

A close-up photograph of a hand holding a pair of black binoculars. The hand is positioned in the center-right of the frame, with the fingers gripping the top of the binoculars. The background is a dense field of vibrant green ferns, which are slightly out of focus, creating a sense of depth. The lighting is bright and natural, highlighting the texture of the hand and the intricate details of the fern fronds.

# ON ASSIGNMENT WITH THE COMMERCIAL SECTOR

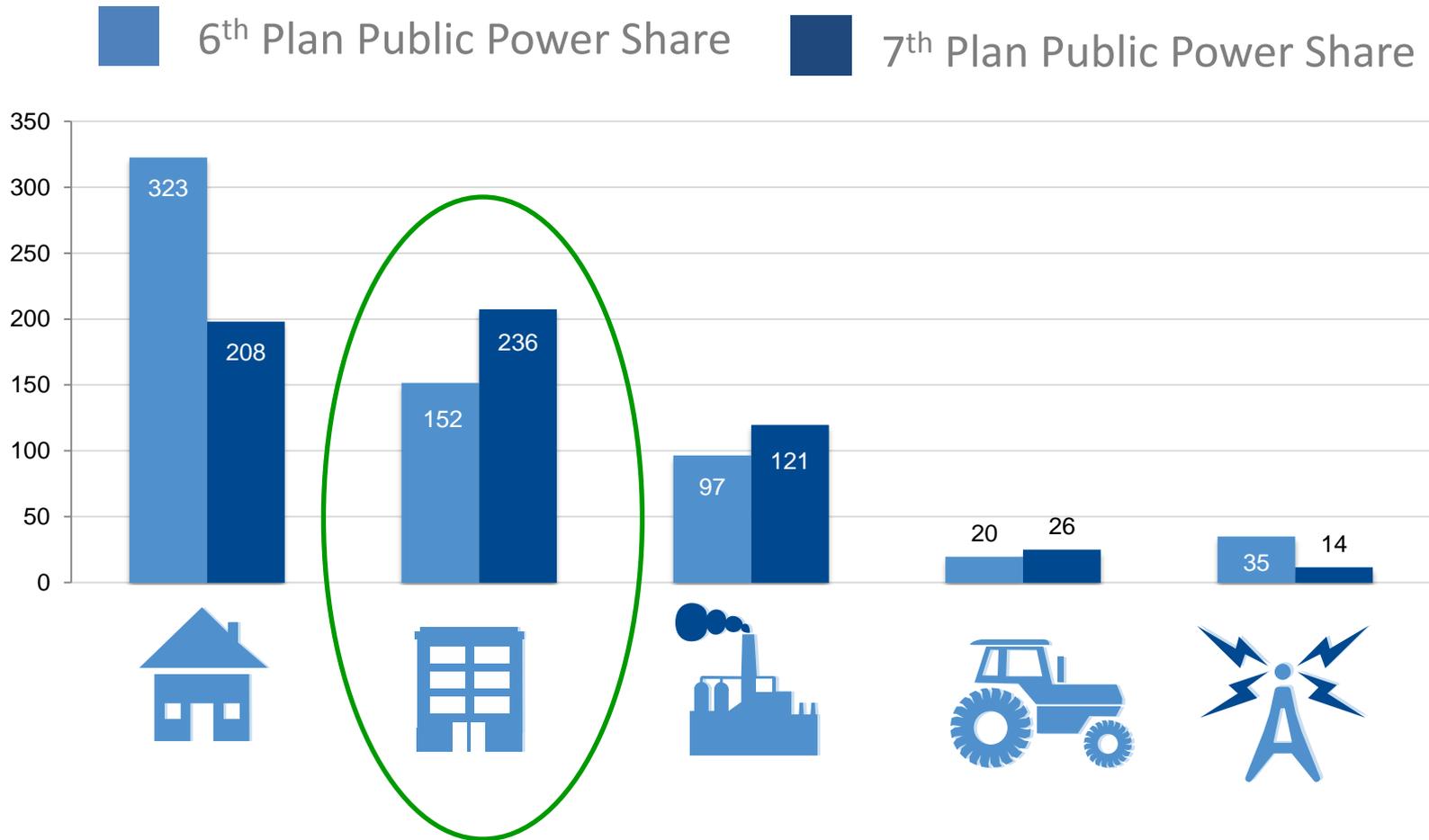
UTILITY ROUND TABLES, 2015

# THAT'S WHAT'S UP

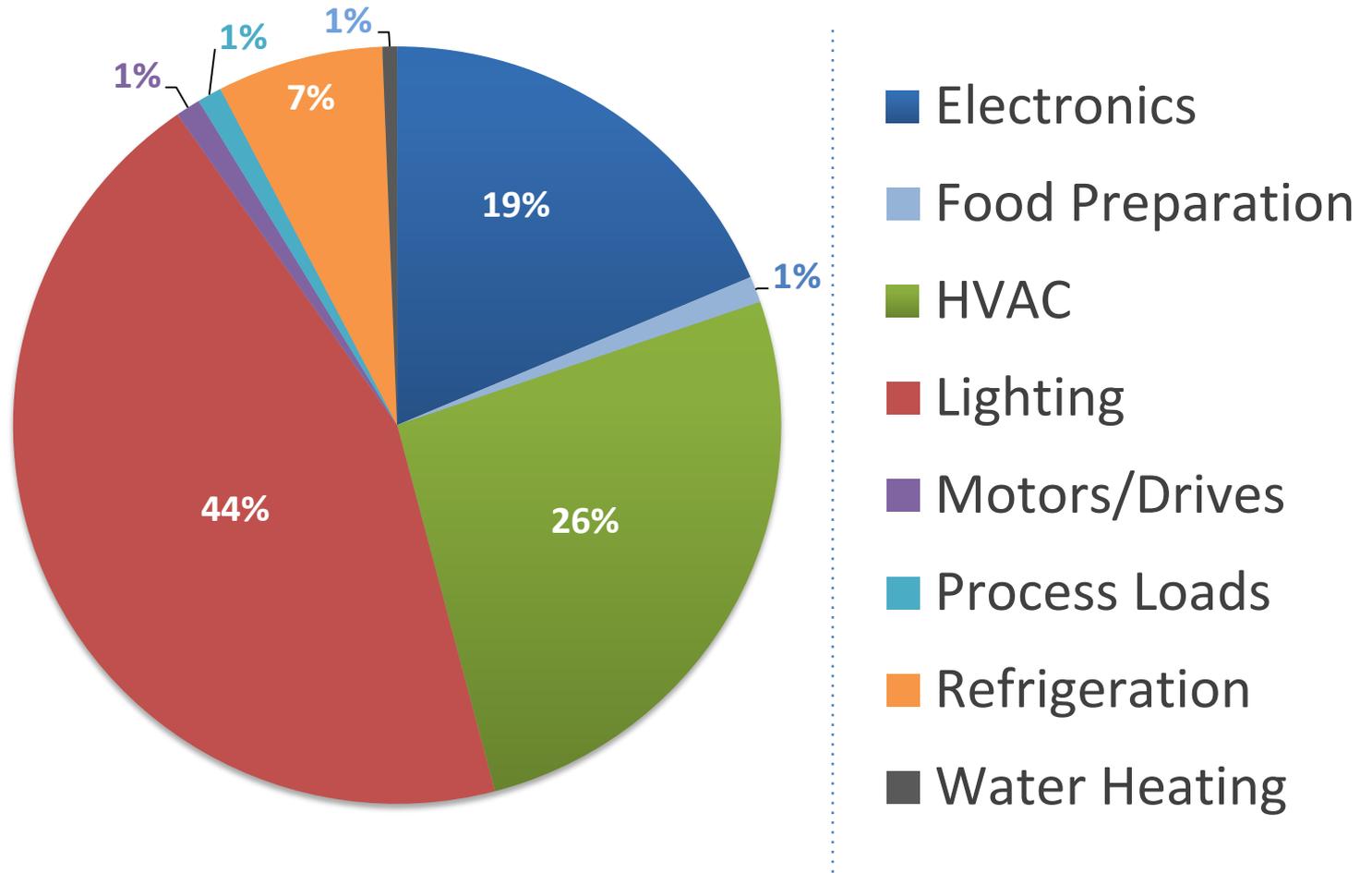
- Commercial Sector Program Development
  - 30 Minutes
- Non-Residential Lighting
  - 10 Minutes
- Trade Ally Networks
  - 10 Minutes



# WE KNOW THERE IS A LOT OF SAVINGS POTENTIAL IN THE COMMERCIAL SECTOR



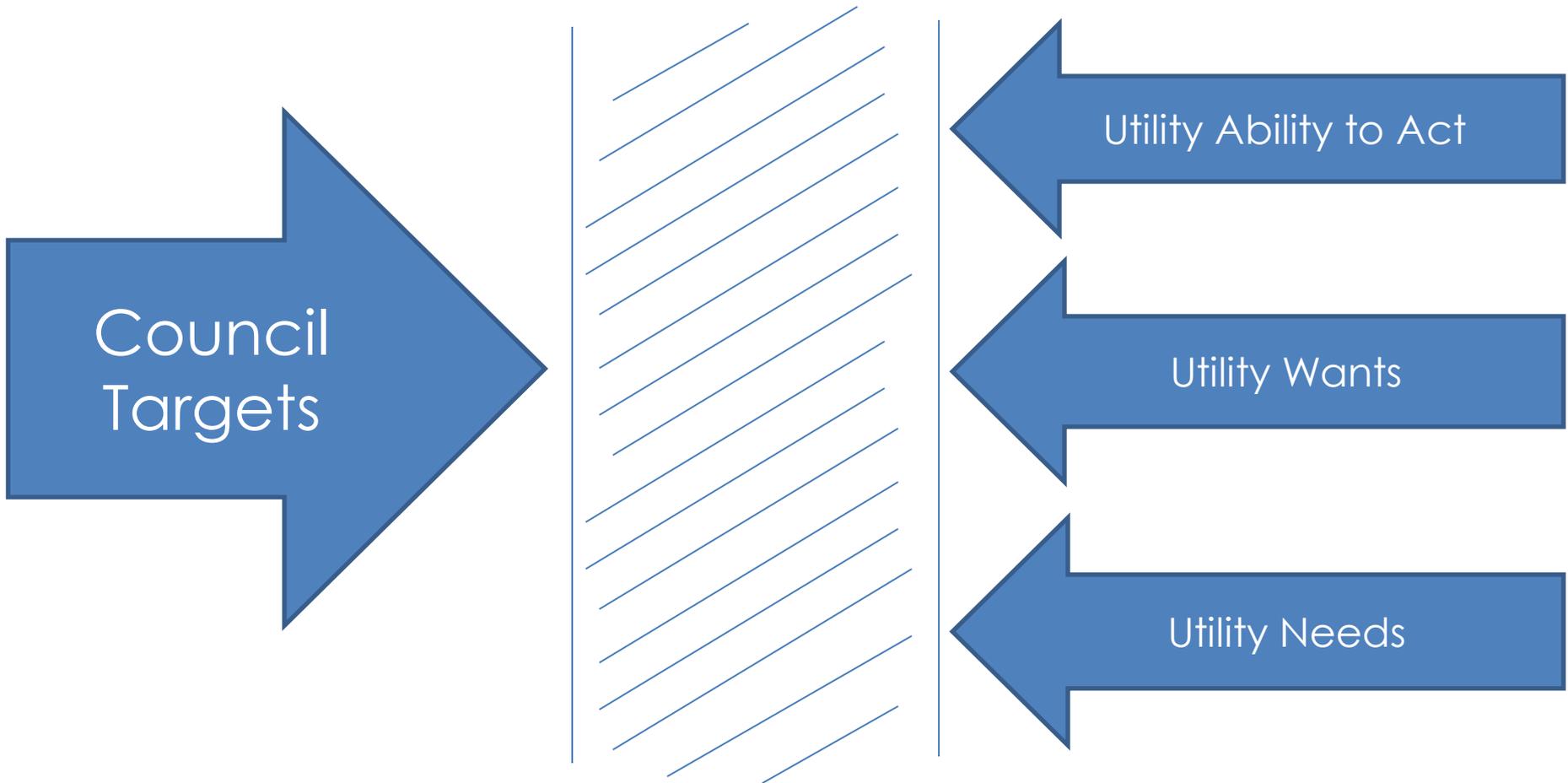
# AND WE KNOW WHERE IT IS



6-YEAR Economic Potential

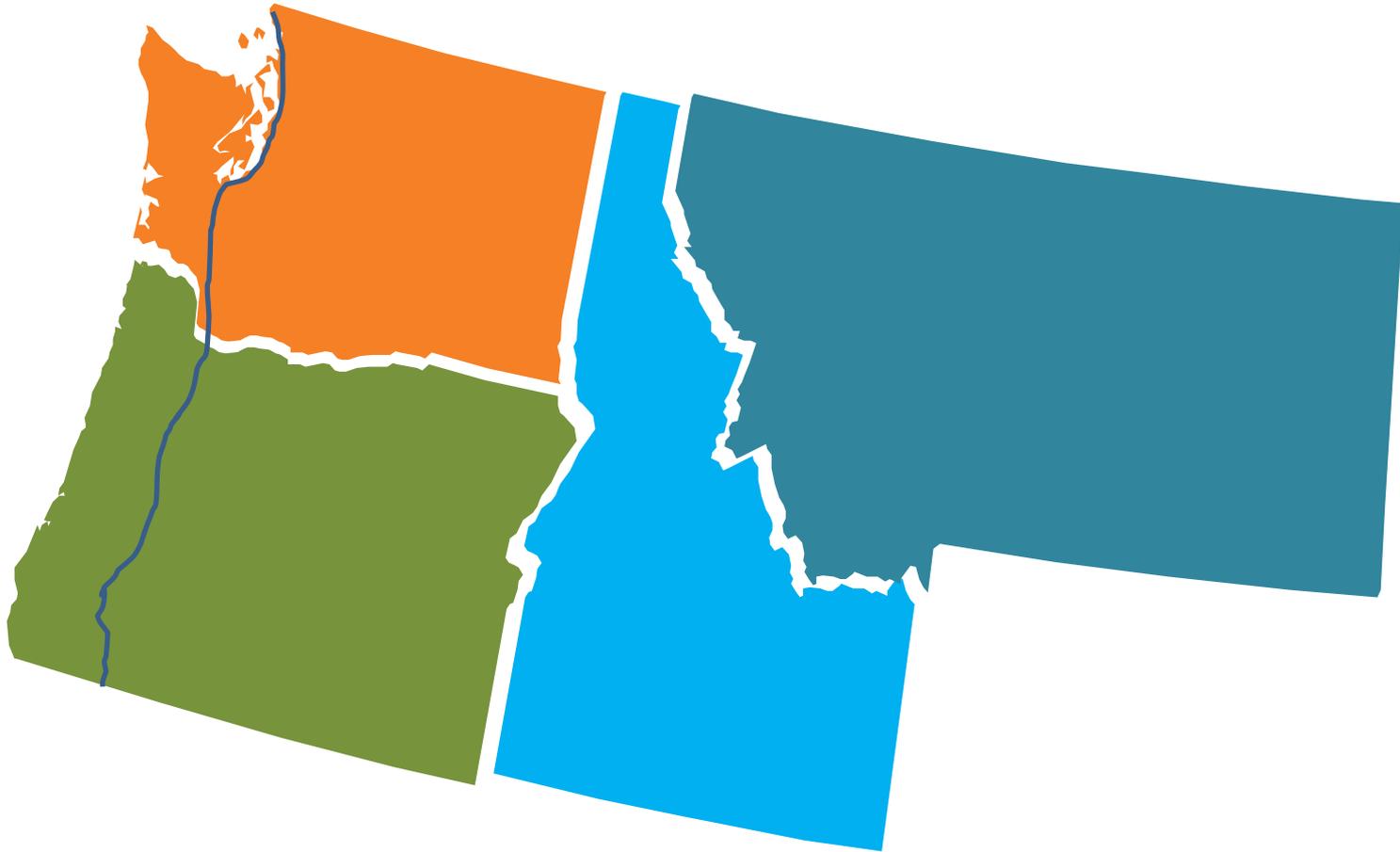
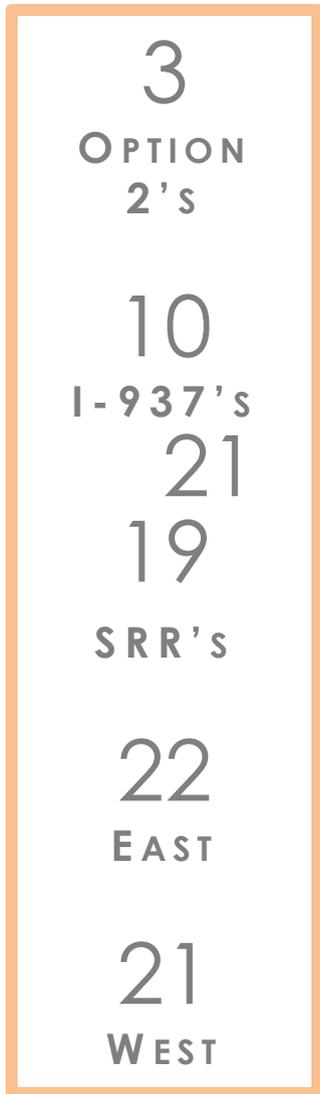
in order to bridge the gap

Starting with utility needs



The great divide...

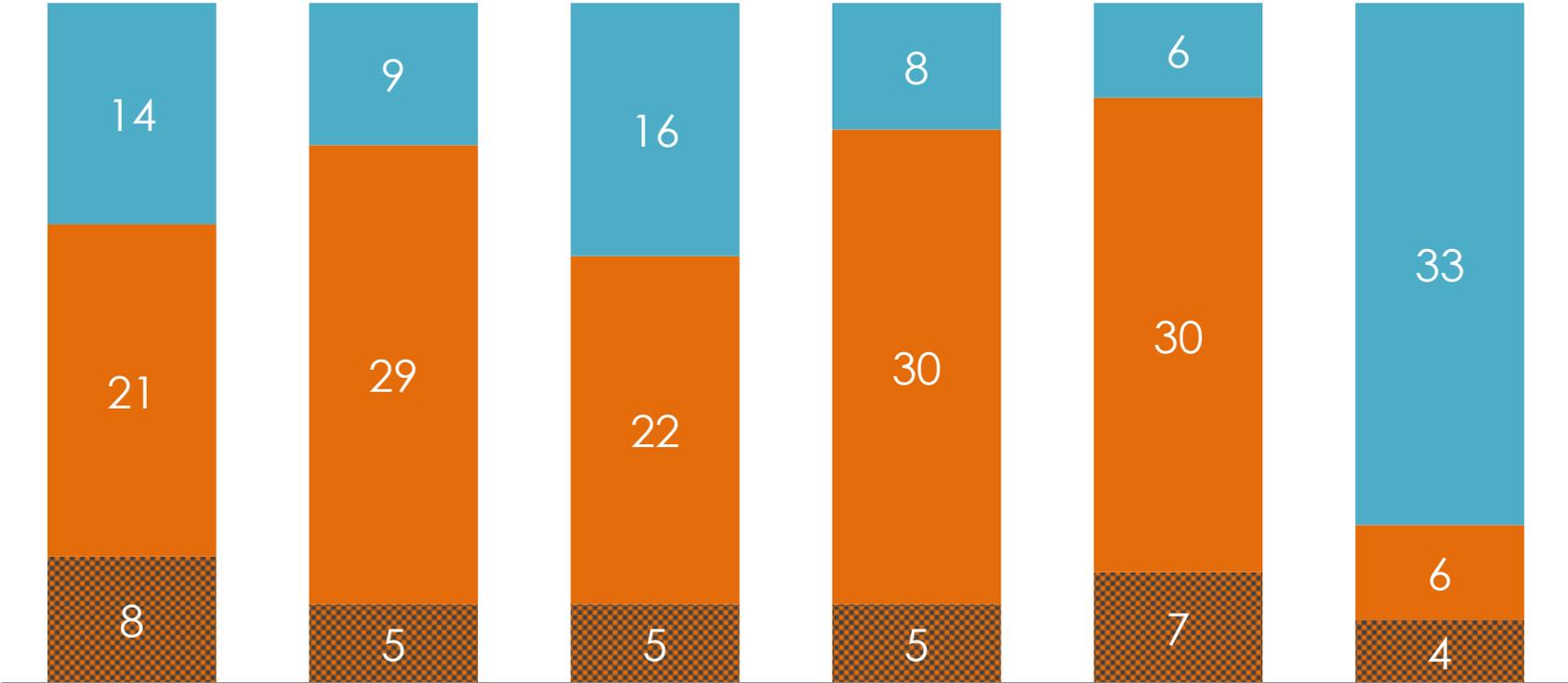
# ASSESSMENT PARTICIPANTS BY GROUP



# LEVEL OF SUPPORT BY PROGRAM COMPONENT

Select the level of program support you want

■ Utility      ■ Commercial Program      ■ Both



Generate Prospects

Create Proposals, Present Proposals

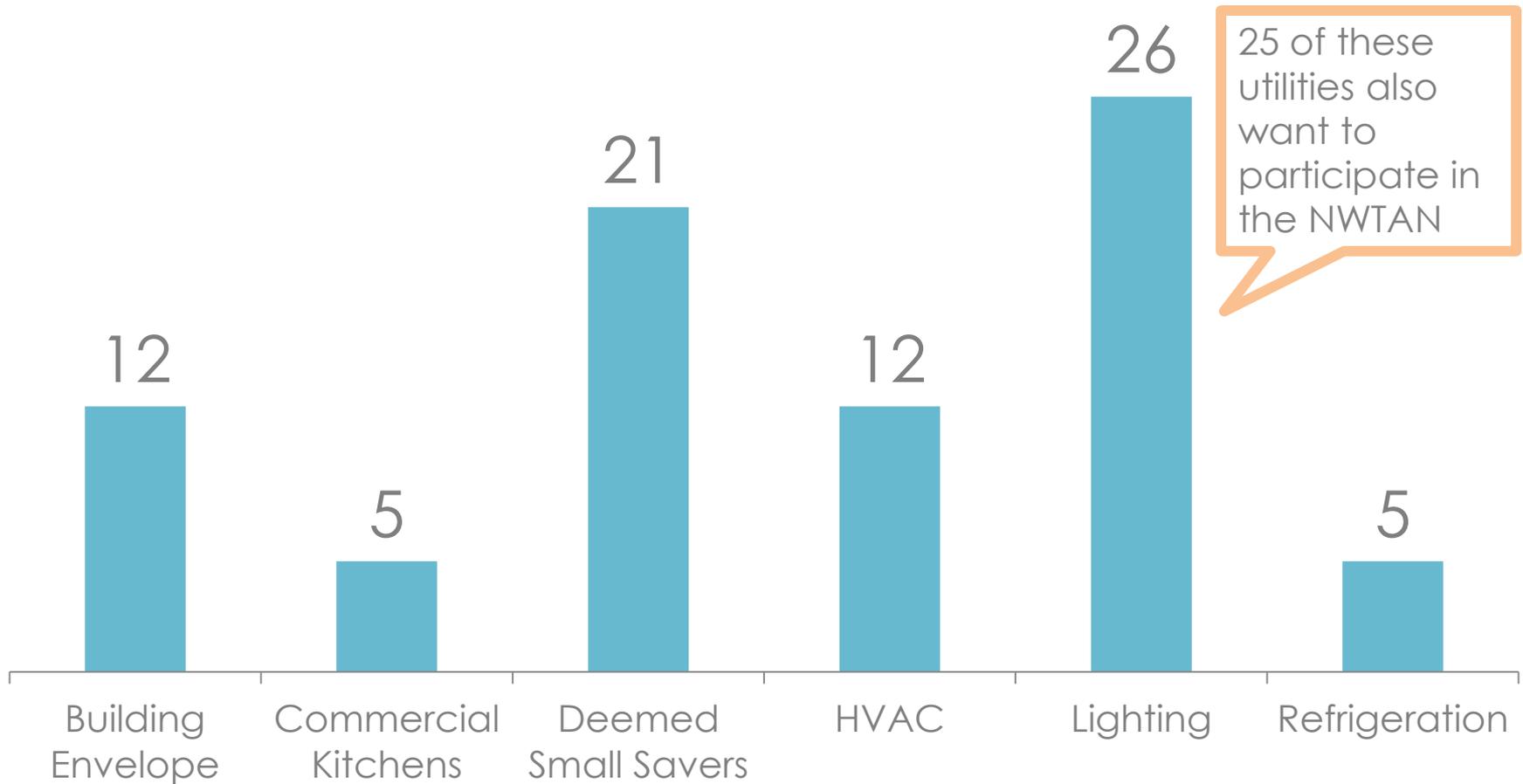
Train Trade Allies

Perform M&V

Pay Rebates

# UTILITIES PREFER TO MANAGE CERTAIN MEASURE TYPES

*Which measure types do you want to implement with minimal BPA support?*



N = 43

# MANY DIFFERENT PREFERENCES

transparent pipeline tool utility participation in  
the project pipeline utility pays rebates  
FOCUS ON DEEMED MEASURE SAVINGS  
A TURNKEY PROGRAM LIKE ESI OR ESG WORK WITH TRADESPEOPLE  
IN OUR TERRITORY **LOW COST, KNOW COST**  
Want To Run Our Commercial Program Independently RELY  
ON THE EXPERTISE AND SUPPORT OF BPA  
ENGINEERS Independent programs WANT  
UTILITY-CUSTOMIZED MARKETING MATERIALS  
SEM PROGRAM SUPPORT

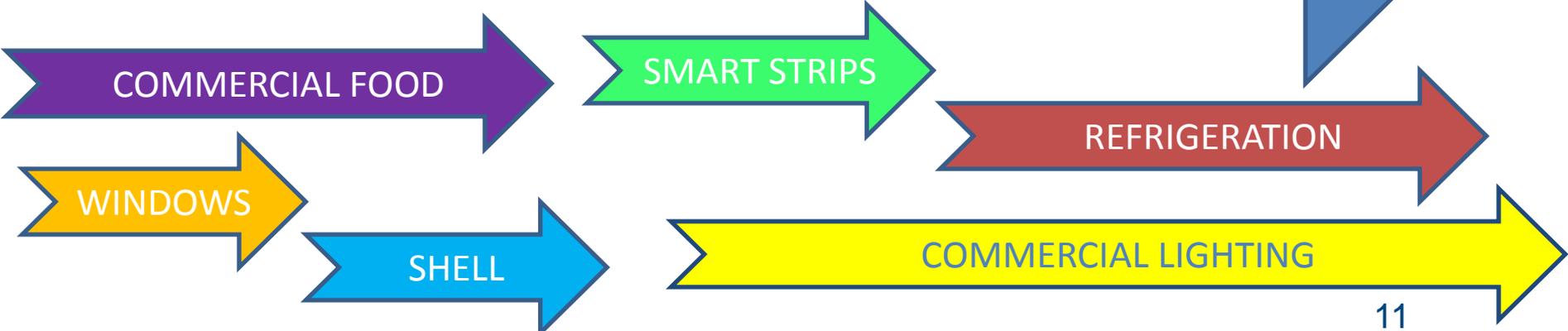
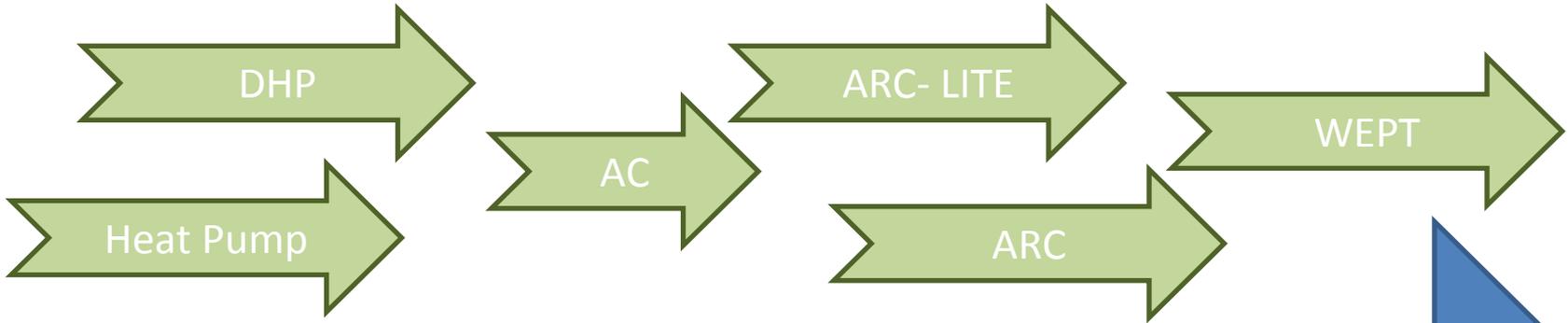
BUT LOTS OF OVERLAP

# FROM FINDINGS TO ACTION PLAN



# FINDINGS FROM THE UTILITY ASSESSMENT

## COMPREHENSIVE MEASURE OFFERINGS



# MAKING MEASURES EASIER FOR EVERYONE

## REFRIGERATION

Refrigeration measures now in the IM

## HVAC

HVAC measures revised and simplified

## PIFs

Project Information Forms

## QPLs

New Qualified Products Lists

# PIFS

Upload Your Image Here

## Ductless Heat Pump

For small commercial locations with electric resistance heat

Official Use Only:  
Customer ID:

**Business Information Form**

To be completed by utility account holder and installation contractor. Answer the following questions based on the small commercial location. All fields are required. This program is focused on energy savings for small commercial spaces that are upgrading an HVAC system.

**Contact Information**

Business Name:  Phone:

Site Address:  City/State/Zip code:

**Site Information**

Business Type (Please Describe):

Hours of Operation:  Square footage of the conditioned floor area of the building:  Number of stories:

Does the site have a natural gas meter?  Yes  No List any gas uses (stoves, fireplace, grill, heat, ect.):

Has the same tenant or business type occupied the site for at least 24 months?  Yes  No

If no, please explain:

Year building was constructed:  Does the site have air conditioning?  Central  Zonal  None Has the site been weatherized/insulated?  Yes  No if yes, what year?

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5
What type of heat does the zone have?					
List any large electrical equipment in this zone					
Building level location of DHP					

**Installation Information**

Contractor company name:  Date of Installation:

Total installed cost (including equipment, labor, electrical, tax, permit, and other costs, prior to rebate):

Material Cost:  Labor Cost:  Tax Cost:  Permit Cost:  Other Cost:

Total number of indoor units installed:  Total nominal heating capacity of outdoor units installed (Btu/hr):

---

**Detailed Description of System Installed to Serve Main Occupied Area:**

Outdoor unit manufacturer:  Outdoor unit model number:

Refrigerant added (over manufacturer's pre-charge):

Associated Indoor units	Indoor unit model number(s)	Energy efficiency rating	Heating capacity (Btu/hr)	Installed line set length (ft)	Zone square footage (ft)	Zone room description
Indoor unit 1						
Unit 2 (if installed)						
Unit 3 (if installed)						
Unit 4 (if installed)						
Unit 5 (if installed)						

Note: Equipment installed **MUST** be either a dual zone or single zone system, or two single zone systems.

LOGO

## Ductless Heat Pump

### Project Information Form

For Commercial Locations

Instructions: Complete this form and submit it to the serving electric utility. **Boxes with bold outlines** indicate BPA requirements.

**BUSINESS AND SITE INFORMATION**

Business Name		Address	
State	Zip		
Operating hours per week	Operating weeks per year:	Holidays observed per year:	
Considering the above, estimate the number of operating hours per year: _____			
<i>The business must operate between 2,000 and 5,700 hours per year to qualify.</i>			

**BUILDING INFORMATION**

Qualifying buildings must meet the requirements below.

The building was constructed before 2009 <small>Check the box if this statement is correct. If not, the equipment is not eligible for incentives.</small>	<input type="checkbox"/> Yes
The existing heat source is electric resistance (either zonal or forced air) <small>Check the box if this statement is correct. If not, the equipment is not eligible for incentives.</small>	<input type="checkbox"/> Yes
The estimate square footage of the conditioned area is less than 20,000 sq. ft. <small>Check the box if this statement is correct. If not, the equipment is not eligible for incentives.</small>	<input type="checkbox"/> Yes

**NEW EQUIPMENT INFORMATION**

Complete the information for each installed DHP.

	DHP 1	DHP 2	DHP 3	DHP 4
DHP manufacturer				
DHP model number				
Heating capacity in tons				

**INSTALLER INFORMATION**

Company Name	Total Installed Cost (before rebate) including equipment, labor, permit and tax
By signing this form, I confirm that the above information is correct to the best of my knowledge.	
Installer Signature	Date

Ductless Heat Pump Project Information Form

09/30/2015

1

# PROJECT INFORMATION FORMS

Ductless Heat Pump  
Project Information Form  
For Commercial Locations

LOGO

Instructions: Complete this form and submit it to the serving electric utility. **Boxes with bold outlines** indicate BPA requirements.

**BUSINESS AND SITE INFORMATION**

Business Name		Address	
State	Zip		
Operating hours per week: _____	Operating weeks per year: _____	Holidays observed per year: _____	
Considering the above, estimate the number of operating hours per year: _____ <small>The business must operate between 2,000 and 5,760 hours per year to qualify.</small>			

**BUILDING INFORMATION**  
Qualifying buildings must meet the requirements below.

The building was constructed before 2009 <small>Check the box if this statement is correct. If not, the equipment is not eligible for incentives.</small>	<input type="checkbox"/> Yes
The existing heat source is electric resistance (either zonal or forced air) <small>Check the box if this statement is correct. If not, the equipment is not eligible for incentives.</small>	<input type="checkbox"/> Yes
The estimate square footage of the conditioned area is less than 20,000 sq. ft. <small>Check the box if this statement is correct. If not, the equipment is not eligible for incentives.</small>	<input type="checkbox"/> Yes

**NEW EQUIPMENT INFORMATION**  
Complete the information for each installed DHP.

	DHP 1	DHP 2	DHP 3	DHP 4
DHP manufacturer				
DHP model number				
Heating capacity in tons				

**INSTALLER INFORMATION**

Company Name	Total Installed Cost (before rebate) including equipment, labor, permit and tax
By signing this form, I confirm that the above information is correct to the best of my knowledge.	
Installer Signature	Date

Ductless Heat Pump Project Information Form      09/30/2015      1

Word format easy to edit and customize

Bold outlines for requirements

Installer attestation

Document dated for version control

# QUALIFIED PRODUCT LISTS

Shortcut: A list of qualified products that meet IM requirements

QPLs currently available for WEPT, ARC and Hot Water Heaters

Have a product to recommend?  
Contact BPA!

## Web-Enabled Programmable Thermostat Qualified Products List

Revised 10/5/2015



For a full list of requirements and specifications, please refer to the current [BPA Implementation Manual](#).

### Approved Qualified Products

Manufacturer	Model
DreamWatts	Thermostat
Ecobee	Commercial EMS
Ecobee	EMS SI
Honeywell	Vision Pro 8000 with Gateways for web-enabling
Honeywell	WiFi Vision Pro 9000
Honeywell	Prestige Wireless
Kite & Lightning	UNITY System
Profile Systems	P1900
Proliphix	Internet Managed Thermostats (IMT) 550 hard-wired wi-fi model
Transformative Wave	CATALYST BMS
Venstar	EMS

### Non-Approved WEPT Products

Manufacturer	Model	Reason product doesn't qualify
Nest	Learning Thermostat	Product is designed for residential applications; it doesn't meet fan-on during occupied-periods and fan-auto during unoccupied-periods requirements to meet commercial ventilation code.
EcoFactor	N/A	Product is designed for residential applications; product is intended to work with Internet-connected thermostats from "most manufacturers"; its qualification will depend on the thermostat's capabilities and whether it meets the commercial ventilation code requirements.
Emerson Sensi	Wi-Fi thermostat	Product is designed for residential applications; it doesn't meet fan-on during occupied-periods and fan-auto during unoccupied-periods requirements to meet commercial ventilation code.
Honeywell	Wifi Residential thermostats	Product is designed for residential applications; it doesn't meet fan-on during occupied-periods and fan-auto during unoccupied-periods requirements to meet commercial ventilation code.

For more information about qualified WEPT products, products that do not appear on the list, or other questions, please contact Mira Vowles at [mkvowles@bpa.gov](mailto:mkvowles@bpa.gov)

# IM DOCUMENT LIBRARY

- Commercial Sector

## Project Information Forms

[Unitary Air-Conditioning Equipment Project Information Form](#)

[Advanced Rooftop Control Retrofit Project Information Form](#)

[Advanced Rooftop Control Lite Retrofit Project Information Form](#)

[Demand Controlled Kitchen Ventilation Project Information Form](#)

[Heat Pump Water Heater Project Information Form](#)

[Web-enabled Programmable Thermostats Project Information Form](#)

[Window Retrofit Project Information Form](#)

[Ductless Heat Pumps Project Information Form](#)

[Generator Block Heater Project Information Form](#)

[Vehicle Block Heater Project Information Form](#)

[Commercial Insulation Project Information Form](#)

## Tools

[BPA Qualified Commercial Heat Pump Tool V1.61](#)

## Program Sign Up/Close out Forms

[Energy Smart Grocer Program Sign-up Form FY2014-FY2015](#)

[Energy Smart Grocer Program FY2016 Close-out Form](#)

## Qualified Products Lists

[Advanced Rooftop Control Retrofit QPL](#)

[Advanced Rooftop Control Lite Retrofit QPL](#)

[Commercial Water Heater QPL](#)

[Web Enabled Programmable Thermostat QPL](#)

## Other

[Commercial Sector Measure Distribution Documentation Form](#)

New Project Information Forms

New Qualified Products Lists

<http://www.bpa.gov/EE/Policy/IManual/Pages/IM-Document-Library.aspx>

# TRACKING BPAQ MEASURES FOR SUCCESS

- BPAQ Measures are premature
- They need extra attention – but you can't smoothen them with paperwork
- PIFs are now very easy for COTRs to review
- PIFs are filed into folders and tracked by program manager
- Currently working to further reduce utility / trade ally burden



# USER GUIDES AND MARKETING FOR PROGRAM DELIVERY

- Commercial UES Measures need a guide
  - Focus on these building types
  - Look for this sort of existing equipment
  - If you see this, then it's not a good measure
- Trade Ally need to know...
- Business Owner need to know...



**VS**



**VS**



# FINDINGS FROM THE UTILITY ASSESSMENT

## COMPREHENSIVE CHANNELS TO MARKET

### HVAC TECHNOLOGY

#### Utility Administered

From the desk

In the field

#### BPA Administered

Proactive  
Field  
Services

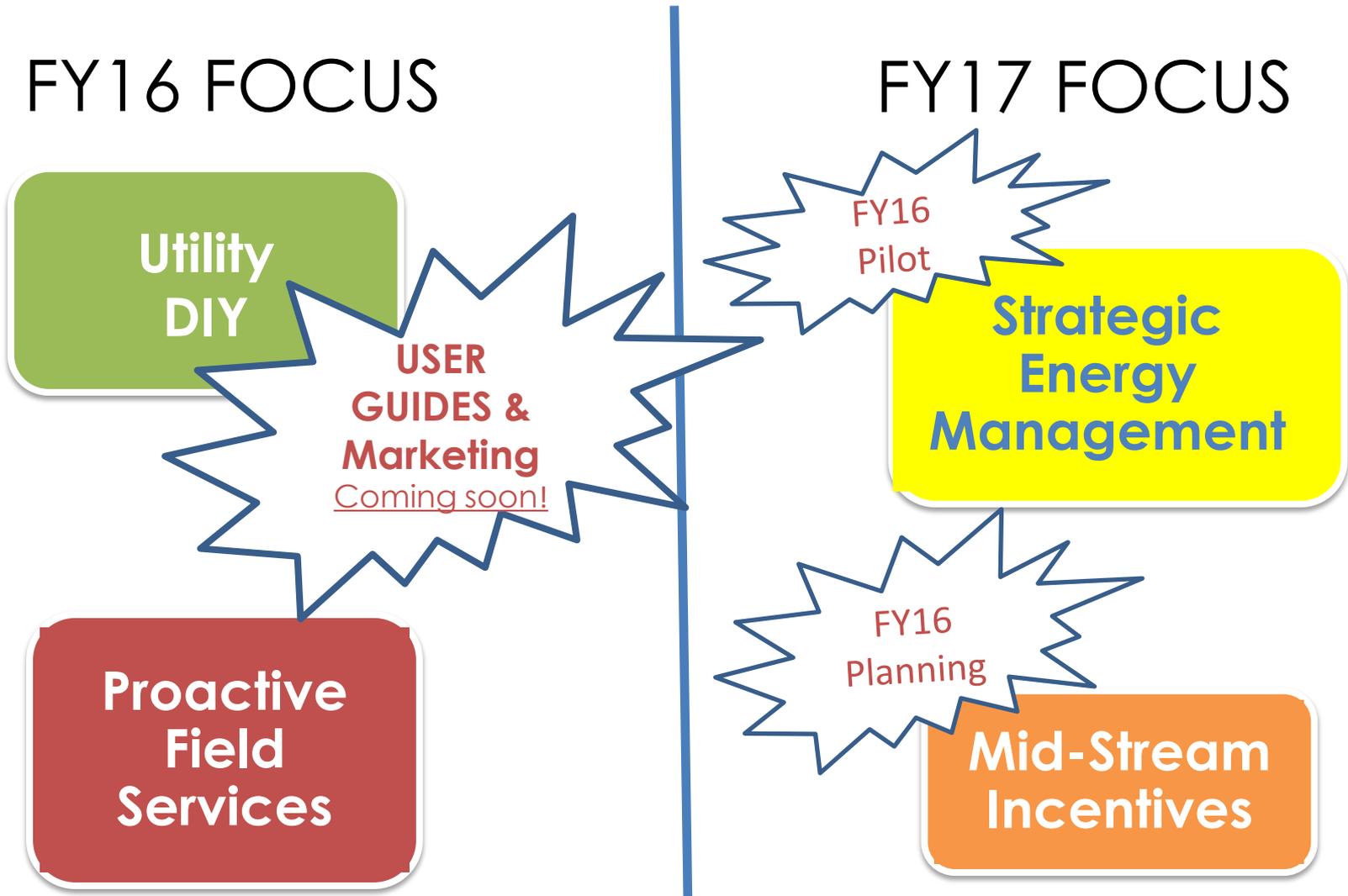
#### Mid Stream Programs

Working at  
HVAC  
distributor  
level

# COMPREHENSIVE SUITE OF SECTOR DELIVERY CHANNELS

FY16 FOCUS

FY17 FOCUS



I want to do more to support my commercial customers with EE...

I want to offer customers more than just lighting...

I don't want to support a regional program that doesn't reach the bulk of my commercial customers...

## Proactive Field Services

But it would require resources I don't have...

But the other commercial measures are confusing...

But I could support a program if it was tailored to fit my needs...

# Wilson's Ontological Field Services Theorem

<sup>^2</sup>

Utility X  
Comm.  
Account  
Plan

BPA Field Staff Engage Selected Customers

Leverage Trade Ally Network

1.  
Focus on  
easy wins –  
UES  
Measures

2.  
Look for  
Lighting  
Potential

3.  
Custom  
Project  
Potential

=

Proactive  
Field  
Services

QED

CUSTOMERS ENTER UTILITY EE PROJECT PIPELINE

# SUPPORT SERVICES

## Trade Ally Networks

- Lighting
- HVAC
- Refrigeration

## Technical Tools

- Lighting Calculator
- Compressed Air Calculator
- HPWH Calculator

## Access to Resources & Information

- Utility Success Share Outs
- Marketing Collateral
- Northwest Lighting Network (NEEA)

## Measure Development

- Through the entire measure lifecycle

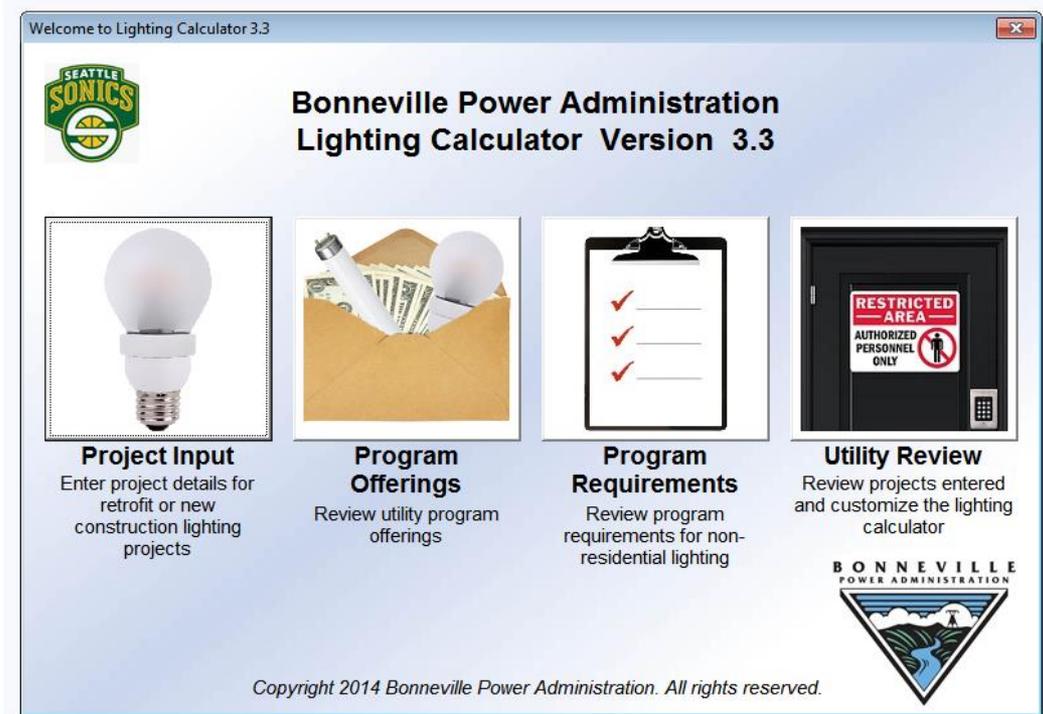
# Save the Date

- November 12<sup>th</sup>- Regional Update on Commercial Sector Program Development
  - Utility Brown Bag
  - BPA will present basic program design for public comment

# NON-RESIDENTIAL LIGHTING

## Lighting Calculator 3.3 Celebrating 1 year plus with:

- no fatal flaws
- Promotional capabilities
- Enhanced utility customization
- Measure level data extraction capability
- No overlapping calculator versions

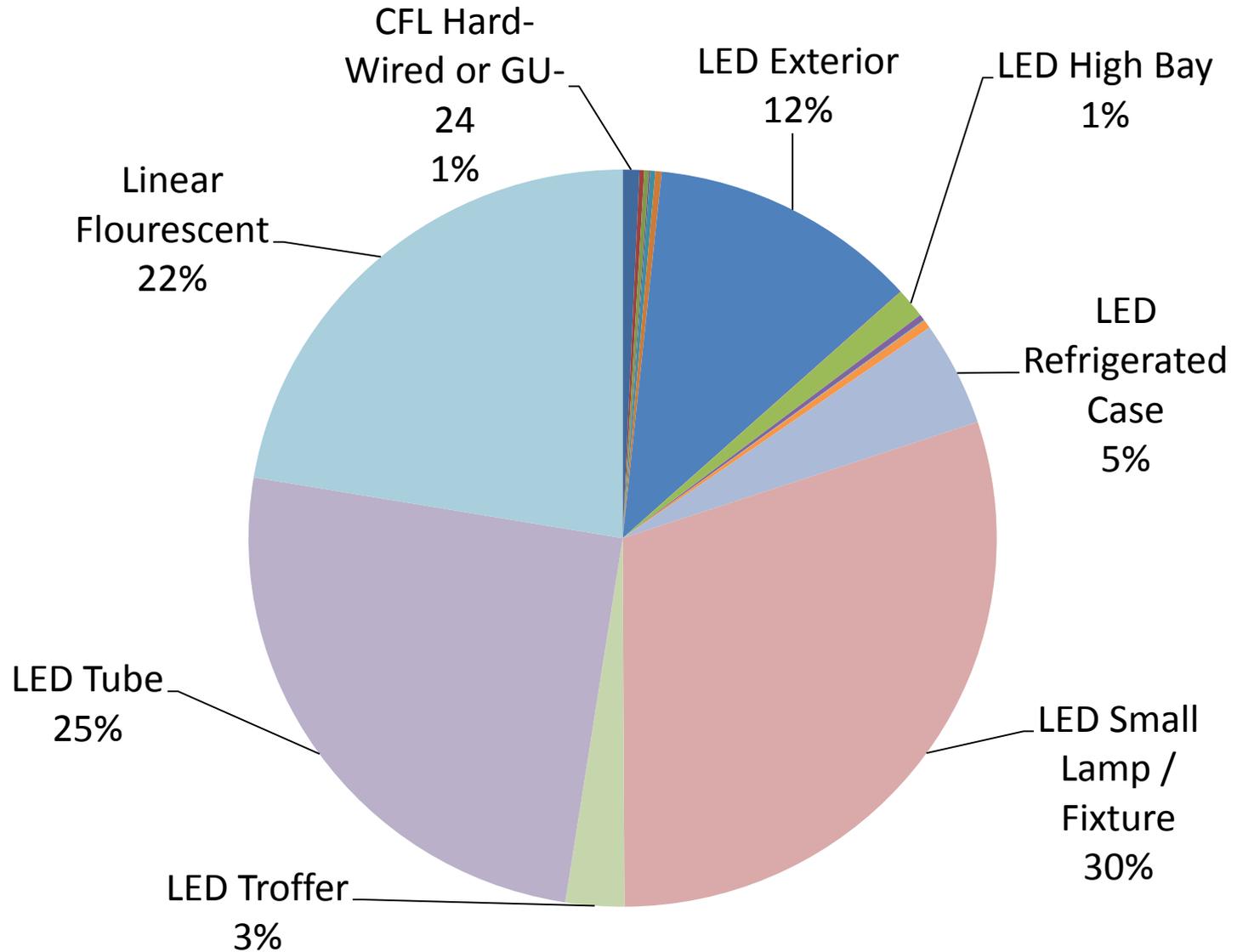


# WHAT'S HAPPENING WITH THE PROGRAM?

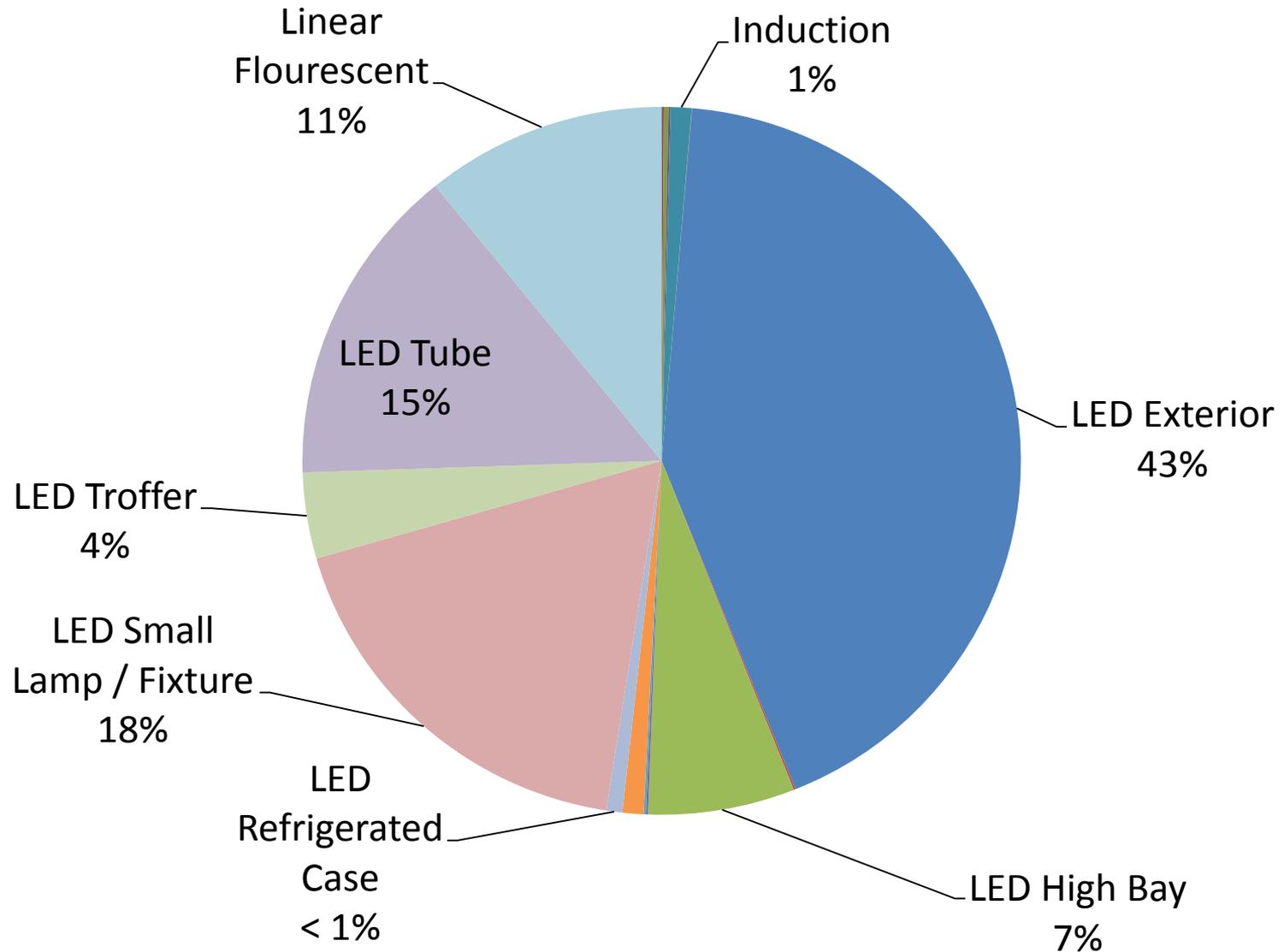
- Canopy Promotion
- Ideas for next promotion?
- Market Research
- Lighting Trade Ally Network focused on New Construction
- **New Utility Reports (as requested)**



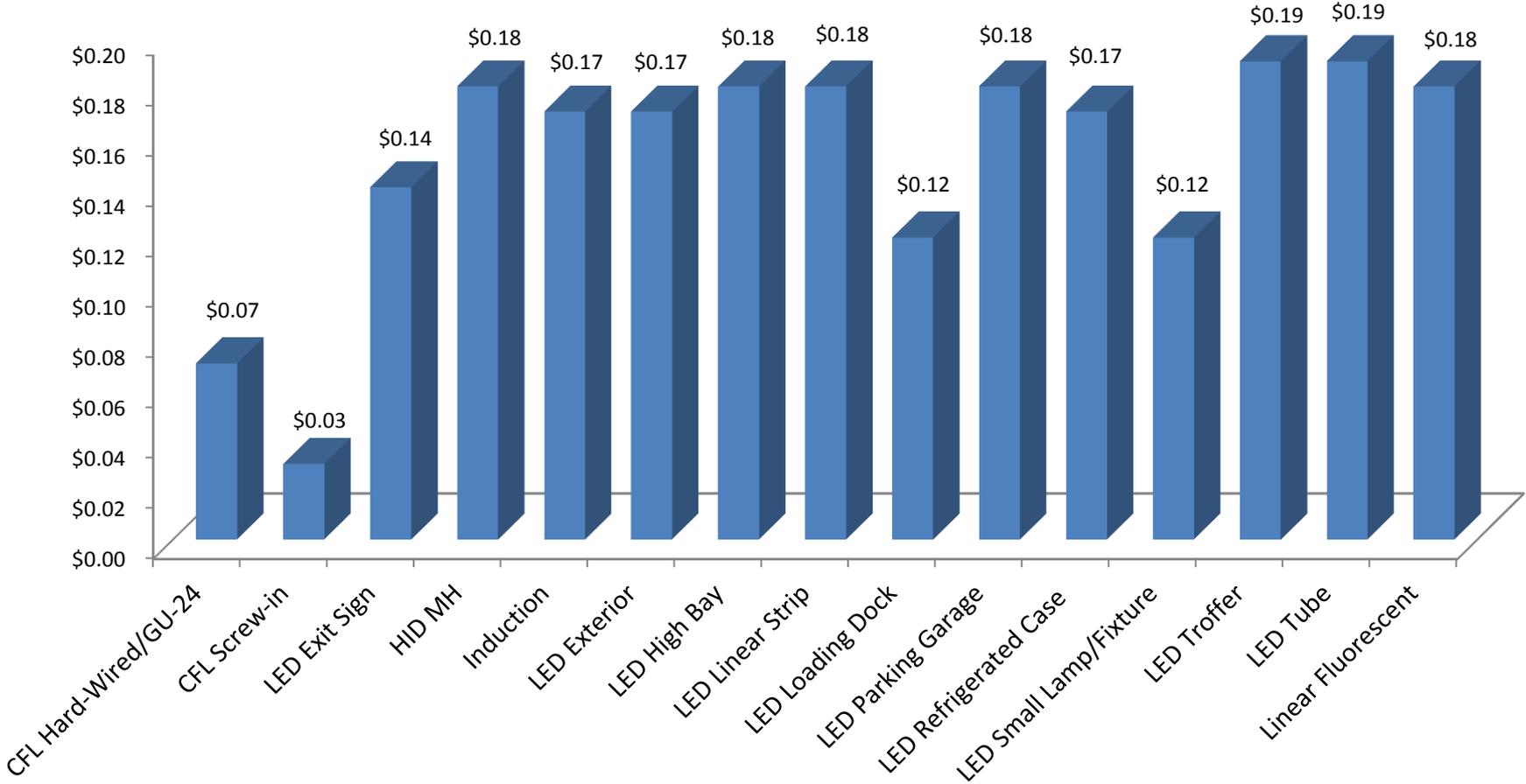
# PORTFOLIO BY TECHNOLOGY



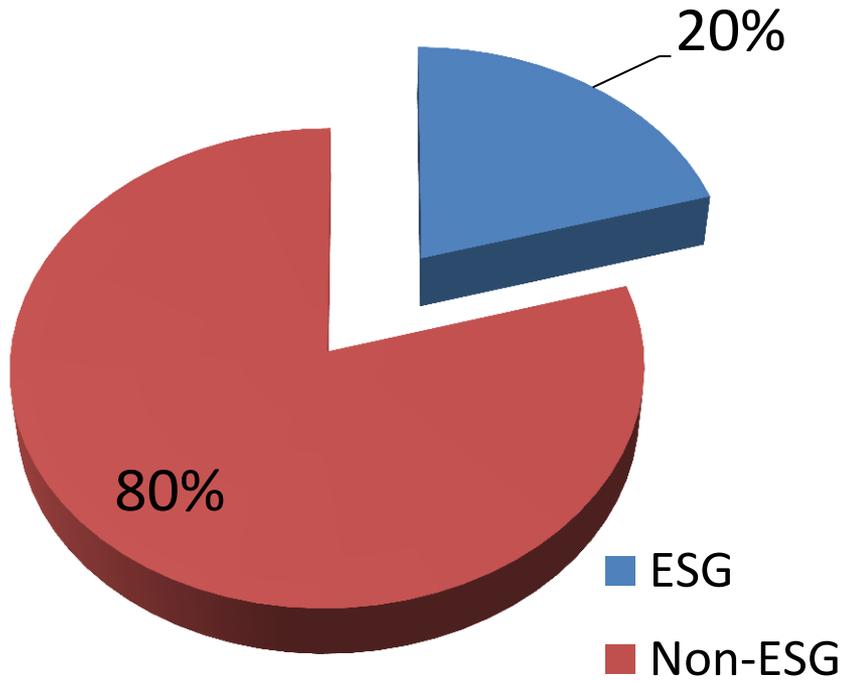
# PORTFOLIO BY SAVINGS



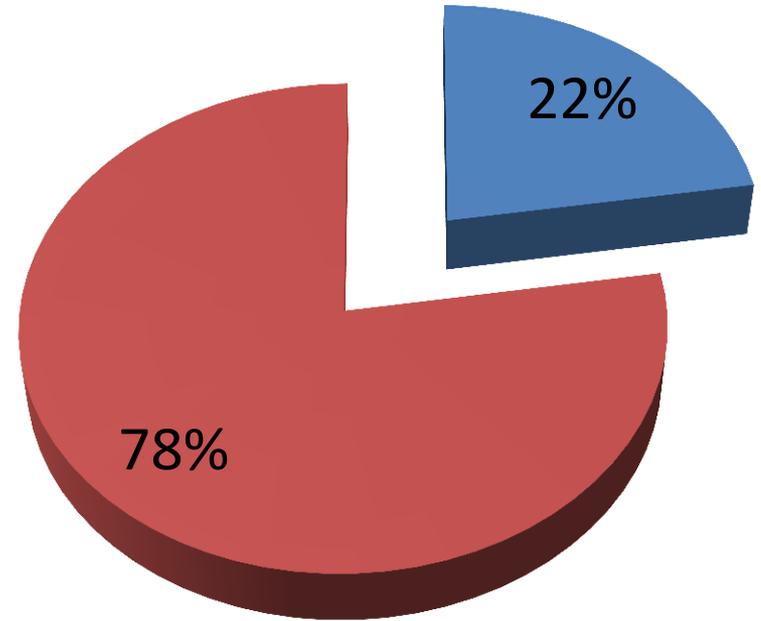
# COST PER KWH BY TECHNOLOGY



# TOTAL LIGHTING PROJECTS

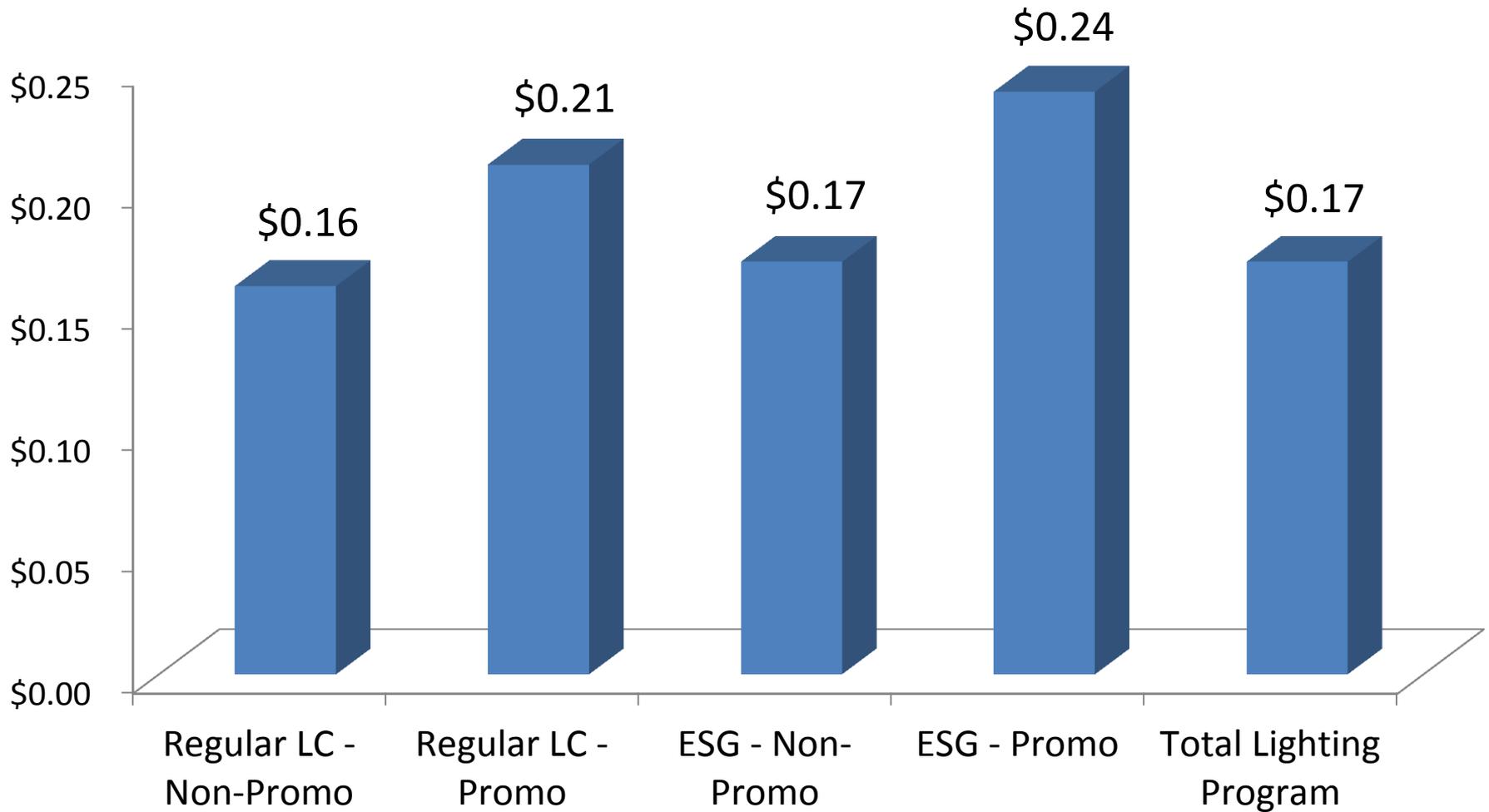


# TOTAL KWH SAVINGS

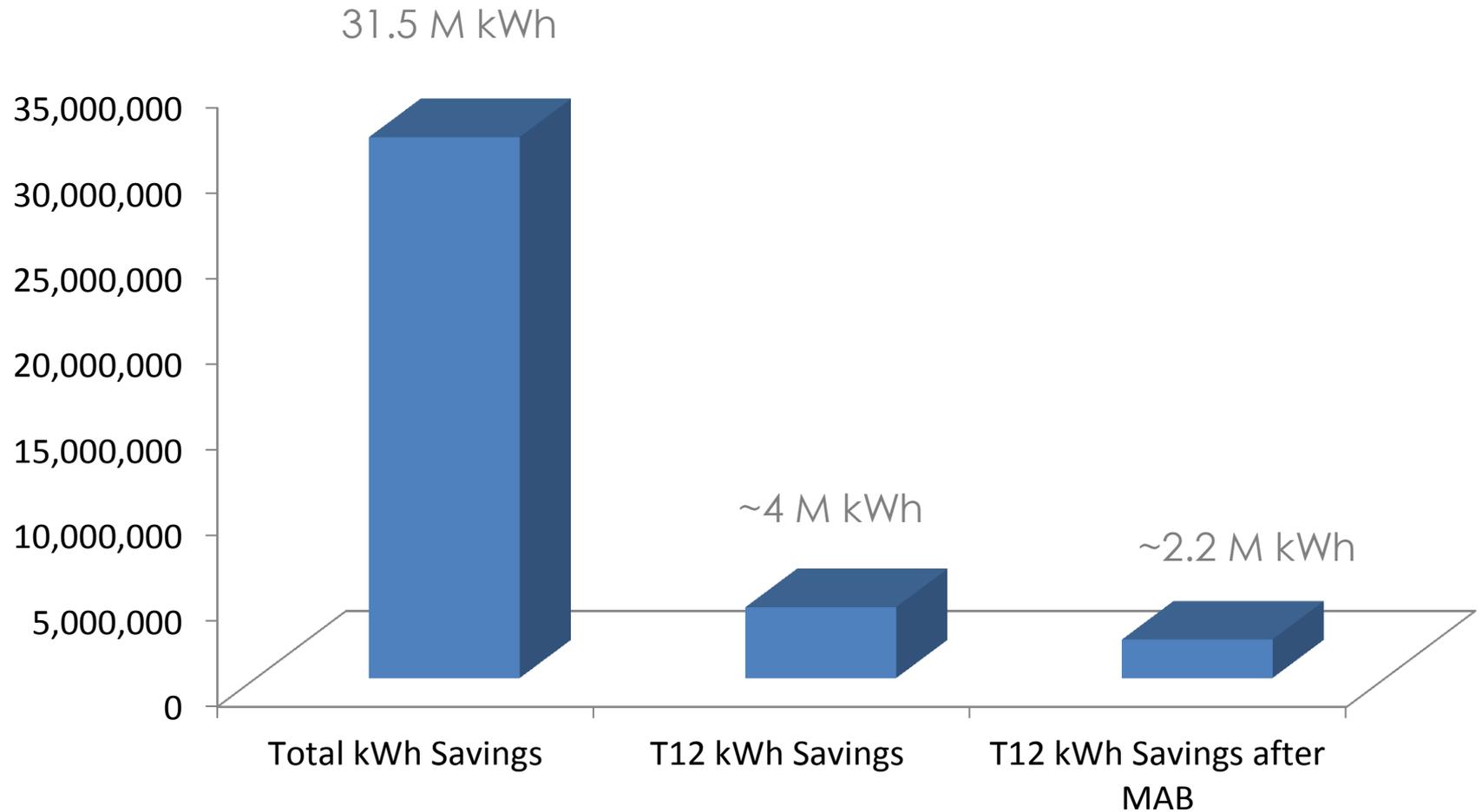


~2.2 M kWh

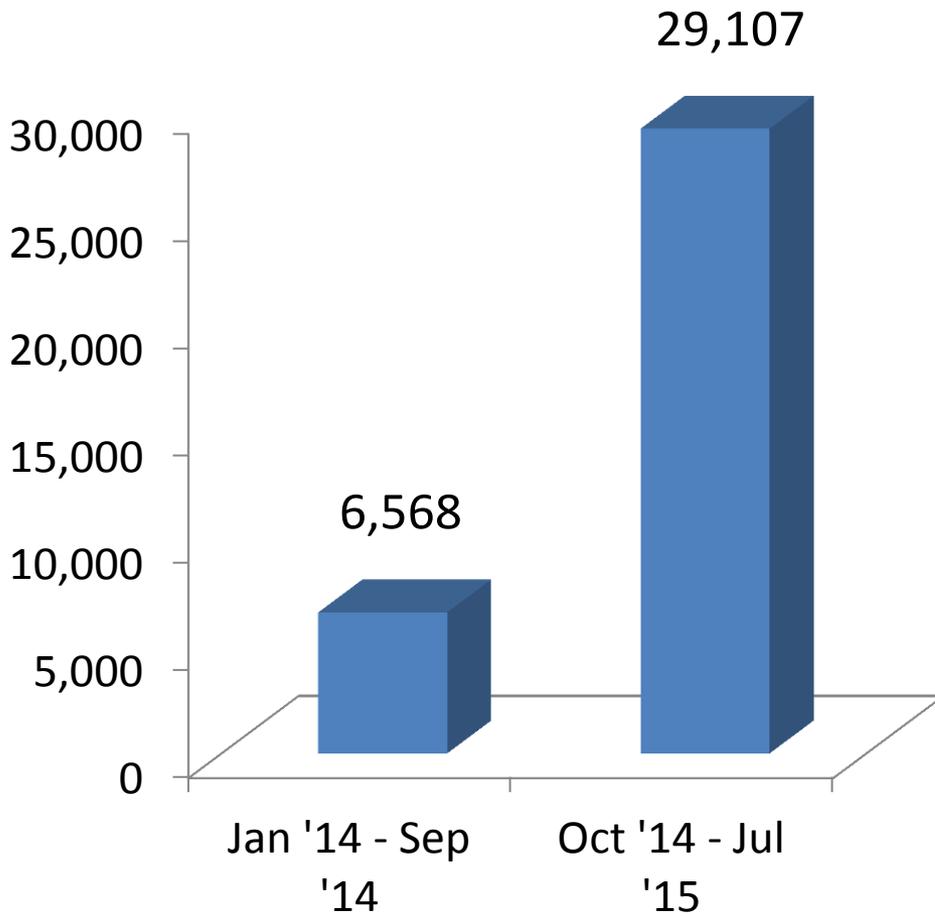
# LIGHTING PROGRAM COSTS



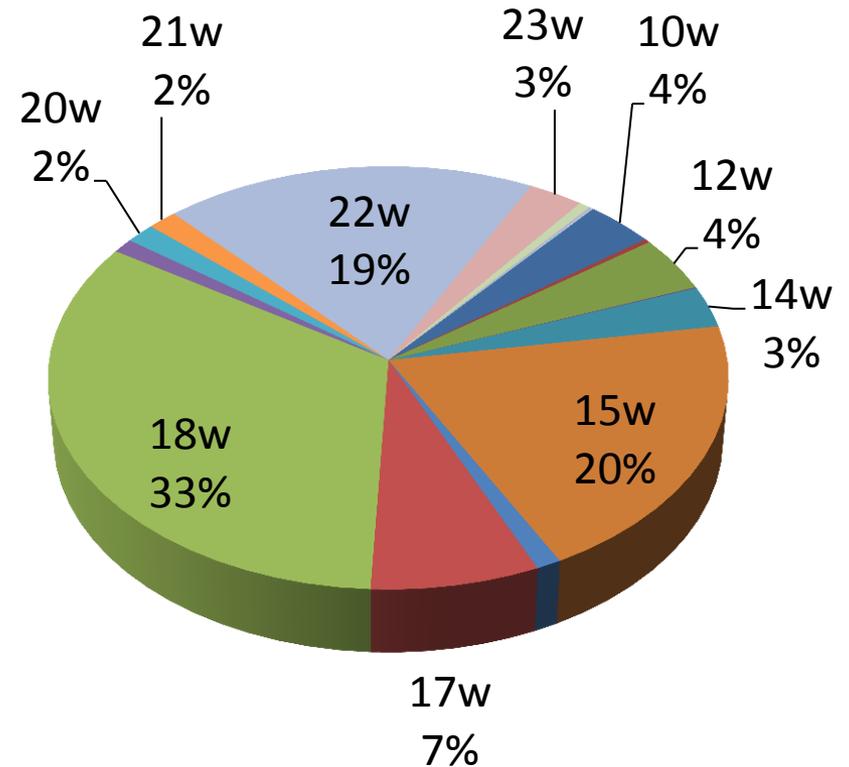
# EFFECTS OF THE MARKET AVERAGE BASELINE



# TLEDs – LOVE OR HATE EM....

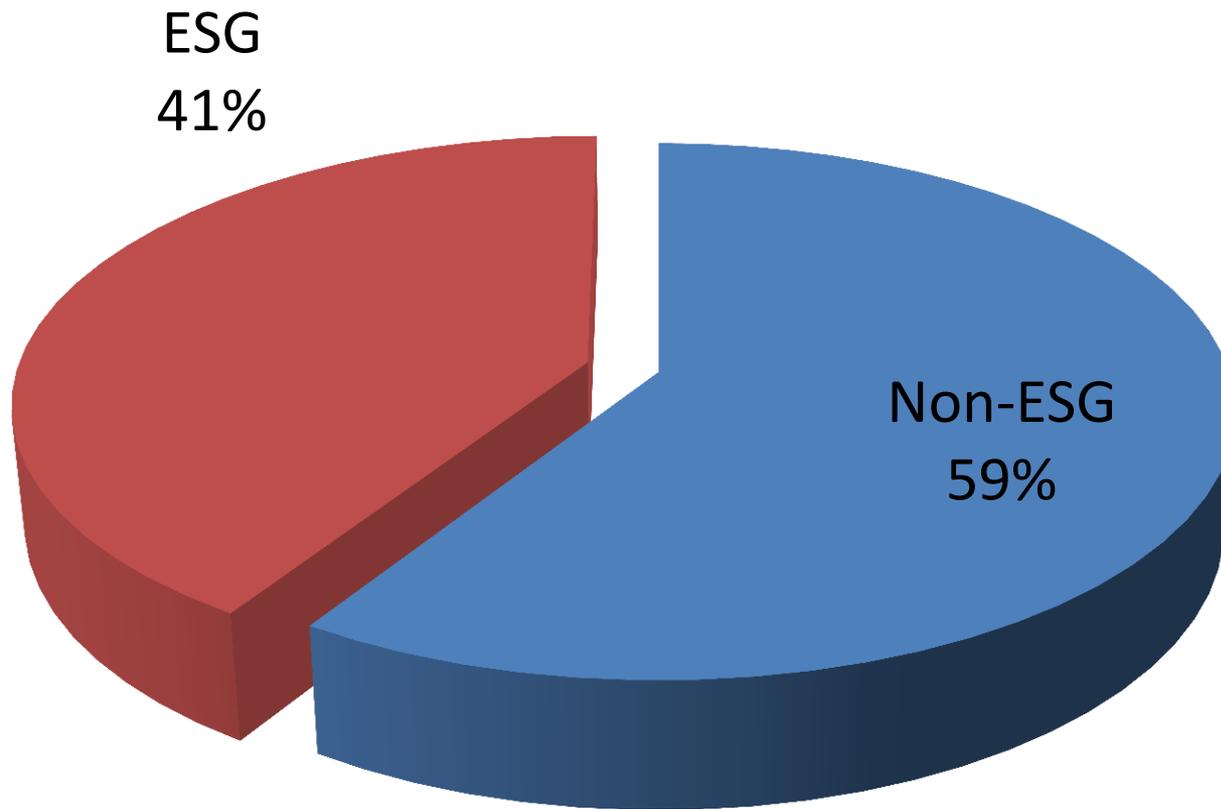


TLED Lamp Count

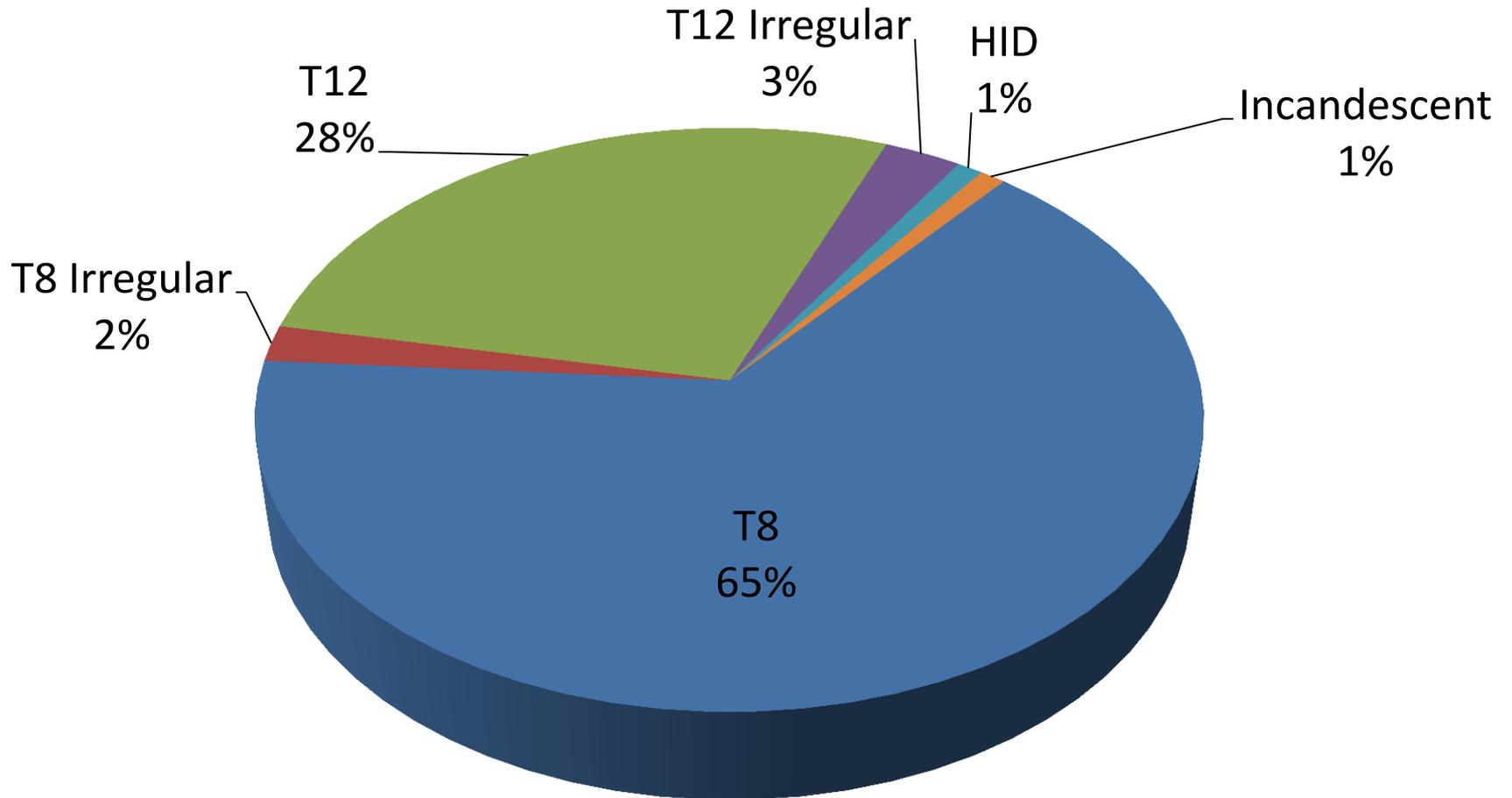


TLED Wattage

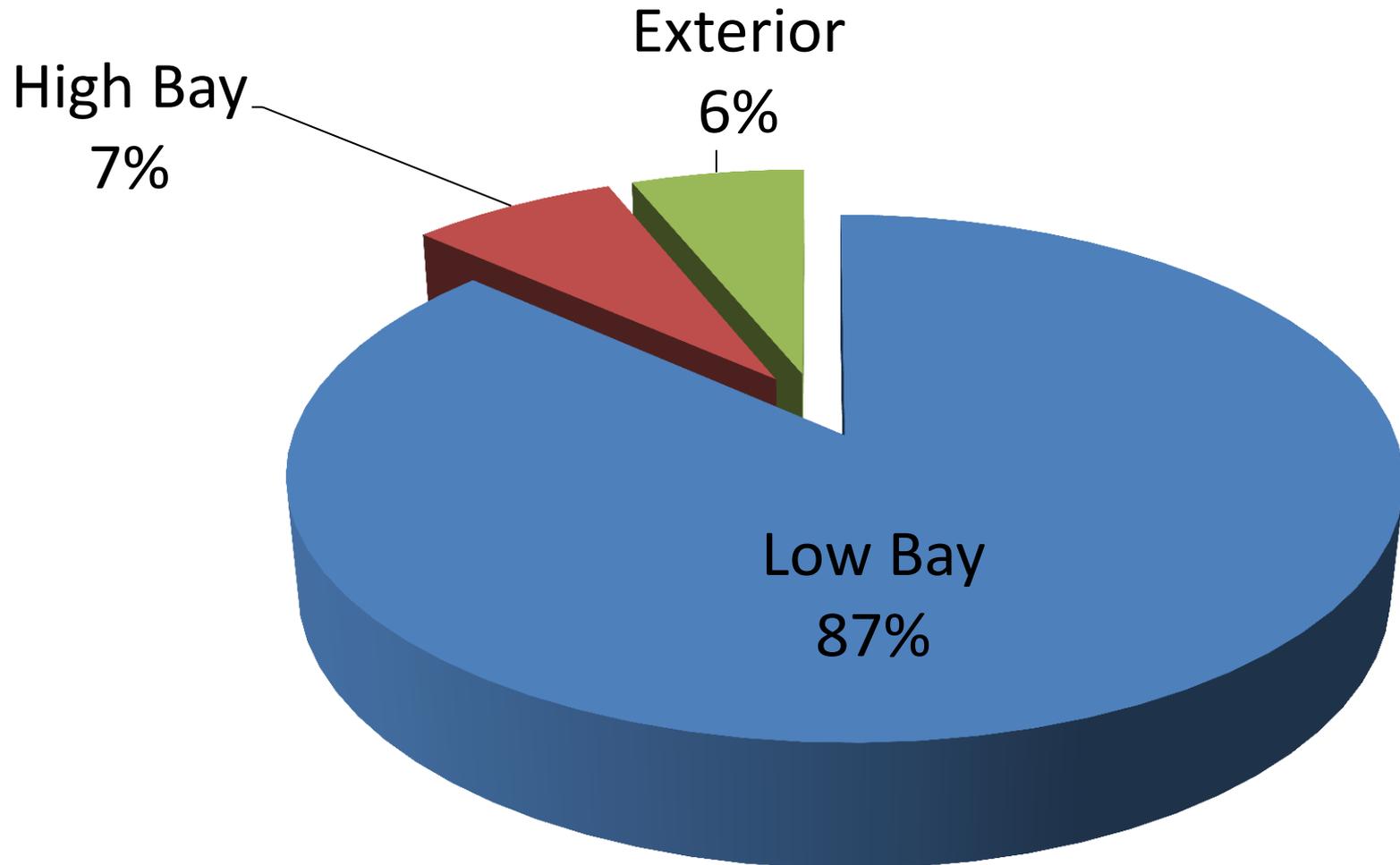
# WHERE DO THEY COME FROM?



# WHAT ARE THEY REPLACING?



# WHERE ARE THEY GOING?



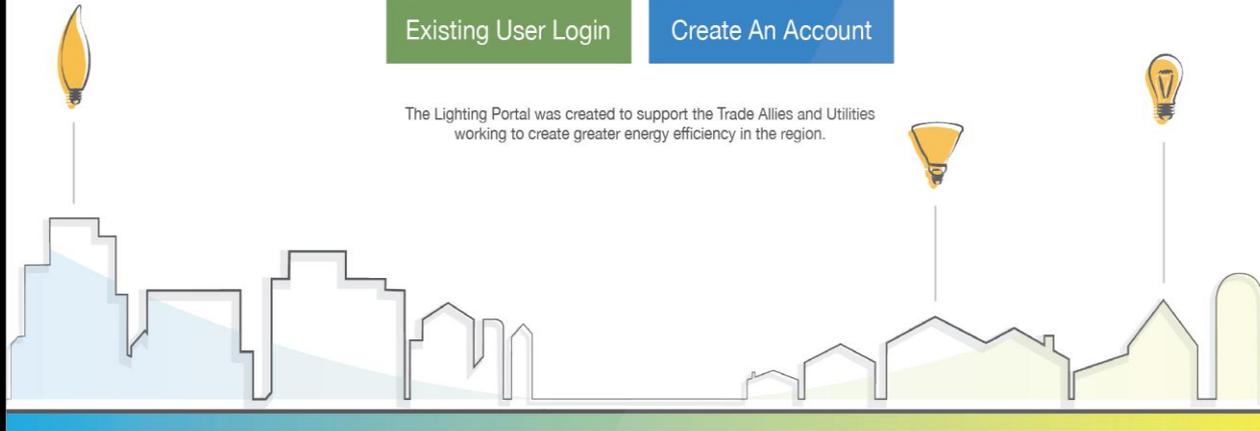
# Lighting Portal

All the resources you need to manage your energy efficient lighting projects.

Existing User Login

Create An Account

The Lighting Portal was created to support the Trade Allies and Utilities working to create greater energy efficiency in the region.



# Lighting Portal

All the resources you need to manage your energy efficient lighting projects.

Existing User Login

Create An Account

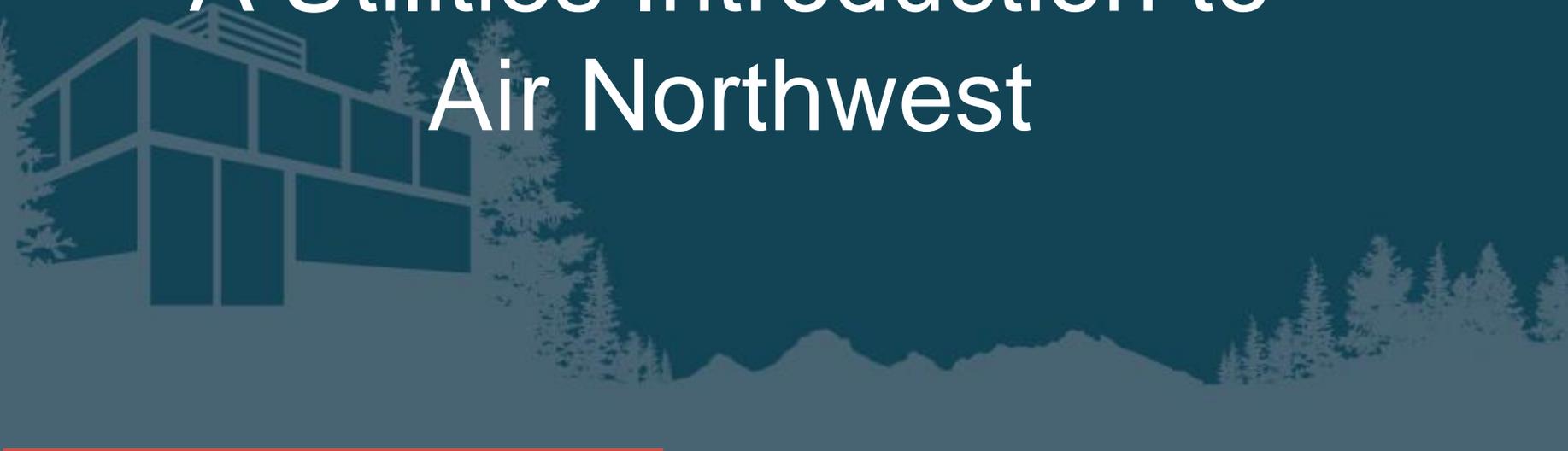
The Lighting Portal was created to support the Trade Allies and Utilities working to create greater energy efficiency in the region.



**NORTHWEST**

Accelerating HVAC efficiency in the Northwest

# A Utilities Introduction to Air Northwest



---

## What is Air Northwest?

Air Northwest is a no-cost membership network that will provide commercial HVAC trade allies with resources to grow their businesses by increasing the sales and installation of more energy efficient HVAC systems and equipment.

Air Northwest is sponsored by Bonneville Power Administration and the Northwest public utilities and is the premier resource for commercial HVAC energy efficiency information.



---

## What is an Air Ally?

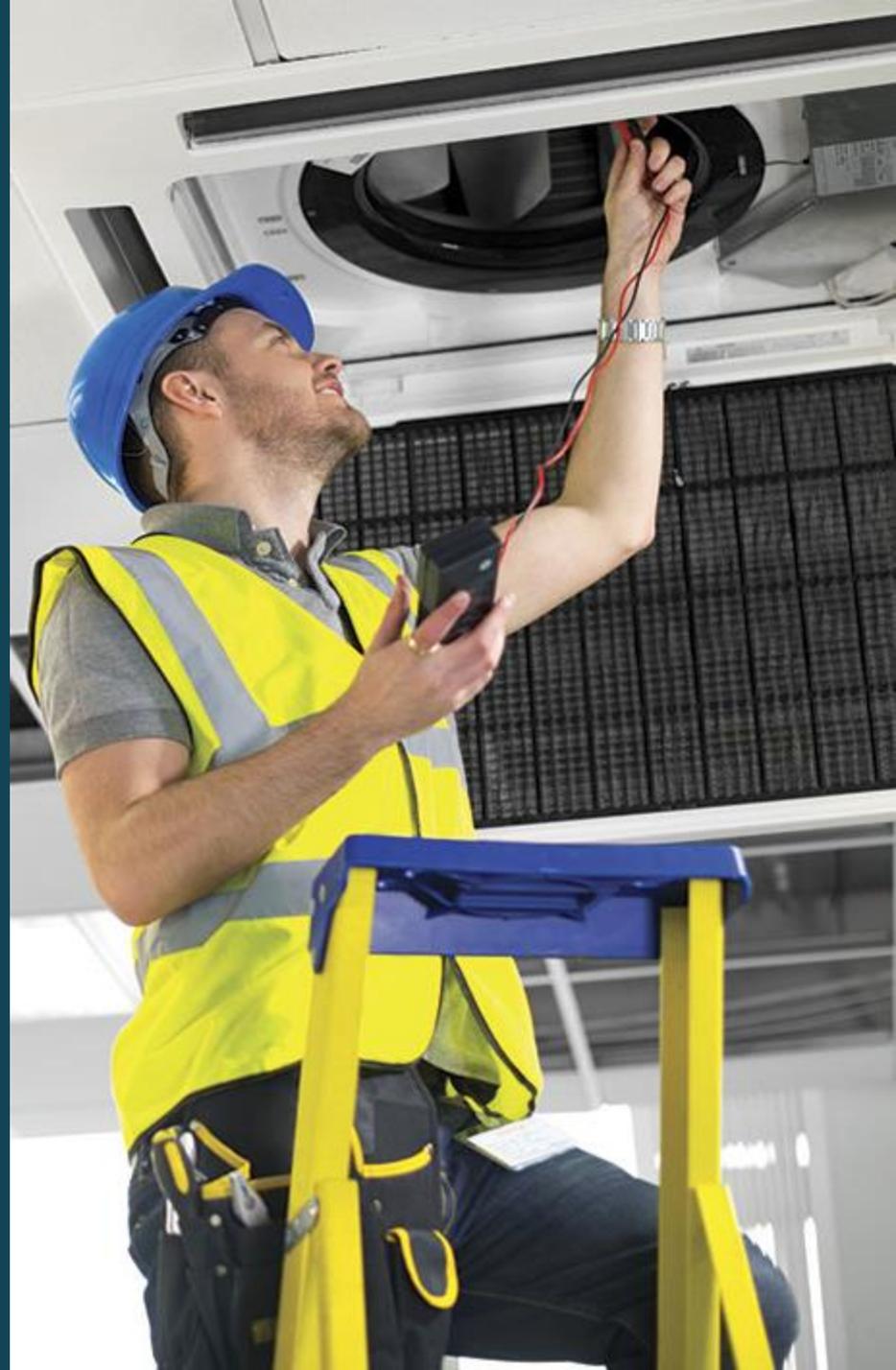
An Air Ally is any approved member that participates in Air Northwest. Air Allies receive exclusive educational opportunities and personalized resources to build the foundation to help them provide utility incentives to their commercial customers.

## Target Audience

Those who install (or have the ability to install) UES HVAC measures in small commercial buildings.

## But I already have an approved Trade Ally list!

Great! Lets collaborate and invite them to join Air Northwest.



---

## Benefits for Air Allies

- ✓ Technical support and free workshops
- ✓ Commercial HVAC resources and best practices
- ✓ Access to Utility contacts and HVAC incentives
- ✓ Increased revenue through more projects

## Benefits for End Use Customers

- ✓ Updated HVAC systems that improve comfort and air quality
- ✓ Latest energy efficient technologies to reduce operating costs
- ✓ Utility incentives to reduce project costs and improve payback

## Benefits for Utilities

- ✓ Increased energy savings through more commercial HVAC projects
- ✓ Ease of working with knowledgeable Air Allies
- ✓ HVAC 101 workshops
- ✓ Air Northwest HVAC Specialists to help:
  - ✓ Identify projects
  - ✓ Create commercial HVAC programs
  - ✓ Support or expand existing commercial HVAC programs

**AIR****NORTHWEST**

Accelerating HVAC efficiency in the Northwest

[HOME](#)[CONTRACTOR RESOURCES](#)[CONTACT US](#)[JOIN NOW](#)

Air Northwest provides commercial HVAC contractors and distributors with tools to grow their business and increase the sale and installation of more energy efficient HVAC systems and equipment.

### What We Do

Air Northwest is sponsored by Bonneville Power Administration and the Northwest utilities. Air Northwest is the premier resource for HVAC energy efficiency information in the Northwest.

Members, known as Air Allies, receive exclusive educational opportunities and personalized resources that build the foundation to help them provide utility incentives to their commercial customers.

Air Allies have the latest information about commercial HVAC best practices and technologies and are able to provide a higher level of customer service and energy efficiency expertise throughout the Northwest.



### Conduit News Feed

Read the most recent posts from Conduit, the online community where Northwest professionals talk about energy efficiency. Visit [ConduitNW.org](http://ConduitNW.org) today and join the lighting conversations you care about.

[Energy Efficiency In Grocery Stores](#)[Nw Ductless Heat Pump Project](#)[E3T Webinar-Commercial Hvac Motors & Fans - 4/8/2015 12:00Pm - 1:00Pm](#)[A Glimpse Of The Future Of Innovative, Efficient Hvac And Clothing](#)[Examining The Claims Of Smart Thermostat Vendors](#)[Highlights Of Hvac Innovations](#)[Energy Efficiency For Industrial Hvac And Refrigeration Systems](#)[VIEW CONDUIT FEED >](#)

### Utility Lookup

Utilities offer a number of energy efficiency incentive programs that will not only help your bottom line, but also fit the needs of your clients.

Find out what's available in your area. Search for commercial HVAC equipment incentives by zip code.

Zip Code

[Search](#)

### Upcoming News and Events

<a href="#">Rocky Mountain Power Sales Workshop</a> Laramie, WY	Jun 16, 7:00am
<a href="#">Proin et Wisd Tincidunt</a> Sacramento, CA	Jun 16, 7:00am
<a href="#">Curabitur Sagittis Tellus ac Massa Hendrerit</a> Los Gatos, CA	Jun 16, 7:00am
<a href="#">Rocky Mountain Power Sales Workshop</a> Laramie, WY	Jun 16, 7:00am

[www.airnorthwesthvac.com](http://www.airnorthwesthvac.com)**AIR****NORTHWEST**

Accelerating HVAC efficiency in the Northwest

[HOME](#)[CONTRACTOR RESOURCES](#)[CONTACT US](#)[JOIN NOW](#)

### Join Air Northwest

#### Step 1:

Watch the [Air Northwest Orientation](#).

#### Step 2:

Download and fill out the [Application Form \(pdf\)](#).

#### Step 3:

Submit the form.

#### Step 4:

We will review your application.

Once approved, you will receive a membership certificate and welcome kit via email, along with a phone call from one of our HVAC specialists.

### Contact Us

If you have any questions, feedback you'd like to offer, or need assistance. Contact us. We will be happy to help in any way we can.

By phone: 866-610-9555

Email: [info@airnorthwesthvac.com](mailto:info@airnorthwesthvac.com)

Fax: 503.243.1154

Mail: 620 SW 5th Ave. Suite 400 Portland, OR 97204

Or fill out the form below and someone will get back to you within 48 hours:

First Name

Last Name

Company Name

City

State

▼

Phone

Email

Questions / Comments

[Submit](#)

Not sure if you're ready to join?

Do you have questions for us?

Call us! 866-610-9555 We are here for you!



## Air Northwest Utility Information Request Form

Accelerating HVAC Efficiency in the Northwest

AIR NORTHWEST

Air Northwest is a no-cost membership network that will provide commercial HVAC trade allies with resources to grow their businesses by increasing the sales and installation of more energy efficient HVAC systems and equipment. To help establish Air Northwest we are working to compile the commercial HVAC measures and programs offered by our customers. By completing this Information Request Form, Air Northwest will be able to communicate the incentives your utility offers to the contractors and distributors in and around your territory. This information will become an essential part of a personalized Utility Resource Guide for each member that joins Air Northwest and will help them effectively support your commercial customers.

### Instructions:

Please fill out the information for each BPA measure as listed in the Implementation Manual (IM) and return it to Justin.hovland@lmco.com by **July 30<sup>th</sup>, 2015**. The applicable excerpt from the IM is included for your reference.

### Contact Information

#### Utility Name

[Click here to enter text.](#)

#### Physical Address

[Click here to enter text.](#)

#### City

[Click here to enter text.](#)

#### State

[Click here to enter text.](#)

#### Zip

[Click here to enter text.](#)

#### Phone

[Click here to enter text.](#)

#### Website

[Click here to enter text.](#)

#### Primary Contact Name for HVAC Measures

[Click here to enter text.](#)

#### Phone

[Click here to enter text.](#)

#### Email

[Click here to enter text.](#)

### Unitary Air Conditioning Equipment in Commercial Buildings

Do you offer this measure?

yes no

Does your name for this measure match the above title? If not, what name do you use?

yes no

Does your incentive match the BPA Implementation manual? If not, what is your incentive?

yes no

Do your requirements and specifications match the BPA Implementation Manual? If not, what are your

yes no

## Utility Information Request Form

To help establish Air Northwest we are working to compile the commercial HVAC measures and programs offered by utilities.

Action Item!

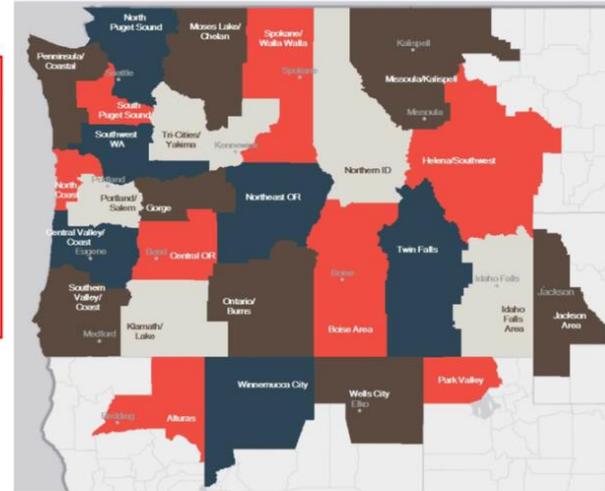
AIR NORTHWEST

# Incentive Resource Guide

- First benefit of joining Air Northwest
- Personalized for each member
- Based on region selected in Application Form
- Updated with each IM or through direct utility communication with Air Northwest
- New reports run for Air Allies made annually or upon request

This report was made specifically for Justin's HVAC Company based on the regions that were selected on your company's Air Northwest Membership Application Form. You have indicated that you actively serve 3 region(s). There are 19 BPA utilities in the regions you selected. 5 of these utilities offer commercial HVAC incentives, which are listed below.

**Note:** We are creating a map that is white with the regions outlined. The regions that are selected by the Air Ally on their application will then be highlighted in color for their personalized Incentive Resource guide.



Orcas Power & Light Cooperative	Measures and Incentives	
North Puget Sound Region 1034 Guard Street, Friday Harbor, WA 360-376-3550 Contact: Anne Bertino, 360-376-3571 <a href="#">Link to Utility Website</a>	Ductless Heat Pumps <i>Building construction date before 2007; Must have Individual metering or the ability to meter electric usage separately from other adjoining building(s)</i>	\$250 per Ton
	Ducted Heat Pumps Custom Projects	\$250 per Ton \$0 per
PUD No. 1 of Snohomish County	Measures and Incentives	
North Puget Sound Region 807 Rainier St, Snohomish, WA 425-783-1000 Contact: Sinh Tran, 425-783-8248 <a href="#">Link to Utility Website</a>	Air Conditioners <11.25 tons <i>Incentive amount depends on system specifications.</i> Ductless Heat Pumps <11.25 tons <i>Incentive amount depends on system specifications.</i> Heat Pumps <11.25 tons <i>Incentive amount depends on system specifications.</i>	\$11 - \$131 per Ton \$15 - \$443 per Ton \$15 - \$443 per Ton

QUESTIONS?