adjusted to match the funding language in Schedule 201

- **No adjustments to 201: LIW, 214: SFE, 215: SFNC**





# Tariff Schedule Revisions

## Business Notables

- E 250, E 251, E 262: Retro, New, Rebates

Adjusted Funding sections to be consistent with Schedule 258 requirements. (Gas Schedules not affected)

- E/G 250, E/G 262: Retro, Rebates

Added language to indicate that consultants or contractors may perform measure installation.

- E 253, G208: RCM

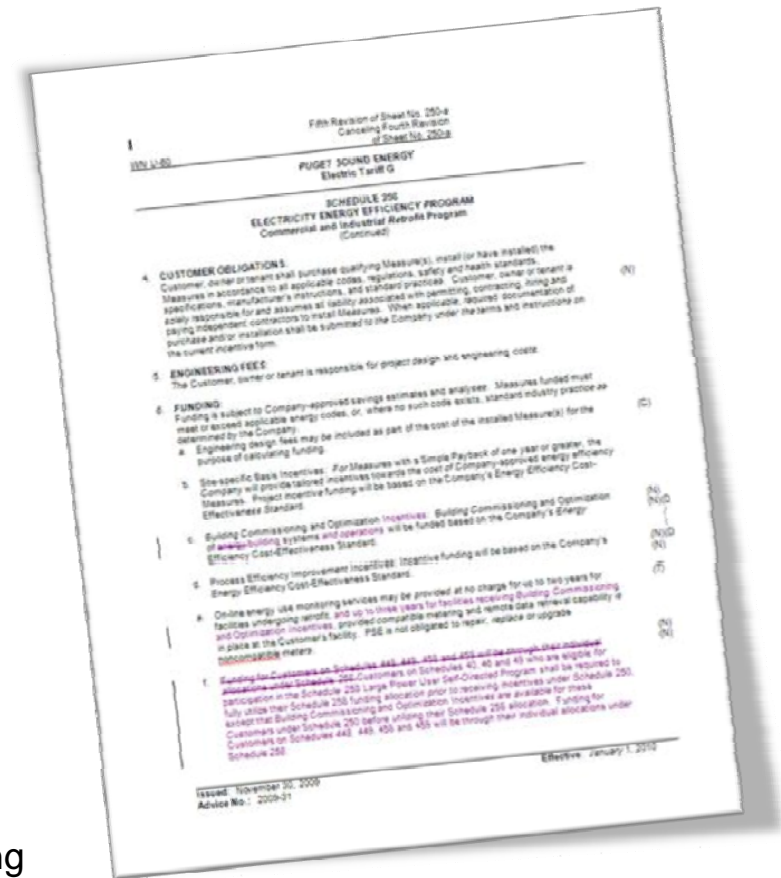
Added language to Services Section to indicate that partial funding of an RCM position is subject to the customer completing specific deliverables.

- E 255: Small Bus. Lighting

Added language to Funding Section to indicate that funding is subject to CE standard.

- E/G 261: E. E. Technical Evaluation

Added language to Funding Section to indicate that program is not subject to achieve savings sufficient to meet CE standards.







# Avoided Cost Calculations & Cost-Effectiveness Tests



**Applicable Sections:**  
**E(10)**  
**conditions:**  
**K(3)(a)(iii), K(10)**

**Bill Hopkins**

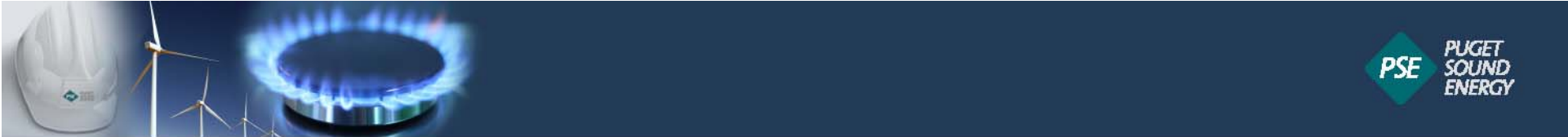
*Manager, Strategic Planning & Market Research*

September 29, 2011 CRAG Meeting



## Topics To Be Covered

- Applicable electric settlement conditions
- Components of electric avoided costs
- Components of gas avoided costs
- Changes in avoided costs from 2010-2011
- Changes in benefit-cost calculations form 2010-2011
- Description of four benefit-cost tests
- Summary of the benefit-cost ratios



# Electric Settlement Conditions: Avoided Costs

- E(9) To determine which energy efficiency programs and measures are cost-effective, PSE shall rely on a calculation of avoided cost consistent with the Council methodology and with the Energy Independence Act.
- K(10)(a) ...PSE must demonstrate that the cost-effectiveness tests presented in support of its programs and portfolio ... incorporate quantifiable non-energy benefits, the 10 percent conservation benefit and a risk adder consistent with the Council's approach.

(Emphasis added)



# Components of the Electric Avoided Costs

## 1. Energy

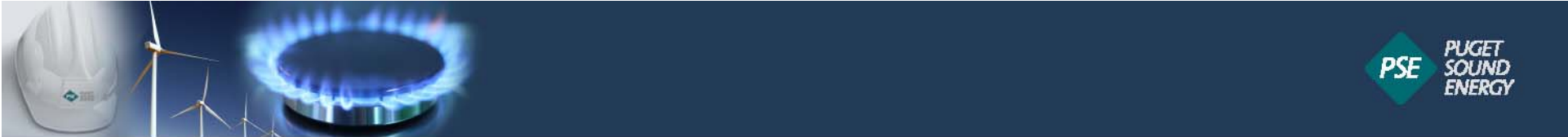
- a. Hourly commodity prices (2011 IRP AURORA prices)
- b. Line loss reduction (PSE 2010 cost of service data, split by Res. & C/I, updated from IRP)
- c. Planning adjustment (added cost to own thermal resources from 2011 IRP)
- d. Avoided renewable benefits (added cost for RPS compliance from 2011 IRP)
- e. 10% conservation credit ( for TRC only)

## 2. Capacity

- a. Fixed cost of capacity (2011 IRP)
- b. Deferred T&D (6<sup>th</sup> Regional Power Plan)
- c. 10% conservation credit (for TRC only)

## ■ Electric methodology is consistent with Power Council

- Reviewed by WA State Conservation Work Group and 2010-11 Third Party Electric Savings Review



# Components of the Gas Avoided Costs

## 1. Energy

- a. Monthly commodity prices (2011 IRP SENDOUT prices)
- b. Pipeline transportation charge (2011 PSE contracted rate, updated from IRP)
- c. Avoided pipeline fuel reimbursement (2011 PSE contracted rate, updated from IRP)

## 2. Capacity

- a. Pipeline demand charge (2011 PSE contracted rate, updated from IRP)
- b. Distribution capacity (2011 PSE contracted rate, updated from IRP)



## Changes in Calculations from 2010-2011

- Kept all avoided costs in a present value format
  - No levelizing of costs
- Adopted the value of electric T&D from the Council
  - In 2012-13, PSE will work with its T&D planning group to identify a more accurate method to estimate the value, for use in next biennium (2014-15)
- Added an adjustment for the costs of renewable energy projects to meet I-937 requirements
  - Energy efficiency means reduced load which means smaller number of renewable projects
- Electric peak capacity value based on average of December peak hours, not a single system peak hour



Presented to  
CRAG 7/21/11

# Impacts on Avoided Cost values

- Generally lower than for 2010-11 (especially gas)
- More value concentrated on peaks
- Electric Values
  - Wholesale market prices lower
  - Peak capacity values higher
  - Little change in value for space heat measures (very coincident with peak)
  - As much as 20% reduction in value for non-coincident measures
- Gas Values
  - Wholesale commodity prices lower
  - Value of space heat measures down less than 10%
  - As much as 30% reduction in value for non-coincident measures





# Electric Settlement Conditions: Cost-Effectiveness

K(10)(a)	<p>The Commission uses the TRC, as modified by the Council, as its primary cost-effectiveness test. PSE’s portfolio must pass the TRC test. In general, each program shall be designed to be cost-effective as measured by this test. PSE must demonstrate that the cost-effectiveness tests presented in support of its programs and portfolio are in compliance with the cost-effectiveness definition (RCW 80.52.030(7)) and system cost definition (RCW 80.52.030(8)) and incorporate, quantifiable non-energy benefits, the 10 percent conservation benefit and a risk adder consistent with the Council’s approach. An outline of the major elements of the Council’s methodology for determining achievable conservation potential, including the Total Resource Cost test, is available on the Council’s website at <a href="http://www.nwcouncil.org/energy/powerplan/6/supplycurves/1937/CouncilMethodology_outline%20_2_.pdf">http://www.nwcouncil.org/energy/powerplan/6/supplycurves/1937/CouncilMethodology_outline%20_2_.pdf</a>.</p>
K(10)(b)	<p>In addition to the Council-modified TRC, PSE must provide portfolio calculations of the Program Administrator Cost test (also called the Utility Cost test), Ratepayer Impact Measure test, and Participant Cost test described in the National Action Plan for Energy Efficiency’s study “Understanding Cost-effectiveness of Energy Efficiency Programs.” The study is available on the Web site of the United States Environmental Protection Agency at <a href="http://www.epa.gov/cleanenergy/documents/suca/cost-effectiveness.pdf">http://www.epa.gov/cleanenergy/documents/suca/cost-effectiveness.pdf</a>.</p>
K(10)(c)	<p>Overall conservation cost-effectiveness must be evaluated at the portfolio level. Costs included in the portfolio level analysis include conservation-related administrative costs. For the additional cost-effectiveness tests identified in 10b <i>[NOTE--Addition of RIM and PCT]</i> -PSE must consult with the CRAG to determine when it is appropriate to evaluate measure and program level cost-effectiveness. All cost-effectiveness calculations will assume a Net-to-Gross ratio of 1.0, consistent with the Council’s methodology.</p>



# Cost-Effectiveness Calculations

1. Added two new tests, reported at portfolio level
  - Participant Cost Test
  - Ratepayer Impact Measure Test
2. Made a few global changes to the cost-effectiveness calculations
3. Results are reported slightly differently



# Changes to the Cost-Effectiveness Calculations

1. All dollars are expressed as present values
  - a. Calculation of levelized costs discontinued
  - b. Results reported as NPV's and B/C ratios
2. All benefit and cost PV's are discounted to time zero (start of yr. 1)
  - a. This is consistent with the Power Council
3. Load shapes applied at measure level\*
  - a. Cost-effectiveness is done by measure, by program, before being rolled up to a program (and portfolio) level
  - b. Discontinue using "most typical" program load shape.
4. Measure life applied at measure level\*
  - a. Calculation is done by measure and aggregated to program level
  - b. Weighted average life will still be reported by program and portfolio, but not used for CE calculations

*\*Note: C/I measure-level data not available for planning analysis, will be used to report actuals*

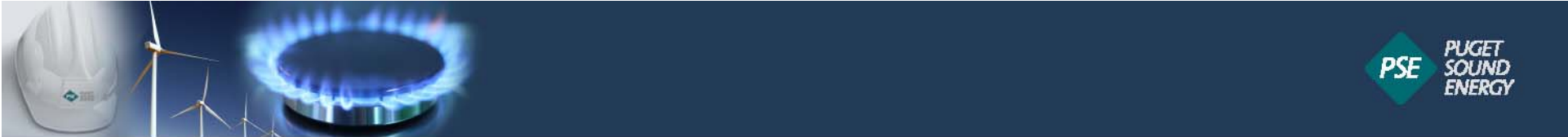
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# Total Resource Cost Test (TRC)

- This is the primary cost-effectiveness test
- Compares the societal benefits of conservation to the societal costs by combining utility and participating customer perspectives
  - Treats lost revenue & bill savings as offsetting
- Methodology is consistent with Power Council
  - Reviewed by WA State Conservation Work Group and 2010-11 Third Party Electric Savings Review
- PSE does not include non-energy benefits, except LIW
  - Most programs are cost-effective without them
  - LIW included value of health & safety repairs
  - Lack of agreed-on measurement protocols; adds to EM&V costs

Costs	Benefits
Program Overhead Costs	Avoided Cost of Energy
Program Installation Costs	Avoided Cost of Capacity
Incremental Measure Costs (full)	Avoided Cost of Delivery
	Monetized Non-Energy Benefits
	10% Conservation Credit



## Utility Cost Test (UC)

- Measures whether the benefits of avoided energy supply and delivery costs from energy savings are greater than the costs of administering programs, from the utility's perspective.
  - It does not include lost revenues to PSE

<b>Costs</b>	<b>Benefits</b>
Program Overhead Costs	Avoided Cost of Energy
Program Installation Costs	Avoided Cost of Capacity
Program Incentive Costs	Avoided Cost of Delivery



# Participant Cost Test (PCT)

- Compares customer costs of efficient equipment to the associated customer utility bill savings
- Ignores how costs of generation and delivery infrastructure no longer avoided by EE could increase rates (and bills) in the long run
- Requires a forecast of rates 30 years into the future
  - Includes assumption about recovery of future lost revenues from conservation (as proposed in current GRC) because they affect rates paid by customers
- Non-energy benefits used for LIW only

Costs	Benefits
Incremental Measure Costs	Bill Savings
Incremental Installation Costs	Program Incentive Payments
	Tax Credits or Other Incentives
	Customer Non Energy Benefits



## PCT Rate Forecast

1. Calculate historical average rates by dividing total revenue by sales (for residential and commercial) from 2002-2010.
2. Used a trend line of historical rates to estimate rates for 20 years
3. Assumed rates increased by 2.5% after 20 years
4. Added a revenue adjustment for conservation for each year (based on projected energy savings from IRP)

***This projection of rates is for the sole purpose of calculating cost effectiveness.  
It does not reflect PSE's intentions with respect to future rate filings.***





# Ratepayer Impact Measure Test (RIM)

- Intended to show how programs will impact future rates
- Ignores how not doing energy efficiency will impact rates
- Requires a 3-year forecast of rates
  - Lost revenues from 2012-13 conservation counted for first 3 years before they are assumed to be recovered in future rates.
  - Not the same as “lost margin”
- RIM lost revenue is less than PCT bill savings

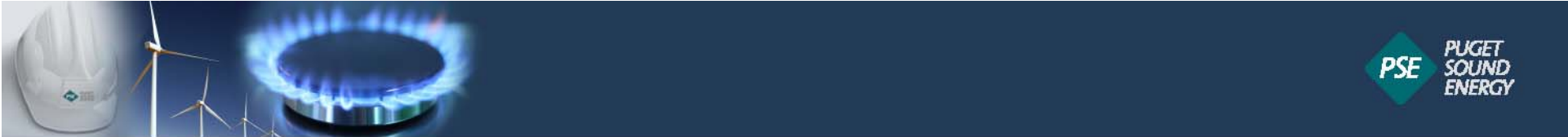
Costs	Benefits
Program Overhead Costs	Avoided Cost of Energy
Program Incentive Costs	Avoided Cost of Capacity
Program Installation Costs	Avoided Cost of Delivery
Lost Revenue	



# RIM Test Lost Revenue Projection

1. Assumed to happen over 3 years only. Lost revenue due to EE occurs until rates from the next rate case take effect.
2. Calculates total lost retail revenue, does not separate variable and fixed components.
3. Rates are forecasted based on historical trend, as done for the PCT, but exclude any conservation revenue adjustment.

***This projection of rates is for the sole purpose of calculating cost effectiveness.  
It does not reflect PSE's intentions with respect to future rate filings.***



# Portfolio Level Cost-Effectiveness Results

	TRC	UC	PCT	RIM
Electric	2.04	2.81	2.92	1.42
Gas	1.28	2.54	0.96	1.89

- TRC and UC tests passed by both portfolios
  - See handout for results by program
- PCT is marginal for gas portfolio
- RIM test passed by both portfolios

*What do the PCT and RIM results mean, given the uncertainties in rate assumptions?*



## 2012-13 Savings Target Setting



**Bob Stolarski**

*Director, Customer Energy Management*

September 29, 2011 CRAG Meeting



# 2012 – 2013 Savings Target Setting

Gas Savings = 9.5 million therms

	<u>mWh</u>	<u>aMW</u>
Electric Savings	666,102	76.0
H.E.R.	-10,996	- 1.3
NEEA	<u>-38,829</u>	<u>- 4.4</u>
	616,277	70.3

November 1 filing:

- Option 1: File target as a RANGE from 70.3 to 76 aMW.
- Option 2: Deem conservative NEEA savings (final reported higher/lower savings would not offset other programs) and file RANGE of 74.7 to 76 aMW (to account for H.E.R.).
- Option 3: Option 2 *plus* outcome of H.E.R. savings subgroup – file POINT target at 76 aMW or file at 74.7 aMW.

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## CRAG Follow-up

Questions on:

Program Details

Budgets

Savings

Tariff Schedule Revisions



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# BCP Updates Since September 1 Presentation

## 1) Exhibit 3

- Adjusted Exhibit numbers to accommodate Prescriptive Measure tables and Ten-year potential/two-year targets

## 2) Exhibit 1, 2012 view *(No effect on the biennial portfolio view)*

- The electric budget for C/I Retrofit was picking up the 2013 line from the budget detail page, rather than the 2012 line.
- In gas tracker budget, Portfolio Support, the sector subtotal did not pick up the Customer Engagement & Education subtotal, under-representing those expenses by \$245,000.
- All TV Turn-in unit counts will be in 2012, rather than spread across both years, affecting the Residential Lighting savings and expenses totals.





# CRAG Questions?



# Third Party 2010 Electric Savings Review

Preliminary Results



**Bill Hopkins**

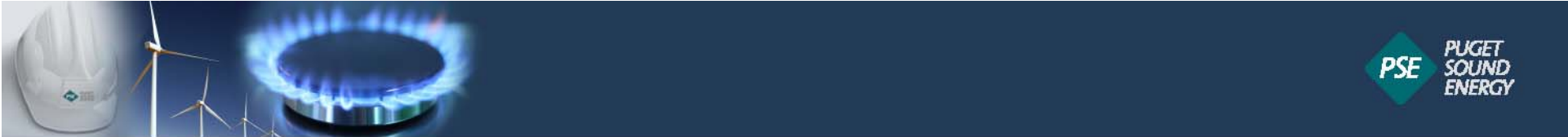
**Bing Tso**

**Karen Maoz**



**Applicable conditions:  
K(6)(g)**

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## Electric Settlement Condition: K(6)(g)

- A one-time only, independent third-party evaluation of portfolio-level electric energy savings reported by PSE for the 2010–11 biennial period, from existing conservation programs operated during that period.
- The independent third-party evaluator shall be selected through an RFP process.
- The review will be funded by the PSE Electric Conservation Service Rider.
- The review will be managed by UTC and PSE staff with input on the scope, cost, RFP development, evaluator selection and ongoing oversight by the CRAG.
- The scope shall:
  - i. focus on portfolio level EM&V of the existing 2010-2011 PSE conservation portfolio regarding impact, process, market, and cost-effectiveness analysis,
  - ii. examine selected existing 2010-2011 programs or measures in more depth than others, as called for in the RFP,
  - iii. provide for some additional but limited detailed independent EM&V study at the program or measure level to be selected by the independent third-party evaluator.
- This evaluation shall include a review of the Company's reported electric savings on a semi-annual basis, with results provided to UTC staff and PSE and discussed with the CRAG.
- A final report for the entire 2010-11 biennium shall be submitted as part of the Company's two-year report on conservation program achievement, required by Paragraph (8)(h), no later than June 2012.
- Funds spent in meeting this condition shall count toward PSE's evaluation expenditures required under Paragraph (6)(f)(i).
- This condition terminates after the final report is submitted.

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# Project Status

Complete Date	Task	CRAG Review
December 15, 2010	RFP Issued	Draft SOW distributed 11/15/10
January 12, 2011	Pre-proposal conference	Invitation forwarded 1/7/11
January 25, 2011	Proposals due from Consultant(s)	CRAG updated & subgroup formed 1/27/11
February 21, 2011	Short list of consultants selected	CRAG subgroup participated
March 11, 2011	Short-list candidate interviews	CRAG subgroup participated
March 31, 2011	Selection of Project Consultant	CRAG subgroup participated CRAG notified 3/31/11
April, 20, 2011	Project kickoff/scope discussion	Met with CRAG 4/20/11
October, 2011	First semi-annual review interim report	Regular CRAG updates. Draft presented 9/29/11
December, 2011	Second semi-annual review interim report	
May, 2012	Third semi-annual review and final two-year report	



# Draft Phase 1 Report: Review of 2010 Portfolio



Bing Tso, SBW Consulting



Karen Maoz, KEMA



## Wrap-up and Next Steps



Dan Anderson

September 29, 2011 CRAG Meeting



## Wrap-up

- Unresolved questions?
- Meeting recap
- Follow up items and their owners
- Quality, value of meeting?





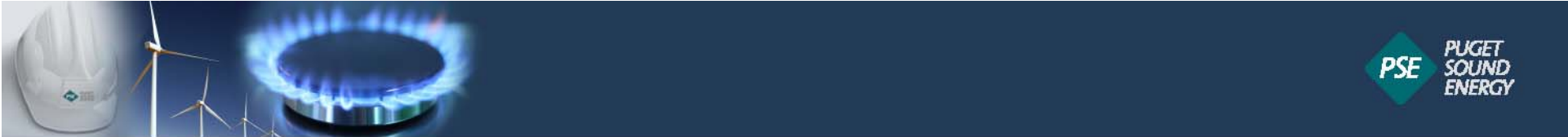
# Next Meeting

- October 20 (perhaps final of 2011?)
- Return to the [Summit room](#), PSE building
  - Draft topics:
    - November 1 BCP filing readiness
    - Settlement Conditions Checklist Review
    - Determine 2012 CRAG meeting schedule



# Handouts

- Current action item list
- New Schedule 271
- Revised Exhibit 1- 2012 view with highlights
- Revised Introduction page, Exhibit 3



# Attendees

## Facilitator

Dune Ives

## CRAG Members

Danielle Dixon  
Tom Eckman  
Stefanie Johnson  
Mary Kimball (possibly call in @  
noon)  
Chuck Murray  
Vanda Novak  
Paula Pyron (Conference call)  
Irion Sanger

## Guests

Bing Tso, SBW Consulting, Inc.  
Karen Maoz, KEMA

## PSE

Cal Shirley  
Grant Ringel  
Bob Stolarski  
Dan Anderson  
Eric Englert  
Syd France  
Bill Hopkins  
David Landers  
Jeff Tripp  
Andy Hemstreet

# **October 20, 2011 CRAG Meeting**

## **Summary Notes**

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Discussion Highlights and Notes ..... 4  
    General Comments..... 4  
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Parking Lot & Questions ..... 10  
There were no issues captured in the parking lot..... 10  
Agreements, Decisions ..... 10  
EES Action Items..... 10

## Attendees

### **Facilitator**

Dune Ives

### **CRAG**

Danielle Dixon

Chuck Eberdt (Conference call)

Tom Eckman

Stefanie Johnson

Mary Kimball

Chuck Murray

David Nightingale

Stan Price

Paula Pyron

Irion Sanger (Conference call)

### **PSE**

Dan Anderson

Eric Englert

Syd France

Andy Hemstreet

Bill Hopkins

David Landers

Cal Shirley

Bob Stolarski

Jeff Tripp

Bobbi Wilhelm

### **Guests**

Erik Markell

## Meeting Topics

1. Review agenda
2. Review ground rules and standing agenda items
3. Focus on Biennial Conservation Plan filing (out of sequence):
  - a. CRAG approval of Home Energy Reports program
  - b. Review of M&V cost analyses
  - c. Review current and year-end status of 2010 Electric Conservation Settlement obligations
  - d. Review contents of BCP
4. Clarify calculation of NEEA savings calculation methodology
5. Discuss second phase of Third-party review of electric savings
6. Wrap-up and next steps

## Discussion Highlights and Notes

*(Only the topics above in which there was discussion. All questions or items that were captured in the “Parking Lot” are noted in the applicable sections below. Specific points are available in the accompanying PowerPoint slide PDF. Any resultant action items are captured below.)*

### September 29 CRAG Meeting Summary Update

The September 29 meeting summary agreements section, #7, is adjusted accordingly:

The attendees agreed that further discussion of the RIM and PCT tests were appropriate at the portfolio-level but no further work was required to estimate at a measure or program-level. Some of the attendees expressed an interest in removing them, but no decision was finalized.

### Home Energy Reports Discussion

Jeff Tripp provided a summary of the Home Energy Reports (“HER”) pilot and provided the CRAG with two going-forward options. It was emphasized that condition K(7)(d)(i) requires full support of the CRAG before PSE can claim savings.

*(Not all of the following points are represented in the actual discussion sequence. They are loosely grouped in order of topics.)*



General discussion included a review of the KEMA and LBNL studies, as well as the proposed savings and evaluation proposal, during which time, it was confirmed that the proposal and the KEMA study have addressed some double-counting issues. It was mentioned that each subsequent evaluation has indicated that the annual per-home savings has increased since the inception of the pilot. The HER measure life will be one year.

The quartiling analyses provided was also a topic of discussion, where it was generally found that the highest-usage customers appeared to generate the largest amount of savings; where a few customers installed a high-savings/high cost measure versus many lower-quartile customers installed a couple CFLs, and how customer makeup in counties other than King may also have an effect ongoing analyses and savings. There was discussion as to how future program design and marketing could use this analysis to ensure full customer participation and minimize program costs per customer. Issues such as customer segmentation, economies of scale were also discussed. Jeff and Bob Stolarski reiterated that the request of the CRAG is to convert the pilot to an ongoing program with savings based on the current customer participation only (approximately 24,000 customers in King County).

The subject of 2011 versus 2012-2013 savings received much discussion. While most attendees were comfortable with the 2012-2013 proposal, not all were convinced that savings analysis and methodologies for 2011 savings were solid enough to count toward the 2011 annual total. Various scenarios, discussing backing savings totals out of potential double-counted measures after the 2011 annual report is provided; and collecting and compiling customer survey data in time for the annual report would prove to be difficult. The surveys themselves were also discussed, relative to the survey timing, customer ability to recall actions, etc. It was pointed out that this issue is considered for all customer surveys.

The nature of the measures being considered was also mentioned. There is a current customer survey, and methodologies are being established for future surveys for the control group versus the test group. With a random sample, and different survey questions for each, PSE can ensure that the same customers aren't being surveyed each quarter. It was pointed out that the survey cycle should coincide with the I-937 cycle, a calendar year. Members also made a point that a \*vendor\* performing analysis was different than an \*independent evaluator\* performing the analysis. There was also a level of discomfort with discounting the bottom quartiles mentioned. Relative to stratified quartiling analyses, it was mentioned that there's a need for a much larger sample size.

The point was made that at some point a habit becomes a habit and if we can show that customers still save after a certain period of time, perhaps two years on the reports for instance, and then dropping off of the reports, that the program can potentially save money by rotating recipients.

The rationale for taking 2011 was raised. PSE pointed out that the HER program has been one of the most exhaustive analyses for a limited number of kWh performed. It's necessary that Customer Energy Management staff be allowed to focus on running programs versus continuing analysis on HER.

It was pointed out that the double-counting question came up initially two years ago and there remains some level of discomfort that the issue hasn't fully been resolved, and that continued requests for clarification and additional analyses are reasonable. A call for agreement that we have a workable protocol, with need of a few "tweaks", was made.

Most attendees indicated that it seemed reasonable to call for the question to approve converting the program into a savings-based program at this time. A question about pro-rating some portion of 2011 savings was posed. PSE pointed out that this would lead to some level of artificial accuracy. Whether 2011 savings are included or not, the program is still within cost-effectiveness thresholds. PSE made the point that it cannot risk a potential penalty of \$50 per MWh missed by including HER savings in the target, and potentially having those savings disallowed at some point. It was also pointed out that there are potential national implications relative to this decision; and other regional utilities may base their decisions to initiate similar programs on PSE's program. A decision to modify or take other action on this program may come to pass in the future; no decision in this kind of program is permanent.

At this point in the discussion, it was reiterated that PSE must have the full support, rather than a general consensus, of the CRAG in order to implement savings claims for HER.

Conditioned on:

- Including the quartiling elements in the protocols
- 2012-2013 savings and survey focus on the calendar year
- PSE will seek to understand the actions of participants and non-participants

A roll call vote was called and each of the attending CRAG members (both in person and via conference call) approved PSE claiming energy savings for 2011, 2012 and 2013, based on the proposed protocols that include adjustments for double-counting other program achievements, including CFLs.

### **Measurement and Verification Project Summary**

Syd France led a discussion on the progress of the Navigant M&V cost study. The M&V methodologies will be included in the EM&V Framework as Attachment 2. The verification sample rates for 2012 are still in development and are designed to augment existing program verifications. These will be performed by the new verification team that is a part of Syd's organization. These samples are different than the SBW site visits (discussed in an upcoming segment of the meeting summary). Attachment 2 needs to be considered in context of the entire EM&V Framework, as it only addresses internal PSE verification processes.

It was mentioned that the RTF is leading an effort to establish regional verification standards and that all trades understand that they're going to be subject to a comparable level of inspection.

Syd indicated that preliminary Navigant study results indicate that M&V spending is approximately in the range of 2.4% to 2.7% of the total portfolio. Added to the Evaluation portion of the 2012-2013 budget, total EM&V spending would therefore be approximately 5%. There was general discussion relative to the goal of the spending amount stipulated in the 2010 Electric Settlement conditions. Specifically, should EM&V focus on the amount spent or the number of studies and actual verification performed? It was mentioned that, relative to other utilities, the spending "band" could be an indicator of commensurate EM&V efforts, but that activity levels, such as the percentage of installations verified, may be the best method of comparison. It was generally agreed that condition K(6)(f)(i) has been met.

### **Condition Compliance Review**

Andy Hemstreet presented an overview of the current and projected status of 2010 Electric Settlement obligations compliance. The checklist table will be included in the BCP as Exhibit 9. It was generally agreed that the checklist is useful and informative. PSE will include in the BCP its intent to maintain the current list of obligations into the next biennium, perhaps with some modifications to the deliverables dates.

There was a question relative to one of the condition's deliverables, K(6)(g). Specifically, was SBW supposed to deliver a report on the accuracy of the savings claims or the veracity of PSE processes and quality control? PSE is not uncomfortable with that ongoing discussion and clarification. It was mentioned that another utility has proposed that a savings review be performed on a different sector (Residential versus Commercial) in alternate years. That way, the whole portfolio is reviewed each biennium. There was a brief discussion on the difference between impact evaluations and portfolio verification.

### **BCP Filing Contents**

Following a short break for lunch, Dan Anderson provided the group an overview of what will be included with the BCP filing, including the exhibits and tariff revisions. Hard copy binders will be mailed to CRAG members as soon as feasible, with the goal of coinciding with the filing. It was agreed that an added value to the hard copy binders would be to include a CD containing the electronic files.

### **2012-2013 Conditions Revisions Request**

David Nightingale solicited input from CRAG members for input as to possible condition revisions for the next biennial order. There was some concern expressed that attempting to modify the conditions could lead to an argument over conditions at the time of the BCP filing. There was also some concern about this issue being brought up this late in the process, and several CRAG members indicated no desire to pursue the discussion any further. David clarified that any modifications don't need to be agreed to by the time of the November 1 filing. The Commission could rule that the BCP is fine as filed or that PSE and the CRAG needs to resolve any issues subsequent to the filing. The tariff filing could go into effect separately from the BCP approval.

### **NEEA Savings Claim Methodology Clarification**

Bob Stolarski led a discussion, reviewing the NEEA savings calculation methodology discussion of September 29. The issue of uncertainty and the need for consistency across the three IOUs was discussed. PSE is comfortable being held accountable for circumstances that it can control. Holding utilities accountable only for programs that they can control directly was also a discussion and consensus point during the statewide Conservation Working Group. It was mentioned that for the three utilities, there are three different ways of calculating and reporting NEEA savings. This is an issue that is not limited to Washington State. An observation was made that the utilities are in a precarious position; it was mentioned that they should not be too aggressive in their savings target setting (relative to knowing what the NEEA savings are/how they are calculated), but they are also required to achieve their Commission-approved biennial acquisition target.

NEEA has presented to different commissions; it'd be interested to know what their positions are. Presenting a conservation range (instead of a point) was generally discouraged by some CRAG members. The current calculation methodology was reviewed, and it was indicated that PSE has been using this method since at least 2007.

Without conditions, the attendees unanimously agreed to allow PSE to continue counting NEEA savings using the current methodology. This methodology consists of PSE claiming the amount of energy saving from NEEA at an amount exactly as included in the savings target planning, regardless of NEEA's actual performance during that period.

### **SBW Phase Two Initiatives**

Bill Hopkins reviewed the review methodologies that SBW employed during its Phase 1 of the one-time only savings review. He indicated that the next step will be a more detailed review. PSE sees the completed tasks as more of a "reasonableness check". Rather than verifying the installation of measures, it's more of a "do we do what we say we do?" The scope of the project is not a check to see if PSE should have claimed "xx kWh" versus "yy kWh".

It was pointed out that this condition was created to augment existing internal PSE reviews and external audits.

There was general discussion relative to how to use the information currently gained to inform deeper review of large-savings programs, performing site visits for the larger programs; it would be most beneficial to pursue areas where the paperwork may have been inconsistent. There is still confusion over realization rates, which some indicated gets back to the point of definition of verification; did the measure actually get installed or is all of the paperwork and processes in order?

The majority of the remaining SBW budget would be used for site visits. The short-term timeline includes additional verification on fewer programs. The current budget was approximately \$250,000 for the third-party review.

There was unanimous support for nearly doubling the budget to \$478,000 the allocation to inform additional process improvement and conditioned that the review remain a one-time only report, as indicated in the Settlement Agreement

### **BCP Adjustments Since September 29**

Dan Anderson reviewed some small quality-control adjustments made to the Exhibit 1 budgets since September 29. All told, the adjustments amount to less than 0.1% of the overall budget.

### **Wrap-up**

Handouts, resulting from the September 29 meeting action items, were provided to attendees.

The possibility of another CRAG meeting on November 17 was discussed. PSE also offered a field trip for that date, focused on refrigerator decommissioning recycling, (per an earlier CRAG request) and Mutlifamily direct installs. It was generally agreed that, unless there is a need to review potential condition revisions or some other major issue, that date could be cancelled. The attendees agreed to revisit the idea of field trips early in 2012.

The attendees indicated that PSE had addressed all major issues relative to the BCP filing and that they did not have any known unanswered major questions.

The 2012 potential meeting dates were reviewed and it was noted that there may be potential conflicts with WUTC open meetings and that June 29 is a Friday. Attendees agreed to respond to the Doodle meetings request. Please follow this link to indicate your anticipated availability (June 29 has been changed to June 28:

<http://www.doodle.com/izb4shs5kqydec6d>

## **Parking Lot & Questions**

There were no issues captured in the parking lot.

## **Agreements, Decisions**

- 1) The attendees unanimously agreed that PSE can take HER savings, based on the proposed evaluation methodologies, and customer makeup, for both 2011 and the 2012-2013 biennium.
- 2) (February 2012) PSE will include the Verification sample rates in the 2011 Annual Report.
- 3) It would add value to the BCP hard copy to include a CD of the electronic BCP files.
- 4) The attendees unanimously agreed that PSE will continue to count NEEA savings using the current methodology.
- 5) The attendees unanimously agreed that it was appropriate to increase the budget allocation for the one time only third-party savings review by approximately \$250,000.
- 6) Andy will change the Doodle meeting request date of June 29 to June 28.
- 7) David Nightingale will provide Andy with the 2012 WUTC open meeting dates.
- 8) Unless specifically needed, the November 17 meeting date will be cancelled.

## **EES Action Items**

- Andy will include a CD with electronic files of BCP binder contents with the binders when they are mailed out.
- PSE will provide all electronic files on the CRS website (same site where very large files are made available for CRAG members) concurrent with the BCP filing.
- BCP binders will be mailed to all CRAG members as close as possible to the filing date as possible.
- PSE will follow up with SBW on its open action items from the September 29 CRAG meeting.
- Andy will change the Doodle date of June 29 to June 28.
- The 2012 Doodle suggested meeting dates will be included with this meeting summary. Here is the Doodle link:

<http://www.doodle.com/izb4shs5kgydec6d>





# Conservation Resource Advisory Group

Energy Efficiency Services



October 20, 2011 CRAG Meeting





**Welcome!**



**Cal Shirley**

*Vice President, Energy Efficiency Services*

October 20, 2011 CRAG Meeting



# Today's Agenda

**Facilitator:** Dune Ives; President, Milepost Consulting

## Meeting Objective

*PSE would like address any open issues on its November 1 BCP filing.*

<i>Topic</i>	<i>Discussion Lead</i>
Welcome!	<b>Cal Shirley</b> , Vice President, Energy Efficiency Services
Agenda review, ground rules, meeting objectives, action item status, and 2012-2013 planning milestones	<b>Dan Anderson</b> , Manager, EES Budget & Administration
Safety moment	<b>Bob Stolarski</b> , Director, Customer Energy Management
<b>Biennial Conservation Plan filing focus</b>	
<ul style="list-style-type: none"> <li>- Home Energy Reports Decision</li> <li>- M&amp;V Evaluation Study status</li> <li>- 2010-2011 Condition Compliance review</li> <li>- BCP Content overview</li> </ul>	<p><i>Wrap up remaining open 2010-2011 issues.</i></p> <p><b>Jeff Tripp</b>, Manager, Residential Energy Management</p> <p><b>Syd France</b>, Manager, NPD&amp;E</p> <p><b>Andy Hemstreet</b> Program Manager, Compliance</p>
Third-party Savings Review, Phase Two	<p><i>Discuss SOW for 2011 semi-annual review.</i></p> <p><b>Bill Hopkins</b>, Manager, Strategic Planning &amp; Market Research</p>
CRAG Follow-up	<b>Bob Stolarski</b>
<ul style="list-style-type: none"> <li>- BCP updates since Sept. 29</li> <li>- BCP Filing Readiness?</li> </ul>	<p><i>Are there any known issues that would prevent you from supporting this BCP filing?</i></p>
Wrap-up	<b>Dan Anderson</b>
<ul style="list-style-type: none"> <li>- 2011 in review</li> </ul>	
Upcoming Dates	<b>Dan Anderson</b>
<ul style="list-style-type: none"> <li>- November 17; meeting or field trip?</li> <li>- 2012 CRAG meeting calendar</li> </ul>	



## Standing Agenda Items



**Dan Anderson**

*Manager, EES Budget & Administration*

October 20, 2011 CRAG Meeting



# Summary of CRAG-Related Activities Since September 29, 2011

## E-mails:

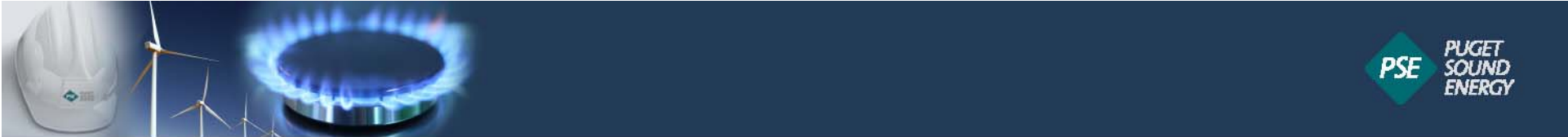
- October 3: Provided comprehensive list of all H.E.R. questions and responses.
- October 3: Draft Tariff Schedule revisions, consistent with condition K(8)(f).
  - Included Sept. 29 meeting summary, CRAG action items, REM Weatherization follow-up.
- October 6: Third quarter updates of Exhibit 3 and Exhibit 4.
- October 13: Responses to first two sets of 2012-2013 BCP questions from Public Counsel.
- October 14: Provided proposed H.E.R. savings claims protocols.
- October 14: Provided SBW interim report with embedded PSE comments.
- October 17: Provided LBNL Analysis of H.E.R. program

## Meetings:

- October 6: Third meeting to discuss H.E.R.

## UTC Events/Filings:

- October 7: Comments due on UTC Staff's WA Conservation Working Group documents.
- October 20: Filed Q3 updates of Exhibit 3 and Exhibit 4.



## Action Items Status Since September 29, 2011

### PSE Completed and/or Provided:

- A comprehensive list of H.E.R. questions and answers.
- The SBW PowerPoint slide deck.
- The evaluation results that indicate a need to streamline the number of REM weatherization measures.
- Clarify how residential customers are provided showerheads and how PSE correctly classifies the savings. (CRAG meeting handout.)
- Locate the IRPAG slides that address carbon cost estimates and demand-side resources' effect on renewable resource acquisition.
- Provide a summary of current biennium completed evaluations.

### PSE Open:

- Provide write-ups of avoided costs and cost-effectiveness calculations. *(Included in Exhibit 2 of the 2012-2013 BCP.)*

October 20, 2011 CRAG Meeting

*The complete, cumulative 2011 PSE Action Item table is part of today's handouts.*



## Action Items Status Since September 29, 2011

### SBW Open:

- Clarify components of the 34% figure on page 20 of their Sept. 29 presentation.
- Construct an SOW for the second phases of the savings study.

The cumulative 2011 CRAG Meeting Action Item list demonstrates that PSE responds effectively and efficiently to all CRAG requests for follow up and information.





# Planning Milestones

*(All dates are “by”)*

Provide information on:



- *August 1:* Ten-year potential and two-year target presented to CRAG. (CRAG mtg. 7/21)



- *September 1:* Draft program details and budgets. (CRAG mtg. 8/25)



- *October 1 (email on Oct. 3<sup>rd</sup>):* Draft program tariff Schedule changes. (CRAG mtg. 9/29)

- *November 1:* Completed Biennial Conservation Plan filed with WUTC. (CRAG mtg. 11/17 [if needed])

- *January 1: 2012 Program implementation.*

**EIGHT DAYS!**





## Safety Moment



October 20, 2011 CRAG Meeting



# Biennial Conservation Plan Filing Readiness

Home Energy Reports  
CRAG Approval Request



**Applicable conditions: K(7)(d)(i)**

**Jeff Tripp**

*Manager, Residential Energy Management*

October 20, 2011 CRAG Meeting



## Home Energy Reports – Savings Proposal

- Only considering claiming savings on the original pilot test group (approx. 24,241)
- Propose to claim savings only for the years 2011, 2012 and 2013.
- Will claim savings based on the protocols outlined in section 3.
  - Savings protocols include addressing double counting issues pertaining to PSE measures, including CFLs, and NEEA measures.
- Without the ability to claim savings the value is not sufficient to continue the pilot.

October 20, 2011 CRAG Meeting



## Home Energy Reports – Savings Protocols

- 24,241 (approx.) pilot recipients in test group
- Ex-post impact evaluation (2011, 12, 13)
- Difference-of-Differences method
- Double counting addressed
  - PSE programs, CFLs, NEEA programs
  - Customer surveys



## Home Energy Reports – Benefits of approval

- PSE able to claim cost effective savings
- Opportunity to continue evaluation of HER effectiveness
  - Persistence
  - Measure life
  - Effectiveness on different segments
- Continue to offer HERs to PSE pilot participants.



## Home Energy Reports – The Ask

- Option #1 – Claim HER savings as proposed
  - File Exhibit 1 as proposed
    - 76 aMW, \$193,429,229
      - Includes approximately 1.3 aMW HER
    - 9,548,916 Therms, \$26,614,880
      - Includes approximately 693,448 Therms HER
- Option #2 – Do not claim savings
  - Amend Exhibit 1 filing
    - 74.7 aMW, \$192,998,328
    - 8,855,468 Therms, \$26,418,091





# Biennial Conservation Plan Filing Readiness M&V Evaluation Status



Applicable conditions: **K(6)(f)(ii)**

**Syd France**

*Manager, New Program Development & Evaluation*

October 20, 2011 CRAG Meeting





# Conditions Agreement K(6)(f)(ii) – Measurement & Verification – Report

## 1 – Condition – Measurement & Verification

*PSE shall provide detailed descriptions of its Measurement & Verification (M&V) policies, protocols, guidelines, and processes to the CRAG for review and advice. Additionally, PSE shall provide to the CRAG an estimate of the costs associated with the detailed M&V plan and PSE will maintain activities at levels that are at least commensurate with regional peers.*

## 2 – Deliverables

- M&V Policies, Protocols, Guidelines and Processes as Attachment 2 to EM&V Framework
  - Included in BCP filing
- Cost Study estimating all costs associated with the detailed M&V Plan

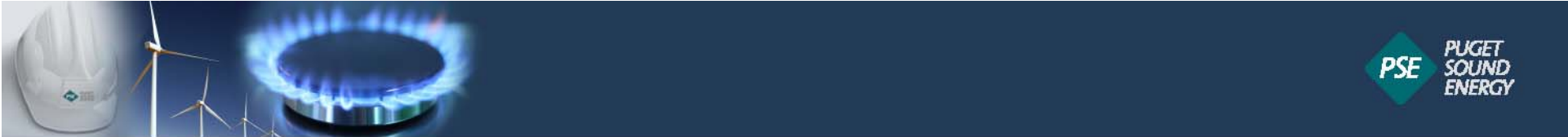


# Measurement & Verification – Report

## M&V Research Project -- Summary

- Draft of EES M&V Plan that includes policies, protocols, guidelines, and processes
- 3<sup>rd</sup> Party (KEMA) Contracted to partner on M&V Research
  - Best Practices & Literature Review Research
  - Interviews with other utilities
  - Interviews with PSE staff
  - Review of EES M&V-related processes
  - Develop & complete M&V cost calculator
    - Cost summaries at protocol, program, department, portfolio levels
  - Project Report & Recommendations
  - Determine 2012 Verification sample rates





# Measurement & Verification – Report

## Emerging Issues & Key Findings

- EE Industry is challenged to more specifically define & address M&V
- PSE EES has culture of continuous improvement re: quality assurance, quality control, measurement & verification
- Looking forward, EES to:
  - Continue data management improvements and integration
  - Enhance/Standardize M&V protocols for 3<sup>rd</sup> party programs
  - Finalize 2012 M&V plan



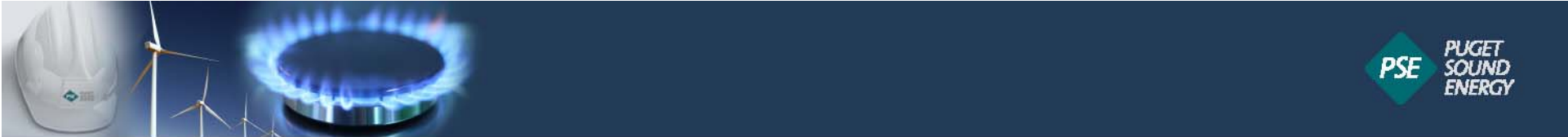


# Measurement & Verification – Report

## Cost Study – (Draft)

- 2011 Costs researched at the program level
  - Budget & Administration M&V functions excluded (e.g., program tracking, measure metrics, auditing)
- Cost summaries at protocol, program, department, portfolio levels
- M&V Categories
  - Design or modification of program rules, policies & measure descriptions
  - \*Data Management & Process Tracking
  - \*Energy Savings Verification
  - \*Assessment & Verification of 3<sup>rd</sup> Party Programs
  - Contractor/Customer Training & Relations Management
  - Documentation, Reporting & Optimization
- EES Program M&V Costs
  - Total \$2.6 million represents 2.7% of EES implementation budget

\* Sub-total -- \$2.3 million represents 2.4% of EES implementation budget



# Measurement & Verification – Report

## Next Steps

- Report to CRAG
  - M&V Policies, Protocols, Guidelines and Processes document in BCP
  - 2011 M&V Cost Study
  - 2012 Verification sample rates & 2012 M&V plan
- 2012 Implementation





# Biennial Conservation Plan Filing Readiness

## 2010 Electric Settlement Terms & Conditions Compliance Status




**Andy Hemstreet**

*Program Manager, Compliance*

October 20, 2011 CRAG Meeting



## 2012-2013 Exhibit 9

- March, 2011, PSE introduced the Condition Compliance Checklist.
  - Extended version, with RCW, WAC and Commission order references,
  - Summary checklist version, 
  - Updated quarterly in CRAG meetings.
- PSE will include the Checklist as Exhibit 9 of the 2012-2013 Biennial Conservation Plan (BCP).





# 2010-2011 Requirements and Conditions

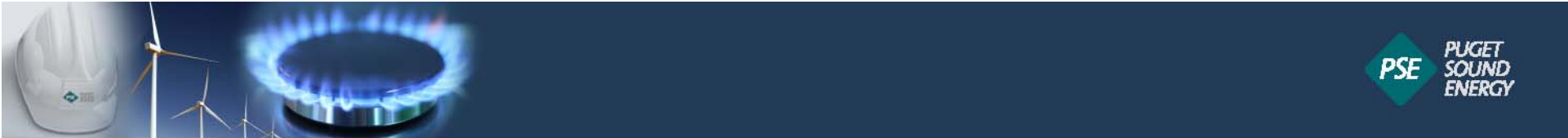
Description	Number
<b>Total</b> , not including explanatory sub-paragraphs	<b>70</b>
Rules, preamble, not actionable, no deliverable condition	10
2012-specific deliverable	5
Total 2010-2011 actionable requirements and conditions	55

Completed in 2010	9
Completed in 2011:	
January	1
February	6
March	5
April	3
May	5
June	0
July	1
August	8
September <sup>1</sup>	12
October	3
November	1
December <sup>2</sup>	1
<b>Total forecast completed 2010-2011 requirements/conditions by YE2011</b>	<b>55</b>

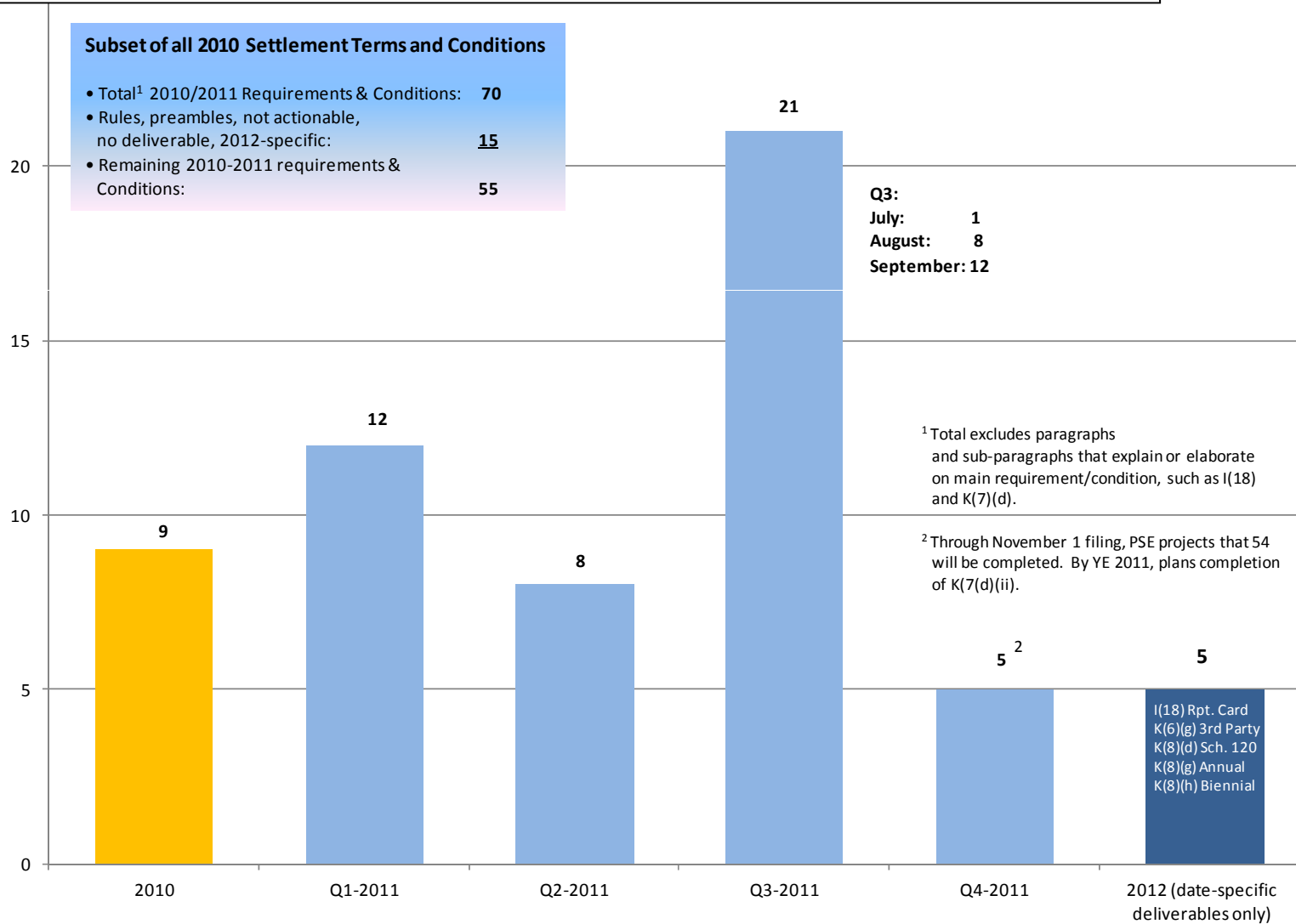
Pending

<sup>1</sup> Although condition K(6)(g) is 66% completed, PSE will not classify the Third-party Savings Review as "complete" until the third deliverable is satisfied.

<sup>2</sup> Condition K(6)(f)(ii) included, although M&V study may not be complete as of the date of the BCP filing on November 1, expected completion by YE2011.



# 2010-2011 Requirements and Conditions





# 2010-2011 Requirement and Condition Compliance

## Summary

- 2010 Electric Settlement Terms and Conditions<sup>1</sup> used the 2002 PSE GRC Settlement Terms for Conservation<sup>2</sup> as a foundation.
- PSE has been abiding by the Stipulation Agreement for eight years.
  - CRAG input has been invaluable, allowing for continuous improvement of the content of PSE's reports, documentation, and information provided.
  - Annual electric conservation savings increased from 9 aMW to over 38<sup>3</sup> aMW. Annual gas conservation savings increased from 700,000 to over 4 million<sup>3</sup> therms.
- PSE has met the added conditions (for instance, EM&V-related, one-time conditions, annual conservation planning, budget details, etc.).
  - Provided an opportunity to document existing processes, and engage the CRAG in these activities.

<sup>1</sup> Docket No. UE-100177

<sup>2</sup> PSE General Rate Case, Docket Nos. UE-011570 & UG-011571

<sup>3</sup> Based on current PSE 2011 forecasts



## 2012-2013 Biennial Conservation Plan

- PSE will continue to operate in compliance with the ongoing obligations of the 2010 Settlement Terms for Conservation.

### 2010 Electric Conservation Settlement Condition B(4)(a):

Except where expressly stated, the conditions in Section K and all other provisions of this Agreement are intended to remain in effect notwithstanding the biennial review conducted under the Energy Independence Act.



# Biennial Conservation Plan Filing Readiness

## 2012-2013 BCP Content Overview



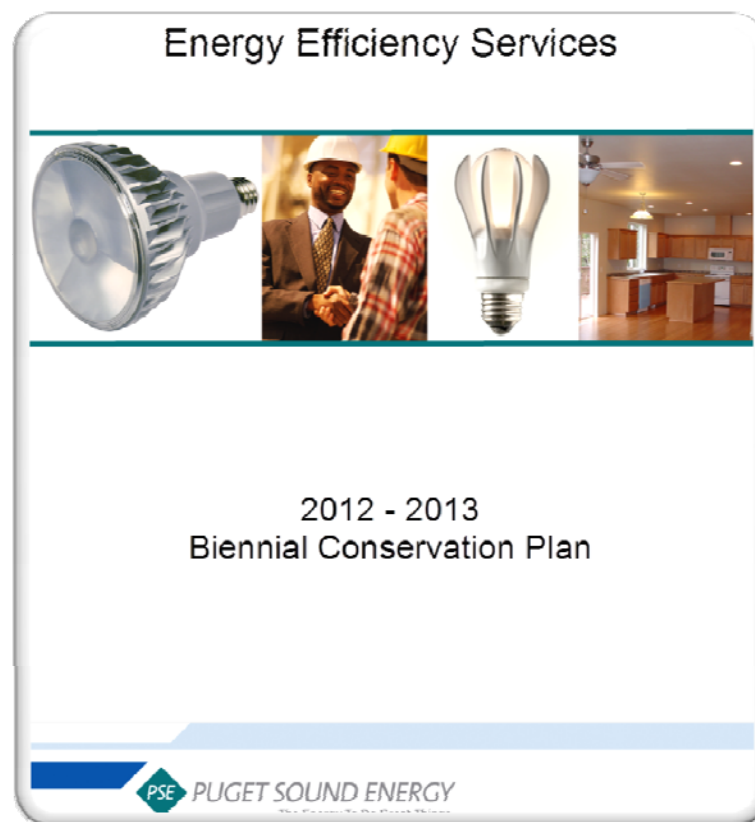
**Andy Hemstreet**

October 20, 2011 CRAG Meeting



# 2012-2013 Biennial Conservation Plan

- The BCP filing will consist of:
  - “The Plan”
    - Executive Summary
    - Introduction
    - The Conservation Plan, by program
  - Exhibits

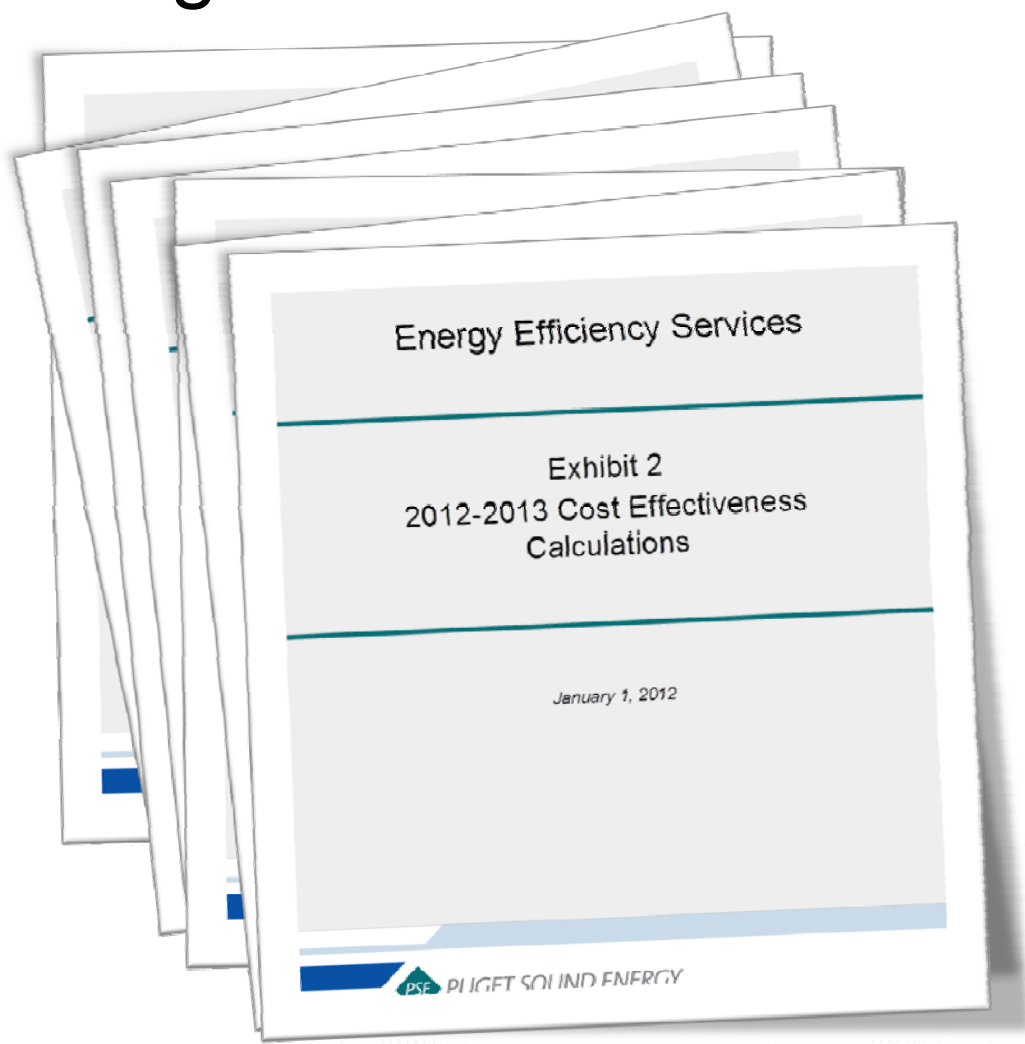




# 2012-2013 BCP Supporting Documents

## Exhibits

- 1: Budget Details  
(drafts provided September 1)
- 2: Cost-effectiveness Calculations<sup>1</sup>  
(draft reviewed in September 29 meeting)
- 3: Program Details  
(drafts provided September 1)
- 4: List of Measures, Incentives & Eligibility
- 5: List of REM and BEM rebate measures
- 6: Evaluation Plan
- 7: Marketing Plan
- 8: EM&V Framework  
(Final version provided to CRAG August 19)
- 9: Condition Compliance Status  
(Full version, rather than Checklist version)
- Revised Tariffs



<sup>1</sup> Avoided Cost and Cost-Effectiveness write-ups are also included in Exhibit 2.





# BCP Filing Supporting Documents

## Concurrent with the Biennial Conservation Plan, PSE will file



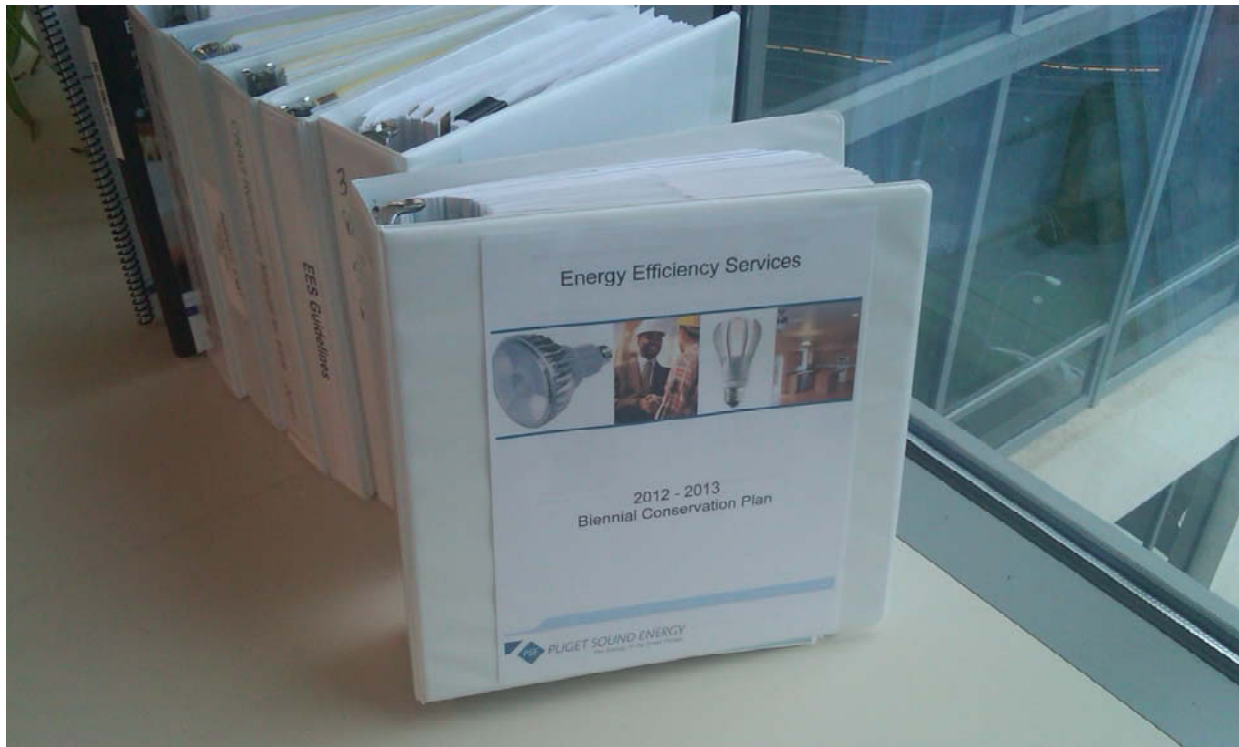
- Revised Tariffs (drafts reviewed on September 29 and provided October 3)
- Ancillary filing documents
  - Pertinent IRPAG meeting presentations
  - Applicable CRAG meeting presentations and summaries
  - Selected IRP chapters and Appendices
  - Relevant Statewide workgroup documents

## In a similar timeframe with the Biennial Conservation Plan, PSE will file its revised tariffs

Drafts reviewed on September 29 and provided October 3



# 2012-2013 BCP Binders will be on the way!





# Third-party Savings Review

Phase Two



**Applicable conditions: K(6)(g)**

**Bill Hopkins**

*Manager, Strategic Planning and Market Research*

October 20, 2011 CRAG Meeting



## Project Status/Next Steps

- 2011 program review now under way
- Finalize Phase 1 report
- Detailed review: finalize scope and start work ASAP



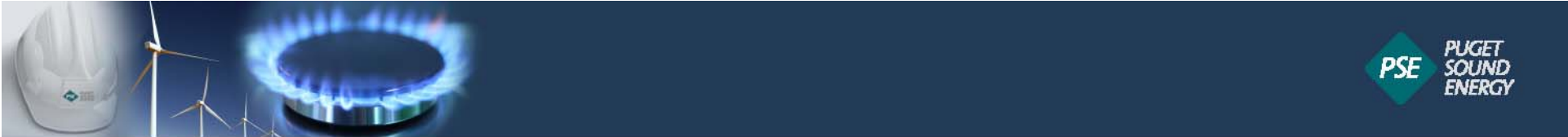
## Sept 29 CRAG Takeaways on Detailed Review

- Focus on verification of savings
- Emphasize use of site visits and/or participant interviews wherever appropriate
- Broader coverage across programs (SF retrofit program originally excluded from detailed review)
- Minimize overlap with other EM&V work already under way or planned in near future
- Reaffirmed that this project is not a full impact evaluation of programs



# Task 4 Detailed Review Scope (revised)

T4 Detailed Review Description	Total Cost	Description of scope
<b>4A E253: RCM program (35 projects)</b>	\$101,000	Randomly select 35 of 2010/2011 first half projects (yields 10% precision @ 90% confidence). Review full project files and assess how savings verification and calculation was performed.  Select 50% of these projects for detailed interviews with customer RCMs and PSE program staff.  Select 50% of interviewed projects (approx. 9) for onsite visits to collect additional data and further verify actions taken and savings achieved for key measures.  Results for each sampled site aggregated to reach general conclusions about the veracity of 2010-11 savings, as well as recommendations for verification and documentation, if needed.
<b>4B E215: Single-family new construction program</b>	\$3,000	Meet with program manager, request and review additional files for projects associated with large homebuilder.  Site inspections would be covered in 4E.
<b>4C Measure installation verification practices</b>	\$14,000	Collect additional data from PSE and third party program implementers on inspection procedures and practices, sampling goals and actual counts, and tracking reports and data collected.  Interview program implementers regarding documentation and processes.  Any site inspections or ride-alongs deemed necessary to understand verification practices would be covered in 4E.  Note: this effort will be defined to not overlap with the recently-concluded programmatic M&V study, nor with the imminent single-family residential impact and process evaluation.
<b>4D Verification of database linkages</b>	\$4,000	Drop, per per feedback from 9/29/11 CRAG meeting.
<b>4E Targeted on-site verification (140+ projects)</b>	\$94,000	Focus on 10 of 24 REMBEM program domains not covered by recent/current evaluations, and where onsite inspections likely will yield meaningful information.  Using 2010/2011 first half project samples chosen for the Task 1 file review as a sample frame, select 141 projects for inspection (see detail sheet) .  Visit site and confirm, through interviews and inspection, that measures associated with project were fully installed and operational. Aggregate results and develop overall findings.  Budget includes \$20 gift cards as participation rewards for residential customers.
<b>10% Contingency</b>	\$21,200	Covers unforeseen but desired work, should additional issues or complications arise during the detailed review. For instance, if significant discrepancies are found in one area, this fund could be used to perform the additional verifications necessary to determine a potential savings adjustment.  PSE/UTC may stipulate that the review team would need explicit authorization to be able to use these funds.
<b>TOTAL</b>	<b>\$237,200</b>	



# Project Budget

Item	Amount
Actual to date (including avoided cost detailed review)	\$ 190,000
Remaining gross savings review and general tasks	\$ 50,000
Detailed reviews	\$ 212,000
Contingency (10%)	\$ 26,000
<b>TOTAL</b>	<b>\$ 478,000</b>
<b>Original budget</b>	<b>\$ 259,000</b>

Detailed Review  
Target Complete Date:  
March 31, 2012  
(approximate)





## CRAG Follow-up

Questions on:

Savings

Budgets

Program Details

Tariff Schedule Revisions



**Bob Stolarski**

October 20, 2011 CRAG Meeting



# BCP Updates Since September 29 CRAG Meeting

- Exhibit 1, 2012-only view
  - Percent evaluation line calculation was pulling from incorrect cells, affecting the overall percentage. That has been corrected.
    - Correct values are: 2.4% electric, 4.2% gas
- Exhibit 1, Biennial Portfolio view
  - Notable adjustment
    - REM Single Family New Construction, Gas
      - Approximately \$230,000 reduction (-30%), resulting from a reduction of the ENERGY STAR Homes bonus incentive on the natural gas side by 60% to ensure program remains cost-effective.
  - Overall effect on portfolio with rounding
    - Less than 0.15% reduction of overall budget
    - Less than 0.01% reduction of MWh target value
    - Less than 0.05% reduction of therm target value



# Biennial Conservation Plan Filing Readiness

***ARE THERE ANY KNOWN ISSUES THAT WOULD PREVENT YOU FROM SUPPORTING THIS BCP FILING?***



## Wrap-up and Upcoming Dates



Dan Anderson

October 20, 2011 CRAG Meeting



## Wrap-up

**2011 IN REVIEW**  
**THANK YOU!**

2011 involved an impressive amount of CRAG review, engagement, teamwork, and input.

**We appreciate your commitment to the  
CRAG Vision!**



# 2011 IN REVIEW

## Meetings

- Seven in-person CRAG meetings
- Two Schedule 258-specific sub-committee meetings
- Three HER-specific sub-committee meetings
- Three EM&V Framework sub-committee meetings
- One on-premise audit (zero audit findings—a streak going back to 2002!)
  - In addition to a full day program orientation audit preparation
  - PSE provided comprehensive responses to detailed audit questions with less than one day's notice
- Planned eighth in-person CRAG meeting or field trip (Refrigerator Decommissioning recycling & Multifamily Direct Install)



# 2011 IN REVIEW

## PSE Deliverables

- 55 (by YE2011—see slide # 19) completed requirements and conditions
- 42 CRAG meeting action items generated
  - 97% of PSE action items will be completed/closed by YE2011
    - Including 4 that are “on-going,” 4 are “PSE open” (2 will be completed by YE2011), 2 are other-than PSE
- In February, PSE presented the most comprehensive Annual Report revision in over seven years
  - Provided a complete view of EES
  - Included new and valuable Exhibits, including measure revision tables, measure counts by program. and savings adjustment tables, for instance
  - Updated content and formatting in response to an informal request by WUTC Staff in 2010
- A Semi-annual Report that detailed program progress and changes to plans
- 3 quarterly updates to Exhibit 4 (Measures list), 2 updates to Exhibit 3 (Program Details)
  - Added a new Exhibit 4 measure revision detail table, documenting business cases
- Five outside evaluation reports provided (By YE2011), having a bearing on over 40% electric, over 30% gas portfolio savings.



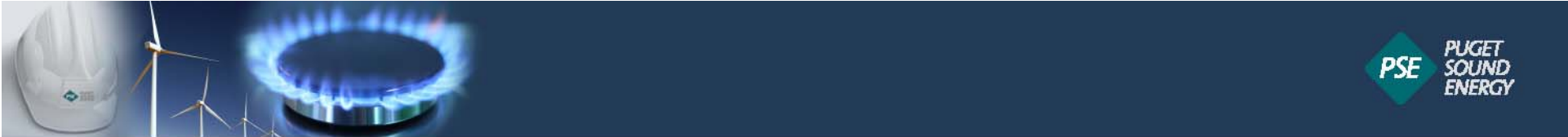


# 2011 IN REVIEW

## Correspondence

- EES's Compliance Team delivered over 30 informational emails with standardized subject line to improve prioritization.
  - Meeting invites, meeting summary notes, Exhibit revisions, measure lists, requests to review reports, etc.
  - Not including those directly from EES managers, evaluation analysts, etc.
- PSE received and provided responses to over 40 question sets<sup>1</sup> (22—Sch. 258, 13—2011 Schedule 120 filing [*not related to Sch. 258 or HER*], 2—BCP, and 3 Misc.)
  - HER-oriented question sets number over 70 in 2011, including questions posed during Schedule 120 filing in March

<sup>1</sup> Excluding GRC data requests and HER question sets.  
“Sets” sometimes included multiple questions on one topic.



# Upcoming Meetings


- November 17, 2011 (Meeting? Field trip?)
- 2012 meetings
  - Condition K(3)(b) requires two semi-annual face-to-face, and at least two conference call (or face-to-face) meetings per year
  - Doodle link, suggesting dates that are associated with key 2012 deliverables

<http://www.doodle.com/2xr3s8ttw7if5aqt>

- March 29: After March 1 Schedule 120 filing (in-person)
- June 29: After June 1 biennial conservation report filing
- October 18: Draft 2013 ACP readiness (in-person)
- December 13: After November 1 2013 ACP filing



# Handouts

- Q3-2011 Condition Compliance Checklist 
- 2011 CRAG meeting action item list
- 2011 IRP extracts, in response to CRAG Meeting Action Items #33 & #34
- REM showerhead delivery matrix
- SBW Third-party Site Visit Sample
- Evaluation team input on evaluations affecting 2010 savings



# Attendees

## Facilitator

Dune Ives

## CRAG Members

Chuck Eberdt (Conference call)  
Danielle Dixon  
Tom Eckman  
Stefanie Johnson  
Mary Kimball (call in for HER discussion)  
Chuck Murray  
David Nightingale  
Stan Price  
Paula Pyron  
Irion Sanger (Conference call)

## PSE

Cal Shirley  
Bob Stolarski  
Dan Anderson  
Eric Englert  
Syd France  
Bill Hopkins  
David Landers  
Jeff Tripp  
Andy Hemstreet

## Guests

October 20, 2011 CRAG Meeting