

# Energize Eastside

## *North Sub-Area Committee Workshop #1*

**Andy Wappler**

*Vice President, Corporate  
Affairs, Puget Sound  
Energy*

energize**EASTSIDE**

March 19, 2014

# Energize Eastside overview

- Growth is straining our region's existing transmission system
- Conservation alone is not enough
- We need to act now
- We will work with the community to identify solutions

***Energize Eastside*** will build new electric transmission infrastructure to ensure dependable power

# Eastside system: 1930s to today

System first installed in  
the **1930s**



3rd Avenue looking west, 1920s - Renton



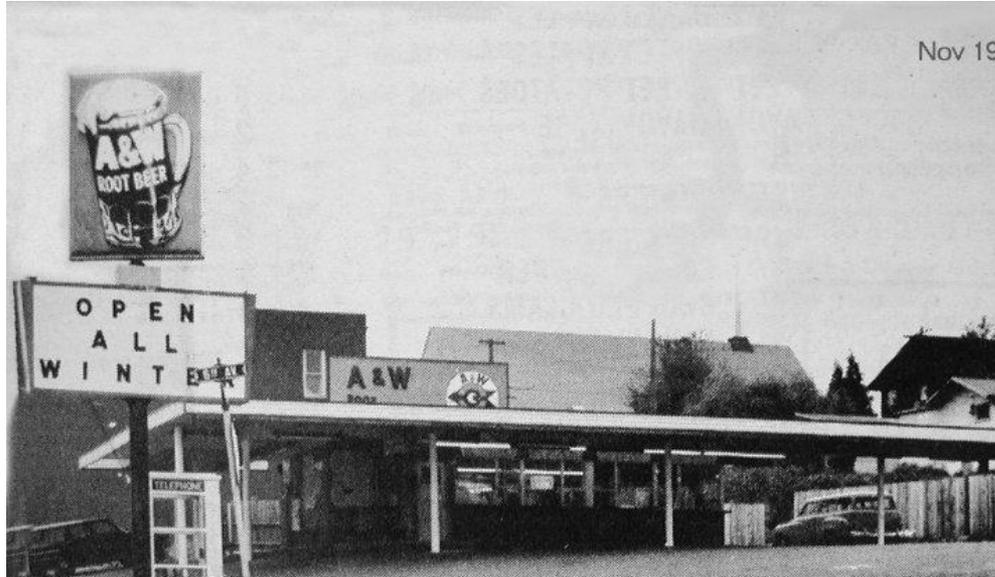
Leary Way, 1940 - Redmond



NE 8th Avenue and Bellevue Way, 1930s -  
Bellevue

# Eastside then and now

## Kirkland



NEW TO KIRKLAND — NEW TO  
canopy, complete with infra-red  
matter how cold the weather y  
and Pat Reid invite you to come  
is 610 Market Street. (Paid Adver



Photo courtesy Wikimedia user Jelson25

# Eastside then and now

## Redmond

1950s

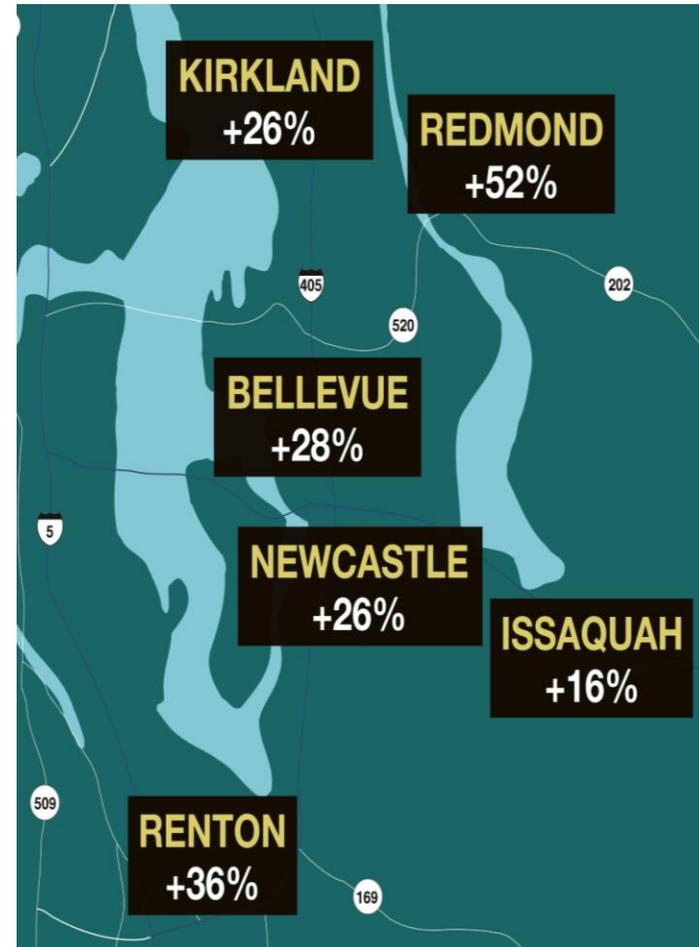
Today



# Growth is straining the system

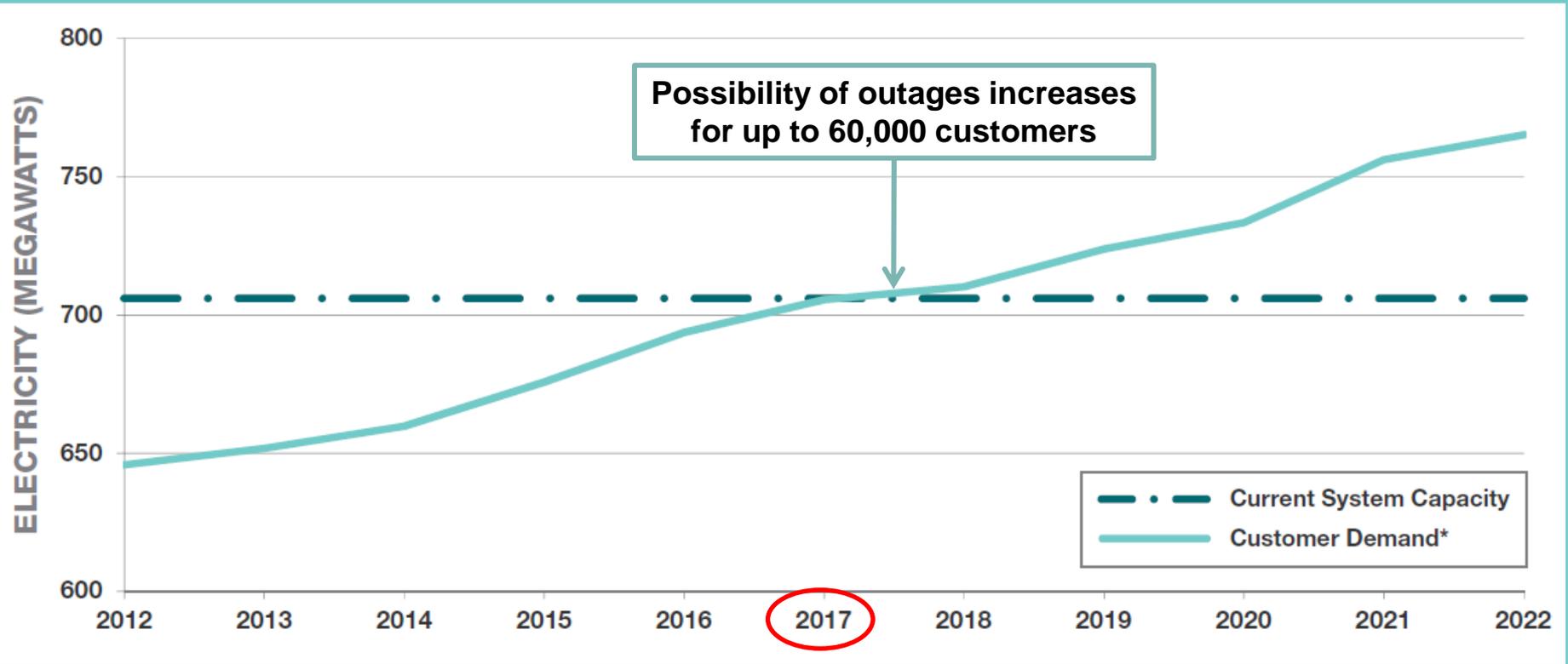
## Regional growth

- Population predicted to grow by more than a third
- Employment to grow 70% between 2012 and 2040



# We need to act now

## EASTSIDE CUSTOMER DEMAND FORECAST



\*Customer Demand assumes 100% of conservation goals are met.

# Conservation alone is not enough

Energy demand will be met through **both** increased, aggressive **conservation efforts**



**And infrastructure upgrades** needed to provide reliable power



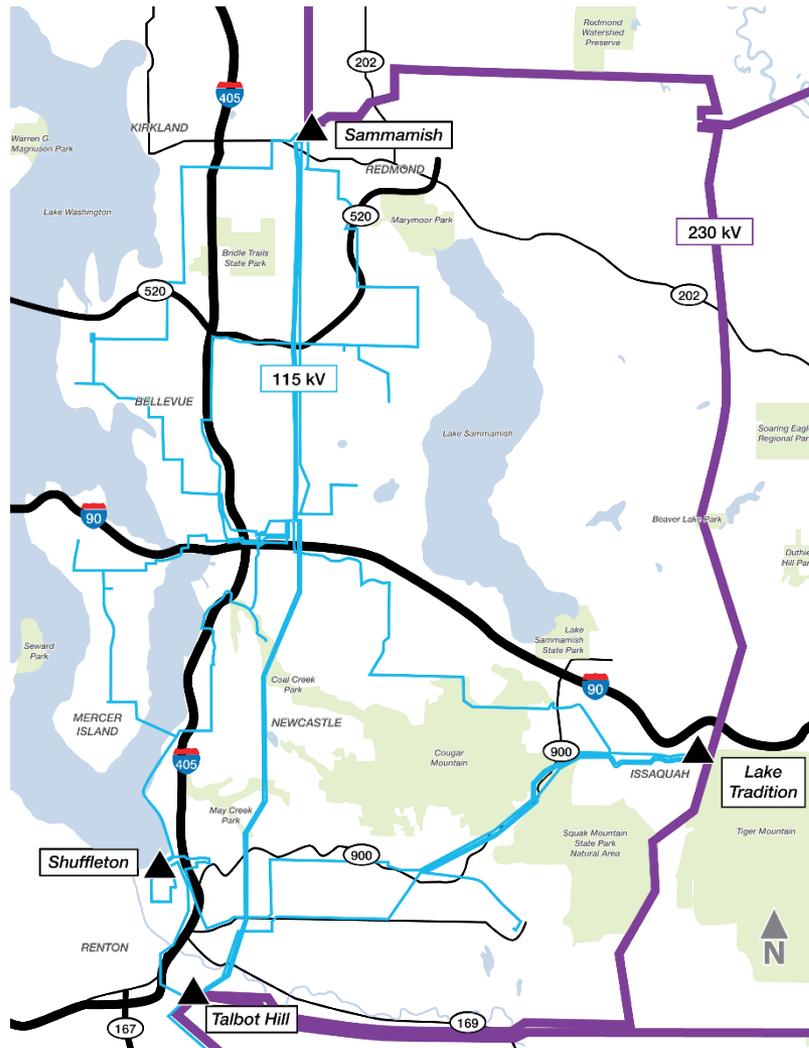
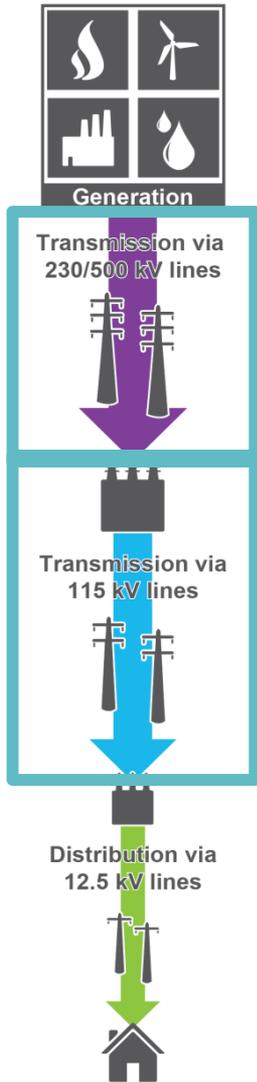
# Our solution

## energize**EASTSIDE**

Builds approximately 18 miles of **new 230 kV transmission lines** from Redmond to Renton

**Supports** the area's **growth**

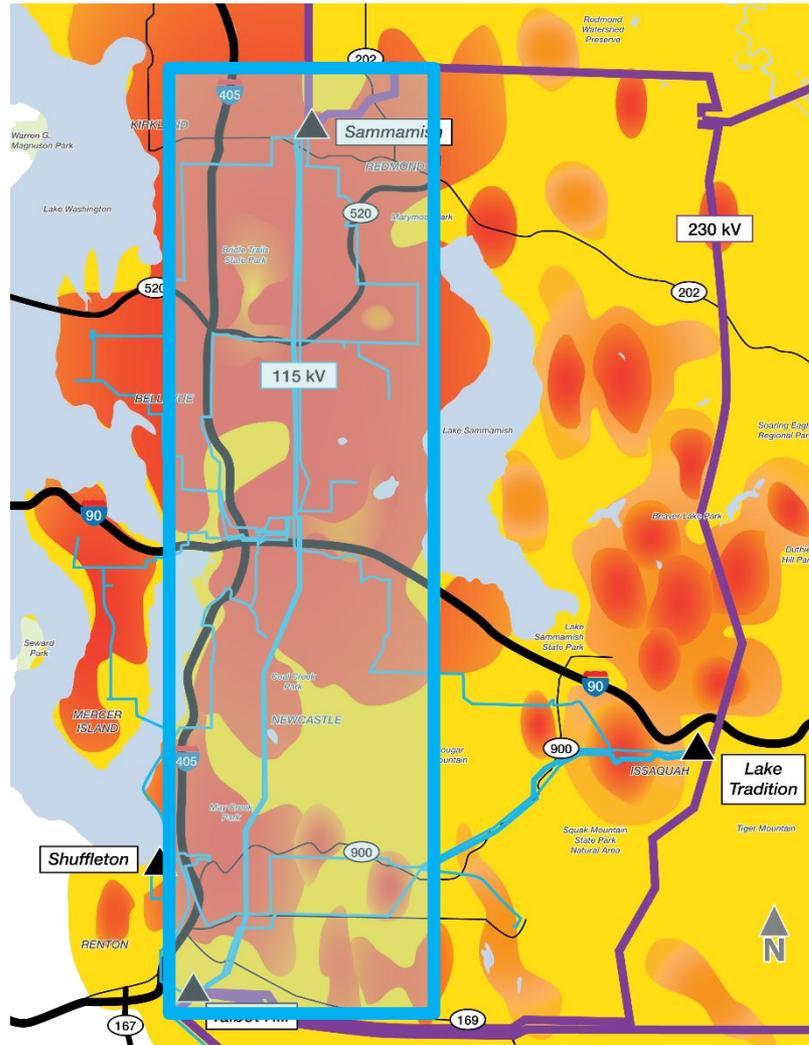
# How power gets to the Eastside



## Legend

- Existing bulk transmission lines (230 kV)
- Existing transmission lines (115 kV)
- ▲ Substations

# Where energy use is growing most



## Legend

- Existing bulk transmission lines (230 kV)
- Existing transmission lines (115 kV)
- Substations

## Electric demand density



# Solution selection process

# 1

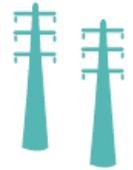
What are the potential approaches to meet the Eastside's electricity needs?



conservation



local generation



infrastructure

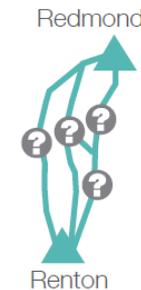
# 2

What approaches provide enough electricity to meet the Eastside's needs?



# 3

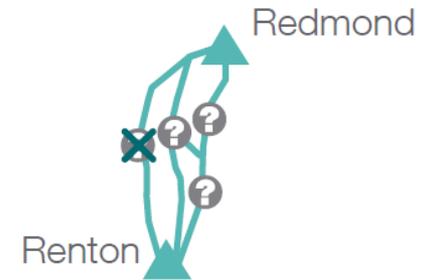
What solutions best deliver electricity to the Eastside?



# Solution selection process

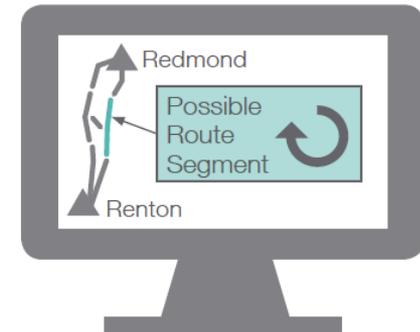
4

What solutions can PSE move forward with?



5

Where could PSE build a solution?



6

What does the public recommend?



# Solution selection process

## ONE SELECTED ROUTE

After collecting feedback from the public, CAG and other stakeholders, PSE will further evaluate requirements and constraints and select the preferred route and substation to move forward for final design, environmental review and permitting.

# Sample transmission lines

Typical pole height: 95 to 125 feet depending on topography

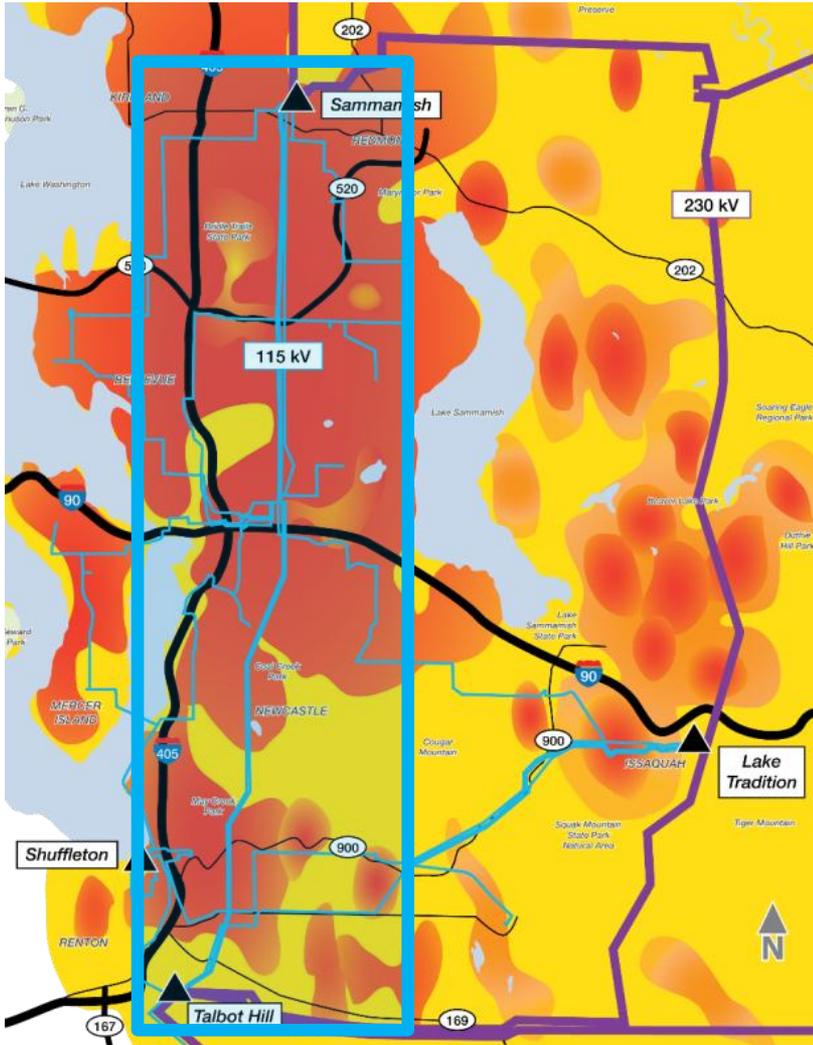
Typical span range: 400 to 700 feet depending on topography



# What we're not building



# Bringing power to where it's needed



# Potential route segments



# What about undergrounding?

- PSE is proposing an overhead transmission line project
- The reasons
  - **No. 1: Cost \$**

<b>Underground</b>	<b>Overhead</b>
\$20-28 million per mile (estimated labor, material and equipment costs)	\$3-4 million per mile (estimated labor, material and equipment costs)

# Who pays to underground?

Requesting group pays the delta between undergrounding and overhead

- Requesting group needs to initiate and identify the specific members of the group
- Money paid up front for both engineering and construction

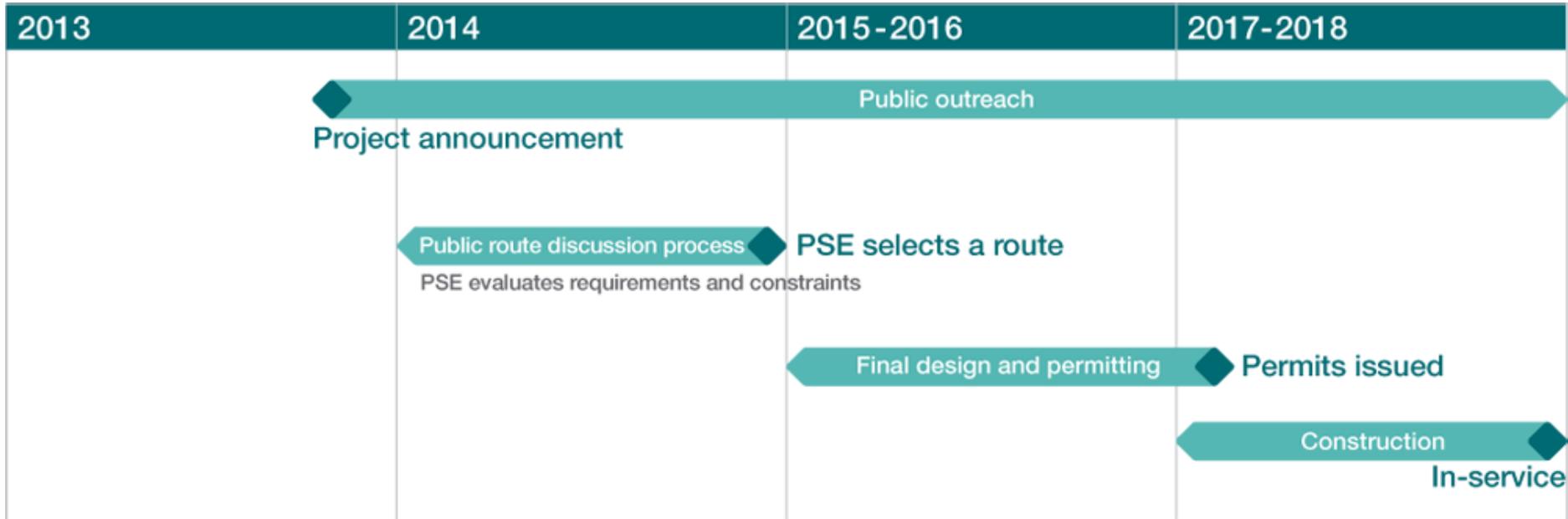


# What about undergrounding?

- Other reasons:
  - Construction impacts
  - Environmental impacts
  - Operational impacts



# Project schedule



# Opportunities for public involvement

Community Advisory Group

Sub-Area Committees

Community Meetings

Other Opportunities

## WINTER

### 1 Education

Learn about electric system and project need

**Community Meeting #1**  
Feedback on project need, potential segments and route selection process

- Discuss community concerns
- Learn about the factors involved in developing the route segments
- Bus tour of project area

## SPRING

### 2 Identify route options

Develop sub-area segment input for full Community Advisory Group discussion

- Discuss community concerns
- Develop potential route options based on input from Sub-Area Committees

## SUMMER

### 3 Narrow route options

**Community Meeting #2**  
Feedback on potential route options

- Discuss community concerns
- Weight community values for evaluation process
- Narrow route options to one recommended route

## FALL

### 4 Recommended route

**Community Meeting #3**  
Feedback on Community Advisory Group recommended route

- Discuss community concerns
- Consider public input and validate recommended route and provide route recommendation to PSE for consideration

Neighborhood and community group briefings, fairs and festivals, public kiosks, online surveys

# Sub-area boundaries



# Workshop #1 goals

- Provide input on the potential route segments
- Begin discussing key evaluation factors

# Overview

- Each table will focus on one route segment
- If you're not currently at the segment that interests you, feel free to move
- Choose one person at your table to be the recorder
- Follow the guiding questions provided
- The recorder will write down your group's conversation on the flip chart provided
- We will have facilitators available to help and subject matter experts available to answer specific questions

# Route segment conversation

- **Question 1:**

For this segment, what key issues should be considered?

- Part A: Individually, complete the issues checklist worksheet
- Part B: As a group, discuss and identify the top five issues for this segment

- **Question 2:**

For this segment, what are specific considerations, unique characteristics and any other information that hasn't already been discussed that the Sub-Area Committee and Community Advisory Group should know about?

# Evaluation factors

- Community values vs. technical criteria
  - Community values = your values
  - Technical criteria = engineering constructability
- Evaluation factors
  - For example, a healthy environment is a ***community value***.
  - Protecting the environment could be an ***evaluation factor***.

# Evaluation factors

- **Question 1: Values**

As a group, answer the question:

*What evaluation factors should be considered by the Sub-Area Committees when considering route segments in this sub-area?*

- **Question 2: Factors**

Thinking about the factors you considered above:

*What data does your group think would be useful to make an objective comparison across segments?*

# Evaluation factors report out

- What evaluation factors did your group come up with?
- Share three key factors

# Upcoming meetings

- **North Sub-Area Committee Workshop #2**  
April 16 from 6:30 to 9 p.m. at Old Redmond Schoolhouse
- **Sub-Area Committee Meeting**  
May 7 from 6:30 to 9 p.m. at Old Redmond Schoolhouse

# Thank you!