



# Consumer Lighting Focus Groups

Prepared for:

Puget Sound Energy  
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# EXECUTIVE SUMMARY

## Background and Purpose

Puget Sound Energy is interested in obtaining a qualitative evaluation of how its customers shop for light bulbs and what kinds of perceptions they have about different types of lighting. The main objective of the research is to help guide the creation and implementation of communications and marketing materials designed to educate and inform consumers about energy efficient lighting technologies.

## Methodology

Two focus groups were moderated by Patricia Glazer of the Gilmore Research Group on May 3, 2012. The groups took place at 5:30 and 7:30 pm at the Fieldwork Seattle – Kirkland facility in Kirkland, WA. Each session had 10 participants and each continued for 90 minutes in length.

Discussion spanned many topics including motivations for buying, types of bulb last purchased, familiarity with bulb technologies, terminology of lighting, evaluation of packaging and displays and reviews of point of purpose communications and outreach materials designed to inform choice of energy efficient lighting products.

The moderator's discussion guide for the study is included in the Appendix along with a Demographic Profile of the groups, examples of 5 callout statements ranked by participants, and a copy of the screening questionnaire used for recruitment.

## Key Findings

- 1. Types of Lighting Used at Home and Light Bulb Purchase Frequency:** Many participants said that they use a mix of several types of energy efficient lights, as well as incandescent lights in their home fixtures and in their lamps. Purchase frequency varied greatly in both groups. While some said they purchased light bulbs in the last week or two, others remarked that they couldn't recall their last purchase.
- 2. Motivations for Buying Light Bulbs:** Participants said they most often buy light bulbs to replace burned out bulbs. Secondary reasons for buying are to install new lights in newly purchased lamps, to stock up during sales and to improve the performance or look of a light. Some residents said they are not happy with CFLs because they brighten too slowly and they have an unusual size making them inappropriate for some fixtures.

**3. Steps Taken in Purchasing Bulbs:** A majority of participants said they have a good idea of what they need before they leave the house to buy bulbs because they usually have to replace burned out bulbs. Nearly all would match the purchase they make to the wattage specified on the burned out bulb, or the wattage specified on lamps and on light fixtures.

They choose retailers on the basis of convenience, price, store size (larger stores have a wider selection) and sales help. Key drivers motivating light bulb purchases are price, size, appearance, name brands and product longevity.

**4. Terminology of Lighting:** Although there is good overall awareness of many lighting terms, there is limited understanding of what some mean. Most participants were unable to define terms such as lumens, Kelvin, color, color rendering index and bulb longevity.

**5. Packaging and Displays:** Many participants said they notice rebate information on the packaging of lighting products they intend to buy, but they do not generally seek out rebate information about lighting products they do not want. Overall recall of the PSE logo associated with lighting products was very minimal.

Many said they would welcome having PSE endorse a lighting product. Although some said they would be interested in having a PSE-manufactured product, others were concerned about the suitability of having a public utility involved in the creation and selling of consumer goods.

**6. Evaluation of Point of Purchase Materials:** Participants would generally prefer to see a point of purchase message (“Instant Savings are Re-Energizing”) with the standard PSE logo and name appearing at the bottom of the signage. They were not inclined to accept the logo in a vertical position, nor were they in favor of having the PSE website address substituted for the logo and name. Many said they would prefer to have an “Instant Savings are Re-Energizing” message as a headline on a vertical poster showing a \$ rebate amount and \$ savings information. The poster should include the PSE name, logo and website address.

**7. Rank Order of Callouts:** *Instant Discount with Puget Sound Energy* achieved a number 1 or 2 ranking among 73% of respondents (or 14 out of 19). *Instant Savings is Re-Energizing* came in second place with 42% of respondents assigning a rank of number 1 or number 2.

**8. Evaluation of Retail Lighting Displays:** Participants said they found 3 out of 4 retail lighting displays very useful. They did not seem to like the display titled, “Energy Efficient LEDs” because they felt that the information presented in it was too basic. Their evaluation may be partially linked to the way the 4 displays were presented on a single sheet of paper as a collage of ads. Because the “Energy Efficient LEDs” ad makes minimal use of color and of pictures compared to the others, it may have been less eye-catching.

**9. Evaluation of Lighting Facts:** Participants evaluated two labels created by government agencies that were designed to appear on light bulb package labels. One was a color label with graphics that was produced by the Department of Energy. The other was a black and white print label produced according to the Federal Trade Commission specifications. The groups evaluated these labels as a side-by-side pair on a single sheet of paper.

As a comparison pair, each label drew different comments from participants depending on whether the person making the remark was more drawn to color and to graphics, or to print. The consensus

of evaluation was that an ideal display would offer the DOE chart as a shelf display, and the FTC label as part of the product packaging.

**10. Evaluation of PSE Lighting Information:** Many participants said they found much of the information presented in “Lighting Choices are Re-Energizing,” the first side of the 2-sided display, to be very useful. Somewhat fewer were so enthused about the second side of the display, “Choose Your Bulb.” However, they said that having the two combined as a back-to-back display would be extremely effective.

The NRDC matrix of lighting equivalences gathered mixed reviews, with the 5:30 group more positive about the display than the 7:30 group. The main criticism given by those who did not like it was that the chart looked “too busy.” It is important to point out that some of this criticism may be due to participant fatigue due to the abundance of materials evaluated over the course of the session combined with the later hour at which it occurred.

## Conclusions and Recommendations

1. Unless they are buying lights for new fixtures or replacing specialty bulbs for existing fixtures, most consumers do not seek out lighting information prior to leaving their homes. Therefore, energy efficient lighting information and information about lighting equivalencies would be most effective if presented at point of purchase locations.
2. Most consumers have a fairly limited understanding of advanced lighting terminology. Additionally, they do not seem to be overly interested in extending their knowledge of lighting beyond what they need to know to make a purchase. This suggests that signage and lighting displays should play down the use of advanced terms unless there is a special need to publish formal definitions of these terms to fully inform buyers.
3. There is evidence that consumers are interested in having a PSE endorsement presented on the packaging and the display of lighting products. Endorsement information on packaging and displays should include standard placement of the PSE name and logo.
4. The Energy Star federal endorsement is most associated with appliances and seems to have little value to consumers when they decide on which light bulb to purchase. Therefore, it recommended that if packaging or signage space is limited, PSE substitute more relevant energy efficiency information for the Energy Star.
5. A PSE rebate poster would be most effective if it includes the PSE name and logo, the PSE website address, the dollar amount of rebate given and the message that the rebate is given at the time of purchase (instant discount).
6. Focus group participants preferred the callout, *Instant Discount with Puget Sound Energy* ahead of all others. It is recommended that this message be promoted in signage and displays rather than *Instant Savings is Re-energizing*. This is because it was more widely

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understood and widely liked than *Instant Savings is Re-energizing*, which may imply later savings either in a rebate or lower energy savings, which were not as attractive at the time of purchase.

7. Of the two types of lighting information presented, one by PSE and the other by NRDC, participants strongly preferred the 2-sided PSE display *Lighting Choices are Re-Energizing/ Choose Your Bulb*. It is recommended that this display be used instead of the matrix of lighting equivalencies paired with cost figures. Several participants found the matrix too difficult to comprehend.

## DETAILED FINDINGS

Each group began with a general discussion about the type of lighting that participants have in their homes, what they think about the lighting in their homes and their most recent purchases of light bulbs.

Many participants said that they use a mix of several types of energy efficient lights, as well as incandescent lights in their home fixtures and in their lamps. Few managed to recall the word incandescent, but called them the regular or traditional bulbs. Some mentioned halogen and CFLs or the corkscrew type. LEDs did not tend to come up initially but later in the discussion. They also often mentioned that their home lighting interests are often guided by specific needs. Some needed brighter light in work or reading areas, while others like warm or soft light for comfort areas. Following are some of their comments:

*I use a lot of different kinds of lights. As far as lamps – I like the 3-ways – but I get tired of when they burn down to one level of brightness.*

*I use the corkscrews for areas that don't need as much light. For the kitchen and areas that need more light, I buy a little bit of each kind (incandescent and CFLs). I usually buy two or three at a time.*

*I use accent lighting for my living room.*

*I have so many different bulbs in my house – canned ones, lights in the chandelier, the ones in my kitchen. I use all different types.*

*It depends on what it's for – is it for reading, is it for the hallway (there it has to be attractive), the laundry room, it totally depends on the area – what I'm using it for.*

Purchase frequency varied greatly in both groups. While some said they purchased light bulbs in the last week or two, others remarked that they couldn't recall their last purchase.

## Motivations for Buying Bulbs

Asked to name their motivations for buying new light bulbs participants most often said they needed to buy replacements for burned out bulbs. They also said they purchased light bulbs because they needed installments for new lamps or new permanent fixtures in their homes and to stock up during advertised sales or during sales discovered while shopping for other items. Some said they buy lights when they are not happy with the performance of bulbs in use.

*You need a certain wattage for a new lamp – or you need a specific type for a fixture in the bathroom. ...*

*I have can lights all throughout my house – I usually buy a case so I don't have to deal with it; that way I have the same light all around the same area in the house. I do this because not all lights have the same look, the same brightness.*

*I watch the paper and look for sales; I buy both the energy efficient kind and the regular ones.*

*I look for good prices on 6-packs – I go to Costco.*

*For me it's price. I just go with the cheapest deal; maybe get a few of them if it's a good deal.*

*I wanted to replace what I had with something that was more aesthetically pleasing, and something that had an 'instant on' and I wanted to upgrade.*

Pressed to specify more precisely the reasons for last buying certain types of bulbs, two or three participants said they were interested in matching color or shape with companion bulbs set in a light fixture. Several said they wished to have energy efficient lights and at least one person said he needed to have a certain type of light for personal comfort.

*I needed one of those little ones – a thin one, not a regular size. I needed it for a chandelier light.*

*I sometimes look for color; when you have a light fixture that has 3 or 4 bulbs, you want to make sure that the bulbs you replace have the same color as the ones that are already in there.*

*I bought energy savers – 6 or 7 of them. I use the energy efficient ones outside, just because they're on all the time.*

*I have basically soft light because it's very soothing to my eyes, and that's what I bought.*

Although most participants said they were satisfied with their purchases, a few said they were unhappy with trial uses of CFLs bulbs because of the bulb's unusual shape and what they described as a problem of having them too slowly brighten when activated.

*The corkscrew energy efficient lights – they stick out – the lampshade won't fit over it – the bulbs stick up too far.*

*I care now about how things look – the corkscrew kind can stick out – I like the energy efficient ones, but next time I replace things, I'm going to give how things look a little more thought.*

*I care about the aesthetics too. For the can lights, the energy efficient ones stick out too low. I didn't want that at all. I was experimenting.*

*Those CFLs take longer to warm up, to get brighter.*

*The CFLs don't seem to produce enough light. I like the old-style lights for outside. They're brighter.*

*Those spiral ones – don't they get brighter as they burn? I notice this on my porch light.*

## Steps Taken in Purchasing Bulbs

A majority of participants said they have a good idea of what they need before they make a light bulb purchase, because they said they make most purchases to replace burned out bulbs. Using incandescent lights as the basis of comment, almost everyone said they would match the purchase they make to the wattage specified on the burned out bulb. A few also pointed out that some bulbs need to be in compliance with electrical requirements (in wattage) posted on lamps and on light fixtures.

*I usually double check before I go, because I want to make sure that I get exactly the same as what I need to replace.*

*I'll replace the same thing that burned out. I try to stick with what we've got, and buy a couple of packs.*

*I'll look in the fixture to see what kind of wattage I can't exceed.*

*You have to make sure that the bulb is in concert with the requirements of the fixture. You go by what the fixture says you should get.*

*I get whatever's needed in wattage for a special lamp or fixture. We replace the same thing that burns out. This is the only way you can make sure that it's going to fit, if it's going to work and also look the same.*

A few participants said they decide at the store, but some said they are confused by the type of information they sometimes find there and on the packaging.

*I think it's very confusing – you read things on the packaging, and you get it home, and the light isn't right, or it comes on too slowly.*

*I look at the packaging and on the shelf to check wattage. I'll pick up a package and look at the base of the bulb.*

*I look for information at the store that tells me what the equivalency is in wattage for fluorescent bulbs.*

*On the packaging it will have some sort of model number. The packages tell you a lot of information.*

*I think figuring out the equivalency is difficult. It's frustrating. I feel like I have to Google it first to find out what I need.*

*I don't believe what they say on the outside of the package – I have to replace them more often than what they say I should.*

Asked how they decide which store to go to for light bulbs, participants said they choose on the basis of convenience, price, store size (because multiple brands and styles are available at volume retailers) and sales help. And nearly all respondents answered *no* when probed to specify whether they ever feel overwhelmed with the large number of light bulbs for sale at large hardware stores.

*If my bedroom light burned out, I'd go to my cupboard and see if there's something in there that would fit. If not, well then it would depend on where's the most convenient store. I'd buy whatever's at the grocery store, if it fit. Otherwise – I'd probably go to Home Depot. Last time I went to Bartell.*

*I like McLendons. They almost always have something on sale in the fluorescents.*

*Selection is better at the larger hardware stores and the neighborhood hardware stores, but for supermarkets and drugstores, the selection is more limited – they don't have the specialty bulbs.*

*Lowe's, Home Depot, they're all fine - everybody goes to the big stores sometimes for bulbs.*

*I like Costco, or Ace – Ace is the closest to my home – I just run up there - but I always buy more than I need, a 4-pack or 6-pack, just to have reserves - just so I don't have to go back again and again.*

*I just go to Bartell's because they always have the emergency bulbs for you right there.*

*I go to Lowe's. The sales people there help me. I ask for help.*

Participants in both groups named the following features as key drivers motivating their retail purchase of light bulbs.

- *Price*
- *Size*
- *Appearance – especially for specialty bulbs*
- *Name brands – these last longer than store brand*
- *Longevity, is it a 2-year or a 4-year life span? CFLs are supposed to be guaranteed for 2 years, but I had one burn out right away – I bought these at Costco. I think you have to do a study on how long the lights are kept on – there's a lot of difference from house to house.*

## Terminology of Lighting

When participants in both groups were asked to call out familiar lighting terms or terms they associate with lighting technology, they came up with the following list.

- *Energy efficient – this implies that you're getting more light for less energy;*
- *Lumens – this means the amount of light; the brightness of the light; how much area it lights; the strength of the light, the output;*
- *CFLs*
- *Wattage – this tells me how bright it is; it's my connection to what I'm used to in the old system; electricity it takes to generate the light; you need to know maximum wattage of what a lamp can take or it can cause fires;*
- *Lifetime (measured as hours or years of use)- this tells me how good a buy it's going to be, especially for energy efficient ones;*
- *Color (warm or cool) – there's a cool white, a bluish light and a yellow light. There are differences. The fluorescents all have different shades of color. You don't know what type of color it is until you turn it on;*
- *Clear/frosty*
- *Shatterproof*
- *Cost per year to use*
- *Daylight/full spectrum color*
- *Size*
- *Base type*

One participant in the 7:30 group, an engineer, said that although he understands the terminology used to describe attributes of lighting, he does not believe most people do, and he believes there is a need for commonality of terms.

*There has to be some standard nomenclature to make sense of these terms, in relation to known factors. The average person hasn't got a clue.*

During conversation about light color, and without prompting by the moderator, one or two participants discussed what they knew about the *Kelvin scale*. In related discussion, another participant offered her thoughts about the *color rendering index*. There was some disagreement as to whether color is consistent for similarly manufactured bulbs.

*The fluorescents all have different shades of Kelvins – the color temperature is measured in Kelvins – the range is I think 6000 to 3000; I really like 4500. It's really light – bluish light.*

*There are numbers on the packaging that I think tell you what the color is; the color rendering index. I think this is Kelvins.*

*The only consistency you have is by manufacturer – GE calls it one thing and Westinghouse calls it something else. Different brands use different names.*

*It's trial and error now – you buy bulbs and see what works. I buy anywhere from 2 to 6 – I take them back if they don't work for me.*

Although a few participants said they were aware of the Energy Star federal product endorsement, no one was able to provide any definition of what it means. They were familiar with it from appliance purchases. One participant said she would be more likely to purchase a bulb if it featured an Energy Star on the package.

No one in either group was at all familiar with the Energy Independence and Security Act (EISA). One person asked whether it referred to government action: *does it mean that they're going to get rid of the incandescent bulbs?*

There was varied understanding of LEDs across the two groups. The level of knowledge ranged from a few participants having fairly vague impressions to three or four having relatively extensive awareness of the technology. During discussion of other lighting topics, one or two participants in the first group gave their opinions about the longevity, brightness and price of LEDs:

*I think of them as being used outside, but I don't think they're bright enough for Xmas lighting. I don't think they're bright enough indoors either.*

*I think they last longer – like 5 years.*

*I know they're very expensive – at least \$10 a bulb; but they last a long time – at least 10 years, on average.*

*I look around for a good price, especially for LEDs – I'm waiting for the price to come down on those. I think they add another double to lighting efficiency.*

An engineer in the second group offered an educated opinion that prompted wider conversation about LED disposal.

*LEDs are brighter, they last longer and they're more energy efficient. They don't have mercury. LEDs are a solid state device. But they're more expensive - they are overpriced.*

*I know that if I saw two lights that I liked and one of them had mercury I would not buy the one that I would have to worry about disposing of (the one with mercury). That would impact my buying decision. If getting rid of one is a lot harder than the other – that would affect me. There's an inconvenience factor and I think it outweighs any kind of savings you might have gotten from the bulb.*

## Packaging and Displays

Many participants said they notice rebate information on the packaging of products they intend to buy, but they do not generally seek out rebate information about products they do not want. Overall recall of the PSE logo associated with lighting products was very minimal. Although several participants mentioned seeing and/or taking advantage of PSE rebates for large appliance purchases, only one or two said they noticed a PSE endorsement or rebate for light bulbs.

*I think I've seen one in the PSE bill sometime – a flyer that says which stores to go to that give rebates, like Bartell.*

*I'm not an impulse buyer so these don't really affect me, unless they get me at the right time! And PSE got me at the right time a couple of years ago with a \$2 off rebate on a bulb. This was when I was changing over all the bulbs to CFLs.*

More than one participant said they would welcome having PSE endorse a product:

*It would mean that they want us to buy something because it's more energy efficient.*

*They have our best interest at heart. PSE has a solid reputation.*

*If PSE endorsed: it would make the product more credible to me.*

*I would expect the quality to be top notch.*

However, the groups generally held mixed impressions about having a PSE manufactured product:

*I guess I would really consider it.*

*I would wonder about it... this is a public utility, what are they doing getting involved in selling products?*

Asked how they felt about having instant rebates/instant discounts versus mail-in rebates, participants agreed that they would rather take advantage of getting a price discount at the register when they purchase a product. In addition to having *instant gratification* as one person reasoned, participants said some consumers may feel vulnerable to having future, unsolicited offers from the seller.

*I'd rather do this than have to sign up for something. I don't want to add anybody else to my email list.*

Although a few people said they have noticed Point of Purchase marketing materials for other products in stores, only one person recalled seeing a comparison chart of incandescent lights, CFLs and LEDs alongside a retail lighting display.

## Evaluation of Point of Purchase (POP) Materials

Participants in both groups were asked to evaluate four POP signs that may be used to associate energy efficient lighting products with a Puget Sound Energy endorsement or rebate. To begin the exercise, the respondents were asked to name the colors that they associate with PSE. Many said *blue and white* and one or two said *green*. However, most said they would not associate the PSE blue and white with energy efficient products because they believe the color green better denotes energy efficiency.

The message consistent in all four POP examples was “Instant Savings is Re-Energizing.” Although several participants said they found pairing the concepts “savings” and “re-energizing” confusing, one said she liked the *whole re-energizing thing; I think they’re trying to save our future*.

The materials varied in the following three ways:

1. In alternative signs, the PSE website address (PSE.COM/ReENERGIZE) was substituted for the PSE name and icon. Although the website substitution was liked by one or two, it was mostly disliked.



*Go with the logo that you’re used to seeing. Don’t go with the website one.*

*The website is relatively easy to read, but I don’t want it in place of the PSE. I want it in addition to the words and the PSE logo.*

*This one means you have got to get to the website and look at it. I’d never do that – too much trouble. If this was a flyer in your bill it would work, but not here.*

2. Placement of the PSE name and logo was placed vertically, to the left side of the message. Several participants said they did not like this placement because they found it was too hard to read.

*I don't like having the name run up the side of sign.*



3. A vertical “poster” presented the message at the top, with a box to show the \$ amount of the PSE rebate and a box to show the \$ amount of the Original Price. Both the PSE website address and the Puget Sound Energy logo and name were placed at the bottom of the page.

Although most participants said they preferred the poster presentation ahead of other options, these two comments illustrate the divergence of participants’ opinion:

*It's a bit of a contradiction. Instant savings and rebate are confusing in the same sign – do you have to mail it in, or can you get it when you make the purchase?*

*I really like this one. It's easier to read. It gives the dollar amount. This is the one I'd go for. This has everything that you need. It's got it all.*



## Rank Order of Callouts

In a second exercise participants were asked to rank order from most favorite to least favorite a set of five statements designed to call attention to lighting products. These are displayed in the Appendix, with information summarizing how they were ranked shown below, in Table 1.

	#1 Rank	#2 Rank	#3 Rank	#4 Rank	#5 Rank
Instant Discount with Puget Sound Energy	47%	26%	16%	11%	0%
Instant Savings is Re-Energizing	26%	16%	11%	26%	21%
Energy Saving CFLs Puget Sound Energy	16%	11%	26%	0%	47%
Discounts Courtesy of Puget Sound Energy	11%	26%	37%	16%	11%
Recommended by Puget Sound Energy	0%	21%	11%	47%	21%

The statement, *Instant Discount with Puget Sound Energy* was the most popular of the five.

It was a top 2 choice for 73% of participants (or 14 out of 19). *Instant Savings is Re-Energizing* came in second place, with a top 2 rating among 42% of participants. *Discounts Courtesy of Puget Sound Energy* was ranked a number 1 or a number 2 by 37%.

Participants gave these reasons for ranking *Instant Discount with Puget Sound Energy* ahead of all the other possibilities:

*I get it right now.*

*It's simple and it gets right to the bottom line.*

*It's very clear and precise.*

*It's instant gratification.*

*To me, the discount means it's going to be a lower cost right now.*

Among the few who said they liked other messages better, one explained her choice in this way:

*I don't understand where I'm going to be getting the discount – do I have to go online, will it be in my monthly bill, where will it come from?*

Participants who said they liked *Instant Savings is Re-Energizing* better often said they thought this message was more *visually appealing*. They also said the message implies getting *longer term savings than the savings you get immediately on the bulb*. A person who gave it a bottom tier ranking however, pointed out that *the savings isn't clear – how much and when*.

Although the statement, *Discounts Courtesy of Puget Sound Energy* fell behind the other two in popularity, it was ranked highly by some participants for these reasons:

*Its impact on me is that I'm saving on the product and on energy.*

*It's straightforward; it doesn't bring in the retailer at all. It makes it seem more legitimate.*

*It makes me think of conserving energy.*

## Value of Having a How to Choose a Bulb Guide

Besides evaluating the callout statements and point of purchase materials, participants were asked to think about how much value they might get from a chart or a guide that would show them how to choose a light bulb. Most had not thought of the need independently.

Although most people seemed to be positive about the idea, they were not overly so.

*I would like a chart – it would help me decipher all the bulbs in front of me.*

*Knowing the life span of the bulb would help – years, hours whatever.*

*I would suggest that you keep it simple – you pretty much know what you need, you just want to go get it and get it over with.*

Asked where they thought the guide should be available for viewing, nearly all said they would prefer to have it on display at a retail store. This is because they believe most people give very little thought to light bulb shopping prior to purchase.

*You need it at the store, where you're making the decision. You know what you have to replace.*

*I would not insert this into my utility bill. This is the kind of information that would go right into my recycling.*

## Evaluation of Retail Outreach Information

Participants in both groups evaluated a set of materials designed to guide consumers in their purchase of energy efficient home lighting products. The set consisted of 4 retail lighting displays featured at Lowe's Hardware, two packaging labels - one created by the Department of Energy and the other created by the Federal Trade Commission, and a comparison chart showing types of bulbs and energy output that was created by PSE. These materials are displayed on the following page.

### Retail Lighting Displays

The participants evaluated each display as a set of four “panes” reproduced on one sheet of color paper. In this way, the displays could be compared closely, one against the other.

#### Lumens

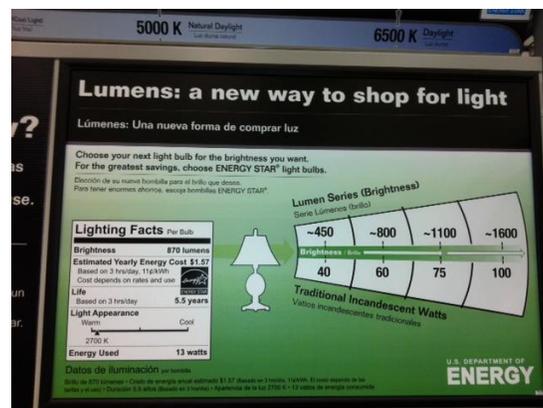
The sign titled, “Lumens, a new way to shop for light,” was widely acclaimed for offering a wide array of lighting information in an easy to understand format.

*It's an easy way to compare – it makes it easier to shop because it shows you the different types of lights, the energy efficiency you'll save.*

*Lumens – if I have to learn about it, this makes it easy.*

*It's much easier to understand than wattage.*

*It's nice to have a common language of usage.*



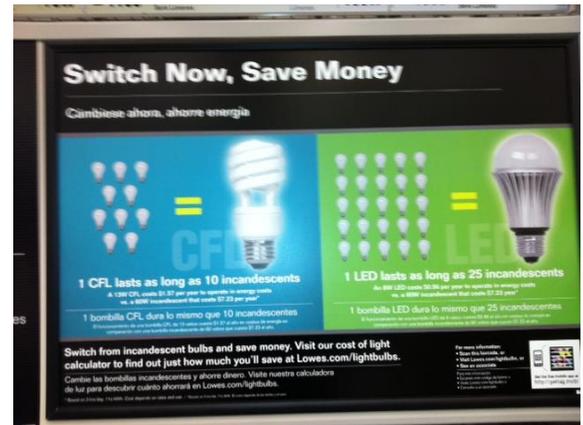
*I really like this one. It helps me visualize the distance that I'm getting – that's been my frustration lately, how far out the light will project; some bulbs are really focused.*

*I like the little box that has all the lighting facts - it's all there.*

### Switch Now Save Money

Although the reproduction of this display ad turned out to be very blurry, several participants said they liked it, primarily because it *quickly shows how you'll save*. It also reached out to one person concerned with how frequently he has to replace burned out light bulbs.

*I instantly thought of chandeliers – if I only have to change out all those light bulbs every 5 years, instead of a couple of times a year – well, that speaks to me, I don't have to drag the ladder in and out of the garage – it's off the honey-do list.*



### Change Your Room's Look

Most participants said they liked this display very much. They were drawn to the color differences shown in the charts, and they said they could easily associate each type of light with each color. Presenting the Kelvin measure beneath the halogen/CFL heading was another plus.

*It tells you how the light will look in your room - you know what to expect. The colors in the chart show this.*

*It gives me a better picture of what it means for room light.*

*Pairing the bulb names and the colors shows you what you're buying; but some of the terms don't seem to go with it – the yellow doesn't look relaxing.*

*It's good because it also gives you the Kelvins.*



### Energy Efficient LEDs

Participants had little to say about this display. Most agreed that the information presented seemed to be almost too basic. This impression may be partially linked to the way the displays were presented on a single sheet of paper as a collage of ads. Because this display makes minimal use of color and of pictures, it may have appeared to be somewhat humdrum in comparison to the three others presented in the group.



### Lighting Facts

The two labels shown below were designed to appear on light bulb package labels. Each provides consumers with lighting facts about lighting products available for their homes. The color label on the left was created by the Department of Energy and the black and white label on the right was created by the Federal Trade Commission. Both groups evaluated these labels as a side-by-side pair on a single sheet of color paper.

Cree LED Lighting

## lighting facts<sup>CM</sup>

A Program of the U.S. DOE

<b>Light Output (Lumens)</b>	<b>575</b>
<b>Watts</b>	<b>10.5</b>
<b>Lumens per Watt (Efficacy)</b>	<b>55</b>
<hr/>	
<b>Color Accuracy</b> Color Rendering Index (CRI)	<b>92</b>
<hr/>	
<b>Light Color</b> Correlated Color Temperature (CCT)	<b>2700 (Warm White)</b>
	
2700K	3000K
4500K	6500K

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: KBNH-X2L3K5  
Model Number: CR6-575L  
Type: Recessed downlight

### Lighting Facts Per Bulb

<b>Brightness</b>	<b>870 lumens</b>
<hr/>	
<b>Estimated Yearly Energy Cost \$1.57</b>	
Based on 3 hrs/day, 11 c./kWh Cost depends on rates and use	
<hr/>	
<b>Life</b>	<b>5.5years</b>
Based on 3 hrs/day	
<hr/>	
<b>Light Appearance</b>	
	
2700 K	
<hr/>	
<b>Energy Used</b>	<b>13 watts</b>

As a comparison pair, each label drew different comments from participants depending on whether the person making the remark was more drawn to color and to graphics, or to print. A few would like to add the light color bar to the black and white information. However, the consensus of evaluation was that an ideal display would offer the DOE chart as a shelf display, and the FTC label as part of the product packaging.

*The right side is harsh. The left side is easier on the eye.*

*They give similar information, but you get the graph for a quick visual comparison – you get the transition in color associated with the numbers.*

*I like the right-hand one because it's easier to read. It's simple. I can get the numbers especially the life estimate based on hours a day usage.*

*You can't put the color graph on every package; if it was somewhere on a shelf that would work.*

*The one on the left has a lot of information ... I think the color is cool but I still don't have a great idea of what that translates into in wattage or what it means for lighting a lamp.*

## PSE vs. NRDC Lighting Information

The last materials evaluated included two displays: one created by Puget Sound Energy and the other by NRDC. The first display that participants looked at was a 2-sided bulb-buying chart. Side 1 of the chart is shown here. Side 2 is displayed on the next page.

Participants said they found much of stepwise information presented in “Lighting Choices Are Re-Energizing” useful. Although several said they liked Step 4, some thought it seemed redundant.

*Having these back to back is extremely effective.*

*These could stand alone and provide a lot of information. They could change my mind about what to buy.*

*I think they can really appeal to 2 different people – the 2<sup>nd</sup> part is really clean – especially for people that need glasses.*

*I like having Step 1 because my brain still works in watts.*

*Step 2 tells me information that I need – how much light I'll get*

*Savings are explained in Step 3. It breaks out the different types of bulbs and how they compare.*

*I don't think you need to have Step 4 – this is going to be the way it is, you don't need to point it out to me.*

**LIGHTING CHOICES ARE RE-ENERGIZING**

Check out this step-by-step guide:  
You have more choices for energy-efficient lighting than ever before. It's easy to find the right bulb for almost any fixture in your home using our guide.

STEP 1	How much light?	Look for lumens! Lumens are a better measure of brightness than watts. LUMENS: 450 800 1100 1600 WATTS: 40 60 75 100
STEP 2	What kind of light?	Warm General Use Bright Reading and Tasks Cool Daylight for Tasks, Working
STEP 3	How efficient?	Efficient bulbs can save 29%-80% compared to traditional incandescent bulbs. See reverse for details. INCANDESCENT 100W 150W 200W 29% 79% 80%
STEP 4	Look for the New Light Bulb Label in 2012. And always look for the ENERGY STAR!	

PSE PUGET SOUND ENERGY

Compared to perceptions of side 1, perceptions of side 2, “Choose Your Bulb,” were more mixed. There were about as many participants who seemed to generally like this display as there were who found it not useful. While several pointed out some details they thought were unnecessary, a few said they liked having more information rather than less.



*The steps shown in the tutorial (side 1) are the best; the 2nd side is just an illustration of side 1.*

*I like to see the four types of bulbs and the equivalence – it’s really clear, and the color scale and the bar charts with the lumens – this is all real succinct and real informative – nothing is puzzling or unnecessary to me.*

*I don’t really want to think about lifetime operating and upfront cost – this is going into the purchase in way too much detail.*

*I don’t think you should show life span because every household is different; they can’t be compared.*

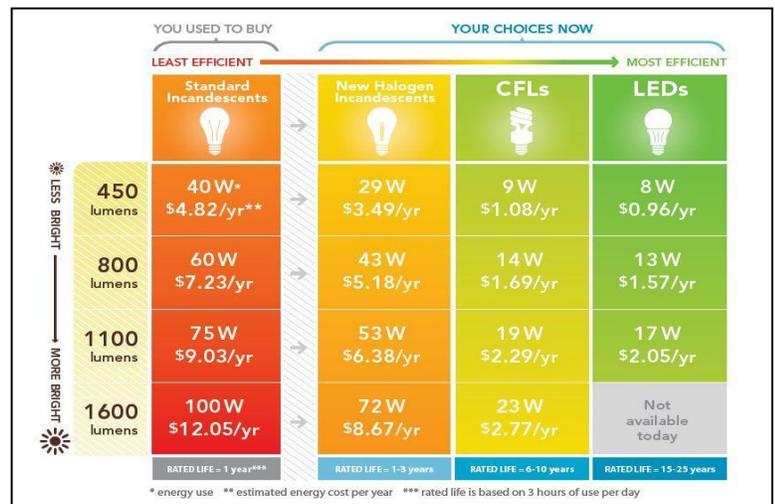
*It’s not interesting me to know lifetime operating cost or upfront cost.*

*The most useful thing here is the picture of bulbs.*

*Upfront cost is not clear when you look at this with the PSE instant rebate. It’s too much.*

*I don’t understand what the upfront cost – the numbers – what it all means – I didn’t take the time to really study it.*

The NRDC display also evaluated by participants was a matrix of information about lighting equivalencies, including cost per year to operate. Although several participants in both groups had positive things to say about the display, negative remarks seemed to dominate in the second group.



The main criticism given by those who did not like it was that the chart looked “too busy,” it provided too much information for quick comprehension. It is important to point out that some of this criticism may be due to participant fatigue due to the abundance of materials evaluated over the course of the session, combined with the later hour at which it occurred.

*The colors make sense to me from least to most is red to green*

*The colors imply saving energy.*

*They give you the light output with equivalent size.*

*It gives you a better idea of how much money you can save each year*

*I think the comparisons are really good - lumens versus watts.*

*I like this a lot. It's very concise. I think it's way too busy to spend my time on it.*

*There are too many numbers.*

*It's too much – I gloss over when I see all these squares with these numbers. I'm not going to digest this.*

*I just want to cut to the chase.*

*The asterisk footnotes are too much. It's too overwhelming.*

# APPENDIX

## Demographic Profile

Demographic Profile			
	Total (n=20)	5:30 pm (n=10)	7:30 pm (n=10)*
<b>Gender</b>			
Male	9	5	4
Female	11	5	6
<b>Age</b>			
30 to 40	1	1	0
41 to 50	6	1	5
51 to 60	5	3	2
61 to 70	6	5	1
71 and older	1	0	1
<b>Education</b>			
HSG/GED	1	1	0
Some college	13	6	7
College grad	5	3	2
*One male in Group 2 refused to answer age and education			

## Callout Statements



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**PSE DISCUSSION GUIDE FOR  
CONSUMER LIGHTING FOCUS GROUPS  
at 5:30 PM and 7:30 PM on MAY 3, 2012**

## **Introduction**

(Moderator introduces self, unbiased third party, and then explain)

### ***Purpose of the Focus Group: (1 minute)***

As you may already know, this discussion is sponsored by PSE. We are here this evening to gain a better understanding of how you shop for light bulbs and what perceptions you have of different types of lighting. Before we get started, let me give you a few guidelines, then we'll introduce ourselves and then we'll start the discussion.

### ***Ground Rules/Disclosures: (1 minute)***

Some viewers are viewing remotely.

Video/audio taping, for my purposes and for any members of the team who couldn't be here today

Use first names only for anonymity

Can only hear one at a time; speak up at same level as I am

No wrong answers, want your candid opinions and suggestions

We don't identify individuals when we quote ideas, but present the information in a combined form.

### ***Respondent Introductions: (5 minutes)***

First name?

What part of the area do you live in?

How long have you lived in this area?

### ***Warm-up (1-2 minutes)***

Now, I'd like you to write down for yourself a few words that come to mind when you think about the lighting in your home. How would you describe it? (If that is too difficult, think of one room.)

## **How Do You Shop for Bulbs (25 minutes)**

When do you think about buying a new light bulb or bulbs for your home?

- What are some of the motivations?
- If not mentioned, ask about whether it was a/an ....
  - Impulse buy
  - Stocking up
  - Light burned out
  - Remodel
  - Fixture replacement
  - Energy efficiency education
  - Wanting more/less light and/or better color
  - Saw on sale (could also be a part of impulse and stocking up)
  - Recommended by friend or family member

When was the last time you bought a bulb or bulbs?

- What did you buy? (Incandescent, CFL or LED?) Where did you put it?
- Why did you buy this bulb? (Listen for color, lumens, watts)
- How was the experience? (Positive? Negative?)
- How satisfied are/were you with the last bulb(s) you purchased? If not, why? If not, did you leave it installed?

What are the mental steps you go through when you decide what type of bulb to buy?

- Are you just replacing a bulb that has burned out?
- Or do you plan ahead? If so, how? (Research? Where?)
- Do you know what you need to replace or do you decide when you get to the store? If so, how?

What do you look for or need in a light bulb?

- What are the attributes you look for? (Call out 5 or 10)
- How do you find out if you are getting what you are looking for? What information is available? Where is that?
- How helpful is the information available?
  - What info was helpful?
  - What info wasn't helpful?
  - What information would have been helpful? What would you have wanted to know?
- Did you do any research before buying the light bulb(s)? Where? Why was it helpful?
  - Did they rely on information on lighting provided by the utility?
  - Where did you see that?

How did you decide which store to go to for light bulbs?

- How was the selection at the store where you last purchased bulbs?
  - Was it limited? or
  - Were there too many choices? (If so, ) Were you overwhelmed?
  - Too many messages?

What drove the purchase: while you were in the store?

- What caught your attention first? (e.g., if not mentioned: Prices? Brand?)
- What's the impact of the product packaging?

How familiar are you with the technologies of the different bulbs?

- What do you know about the Energy Efficient lighting options?
- What have you liked about them?
- Have there been any barriers to purchasing them?
- Have you ever returned any? If so, what was the reason for that?

## Explore the Terminology of Lighting (15 minutes)

What are some of the familiar terms you think about lighting or light bulbs? (COULD WRITE ON EASEL) What does that mean?

Now, let's look at some terms that you might see in the information about lighting. (Especially those not discussed above.) Just tell me what comes to mind when you hear the word?

- Lumens?
- Brightness?
- Light output?
- Light color?
- Kelvin? (2700=warm, 5000=natural bright white, temp.)
- Color temperature?
- Lumens per watt or lumens versus watts? Which means more?
- Rated life? (Length of life?)
- Energy Star? (Fed.. endorsement) Where do you see it? What does it mean?
- EISA? (Energy Independence & Security Act) What do you associate with that?
- CFLs versus LEDs?
- PSE “Instant Savings” and “Instant Discount” POP?

What do you usually see on end cap displays or special signage?

- Which terms?
- Which are more meaningful to you?
- Is there one “measure” or metric that you want to know and shop for?
- (If needed:) For example, do you shop for “a 60-watt bulb” or “a 14-watt CFL?” (even though they may be the same, in terms of amount of light)

## Packaging/Displays (25 minutes)

Have you ever seen the PSE logo attached to, or associated with, a product? If so, what does it mean to you, when you see it?

What do you think when you see a/an ...?

- Rebate offered?
- Instant rebate vs. having to fill out a rebate form?
- Endorsement?
- Utility manufactured the product?

Do you notice the Point of Purchase marketing material that is sometimes available in the store? How do you feel about that?

Is there a particular color or set of colors paired with the utility logo that makes them think of efficient lighting? If so, what is it?

How does the fact that a product is branded by PSE affect you? (Review items in POP (point of purchase) folder

- What does it say/mean to you?
- What impact, if any would that have on your trust of the product?
- Would you trust it more or less than other brands?

How does it impact your purchase, if at all? Which callout would be most effective in getting you to purchase? (RANK ON PIECE OF PAPER 1 to 5 FIRST, THEN SAY WHY.) (Review items in RANK folder

- Instant Discount
- Discounts Courtesy of PSE
- Recommended by PSE
- ENERGY STAR logo
- Instant Savings

What value, if any, would you think it is to have a “how to choose a bulb” guide?

- What should be in it?
- Where should it be? (PSE website, retailer...)

Remember the last time you went to a Home Depot or a Lowe’s (big store) to buy bulb/bulbs, what was the experience like? OR What would it be like to go down this aisle?

What calls your attention to energy efficient product discounts in this display?

Which of these would be more likely to attract your attention to the energy efficient products?

- Icons and pictorial product references with product messaging?
- Photos of families, faces with product messaging?
- Photos of products in living space with product messaging?

SHOW/REVIEW OUTREACH MATERIALS (WHAT INFO IS HELPFUL?)

- Retail Info (Review images in Retail Info Folder)
  - Home Depot
  - Lowe’s
- Lighting Facts (Review images in Lighting Facts Folder)
  - FTC Label
  - DOE Label
- PSE Info (Review images in PSE Info Folder)

## Summary (10 minutes)

Given all that we have discussed here this evening, what has had the most impact on you of what you have learned? Seen?

How likely are you to purchase energy efficient bulbs for your next lighting purchase? And what are the main reasons for that decision?

What might help you make lighting choices for your home? What can PSE do to help?

Has this discussion changed your image of PSE in any way? IF SO, How?  
Is there anything else you would like to tell PSE this evening?

## Screener

C12038

Thursday, May 3, 2012

GILMORE RESEARCH GROUP  
2101 4<sup>th</sup> Avenue, 8<sup>th</sup> Floor  
SEATTLE, WA 98102

Group 1: 5:30 pm ( )  
Group 2: 7:30 pm ( )

HOME PHONE: ( ) \_\_\_\_\_--\_\_\_\_\_ WORK PHONE: ( ) \_\_\_\_\_--\_\_\_\_\_

NAME: \_\_\_\_\_ EMAIL: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY/STATE/ZIP \_\_\_\_\_

RECRUITER: \_\_\_\_\_ ID# \_\_\_\_\_ DATE \_\_\_\_\_

Hello, this is \_\_\_\_\_ of Gilmore Research Group calling on behalf of Puget Sound Energy. **ASK TO CONFIRM THAT YOU ARE SPEAKING WITH THE PERSON NAMED ON THE LIST.** We are inviting PSE customers to attend a focus group sponsored by PSE to hear your opinions about lighting in your home. Do you have a few minutes to answer a few qualifying questions?

- Q1. Do you or does anyone in your household work in any of the following areas?
- (a) In a utility company?
  - (b) In marketing research, public relations or advertising?
  - (c) Anyone who currently works or formerly worked for the PSE

IF YES TO ANY, THANK AND END.

- Q2. First of all, do you live at \_\_\_\_\_ (GIVE ADDRESS SHOWN ON LIST)?

Yes ( ) → CONTINUE

No ( ) → b. Where do you currently live? \_\_\_\_\_

IF NOT ON THE EAST SIDE AND KING COUNTY, THANK &amp; END, OTHERWISE, ASK Q.3.

- Q3. In which type of home do you live? (READ LIST and CHECK ONE) The recruit list is comprised of 77% single family, 22% mobile home and 1% other, so as long as we get about that same mix we're OK

Single Family Detached Home ( ) CONTINUE TO QUALIFY.

OTHERS SHOULD NOT BE ON LIST, BUT IF "yes" BELOW, THANK AND END.

Apartment ( )

Condominium ( )

Mobile Home ( )

Duplex/Triplex/Quad ( )

- Q4. Do you own or rent your current residence?  
Own ( ) CONTINUE

Rent ( ) THANK AND END.

THE NEXT FEW QUESTIONS ARE ASKED SO THAT WE MAY RECRUIT A MIX OF PEOPLE WITH VARIOUS CHARACTERISTICS.

Q5. Could you please tell me in which age bracket you fall? (WRITE AGE IF OFFERED: \_\_\_\_\_)

Under 21	( )	→THANK & END
21-24	( )	
25-34	( )	
35-44	( )	
45-54	( )	RECRUIT A MIX
55-64	( )	
65-75	( )	
More than 75	( )	→THANK & END
Refused	( )	→THANK & END

Q6. And what is the highest level of school you have completed?

Less than high school	( )	
High School Grad./GED	( )	
Some College, community college or trade school	( )	RECRUIT A MIX
College Graduate	( )	
Beyond College	( )	
Refused	( )	

Q7. And in which of the following categories would you place your total household income?

Under \$25,000	( )	THANK AND END
\$25,000 to just under \$40,000	( )	THANK AND END
\$40,000 to just under \$60,000	( )	THANK AND END
\$60,000 or over	( )	<b>INVITE TO GROUP</b>
Refused	( )	THANK AND END

Q.9 RECORD GENDER (DO NOT ASK)      **male**      **female**  
RECRUIT 50% MALE/50% FEMALE.

#### INVITATION:

As part of its ongoing efforts to get feedback from its customers, we are conducting small, informal discussion groups among PSE Customers. This group will consist of about ten residential customers, like you, from around the area. These discussions are usually fun and turn out to be an interesting exchange of ideas. As a thank you for giving your time and opinions you will receive \$100.00 at the conclusion of the group session. Does this sound like something you would like to do?

The groups will be held on Thursday, May 3<sup>rd</sup> at the Fieldwork Focus Group Facility in Kirkland.

The discussion will last about two hours. We will be talking about your lighting preferences and choices for different areas of the home. We may also look at some concepts related to where you purchase your bulbs and would like your opinions. This is strictly an opinion gathering session.

**SCHEDULE:**

**Group 1 Thursday, May 3rd, at 5:30 PM (light meal served)**

**Group 2 Thursday, May 3rd, at 8:00 PM (refreshments)**

Will you be able to attend? Yes ( ) → CONTINUE No ( ) → THANK & END  
**CHECK SCHEDULE ON FRONT PAGE; RECORD NAME, ADDRESS, PHONE.**

Thank you again for agreeing to participate. I think you will find it very interesting. We will be sending out confirmation letters, along with an address and a map to the meeting location. Could we have your email address, just in case we need to send you a last minute communication? We will not make your email address available to anyone. If you don't have email, we will mail the materials with your confirmation letter.

E-Mail Address: \_\_\_\_\_

We will also call you the day before the meeting to answer any questions you may have. In the meantime, since we do value your opinion and participation, let me give you a number to call if you have any comments, questions, or problems. The number is 206-726-5555. You may call and ask for Donna Glosser or Ariel McCollough. **(IF A PSE CONTACT IS NEEDED, A RESPONDENT MAY CALL Eric Haechrel).**

Thank you again; we'll look forward to seeing you soon.