



Sammamish-Juanita 115 kV Project

Community Meetings



June 20 and 23, 2012

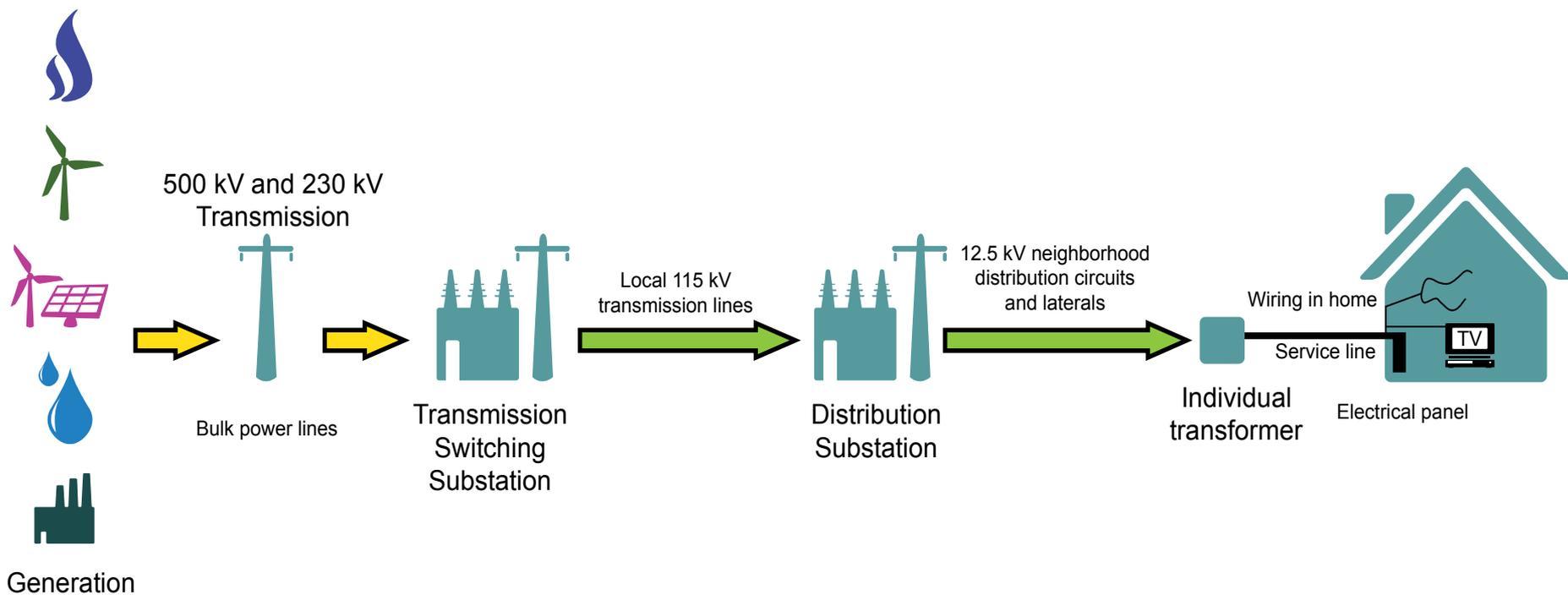


Tonight's agenda

- Review the electric system and project need
- Share the community-involved siting process
- Review the three route alternatives
- Discuss next steps
- Answer your questions

How power gets to you

Distribution





What's the problem?

- Demand for power is growing
- Demand for power is pushing limits of system capacity
- Our job is to keep your lights on and we need a reliable system to do so

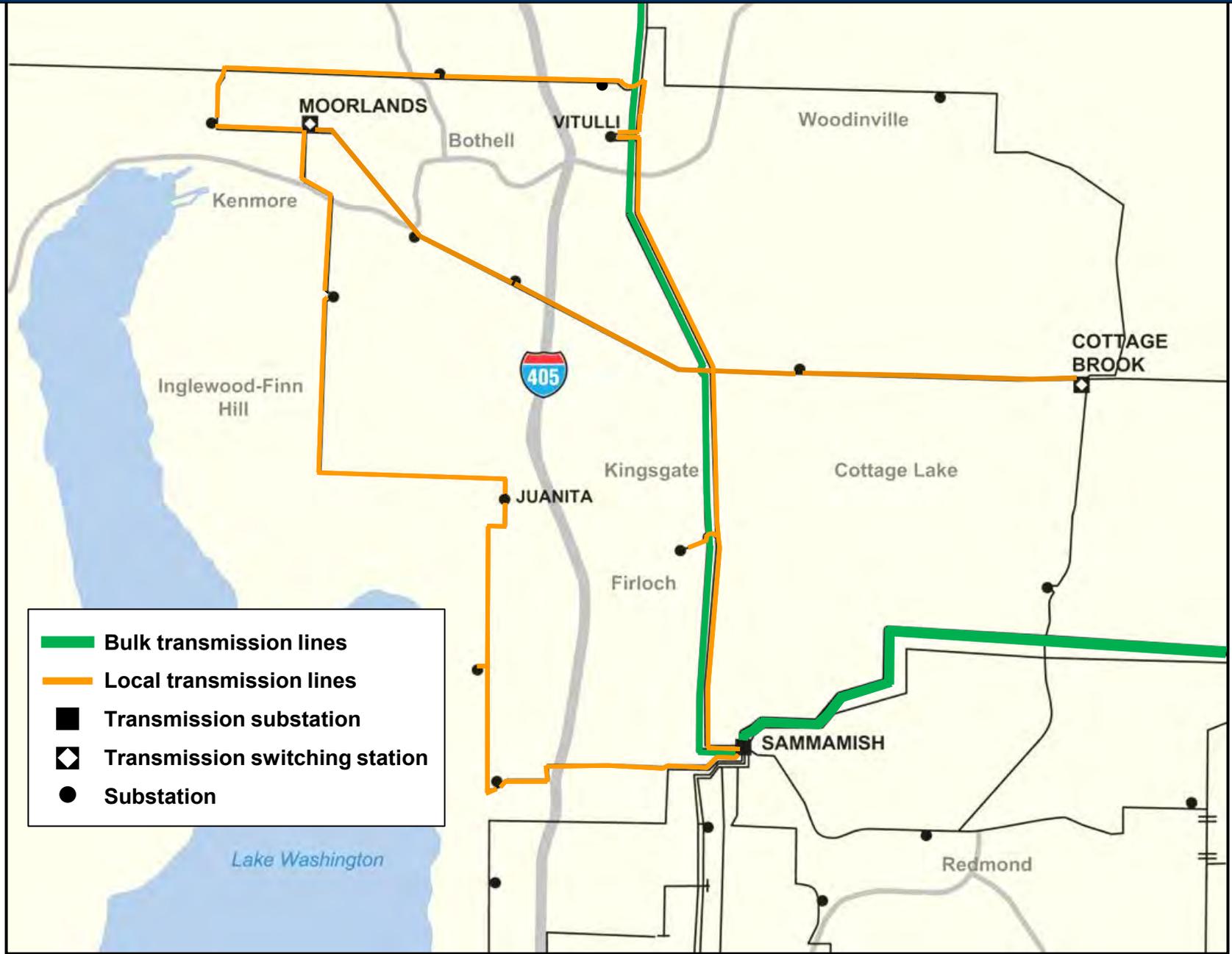




Solutions to capacity and reliability challenges

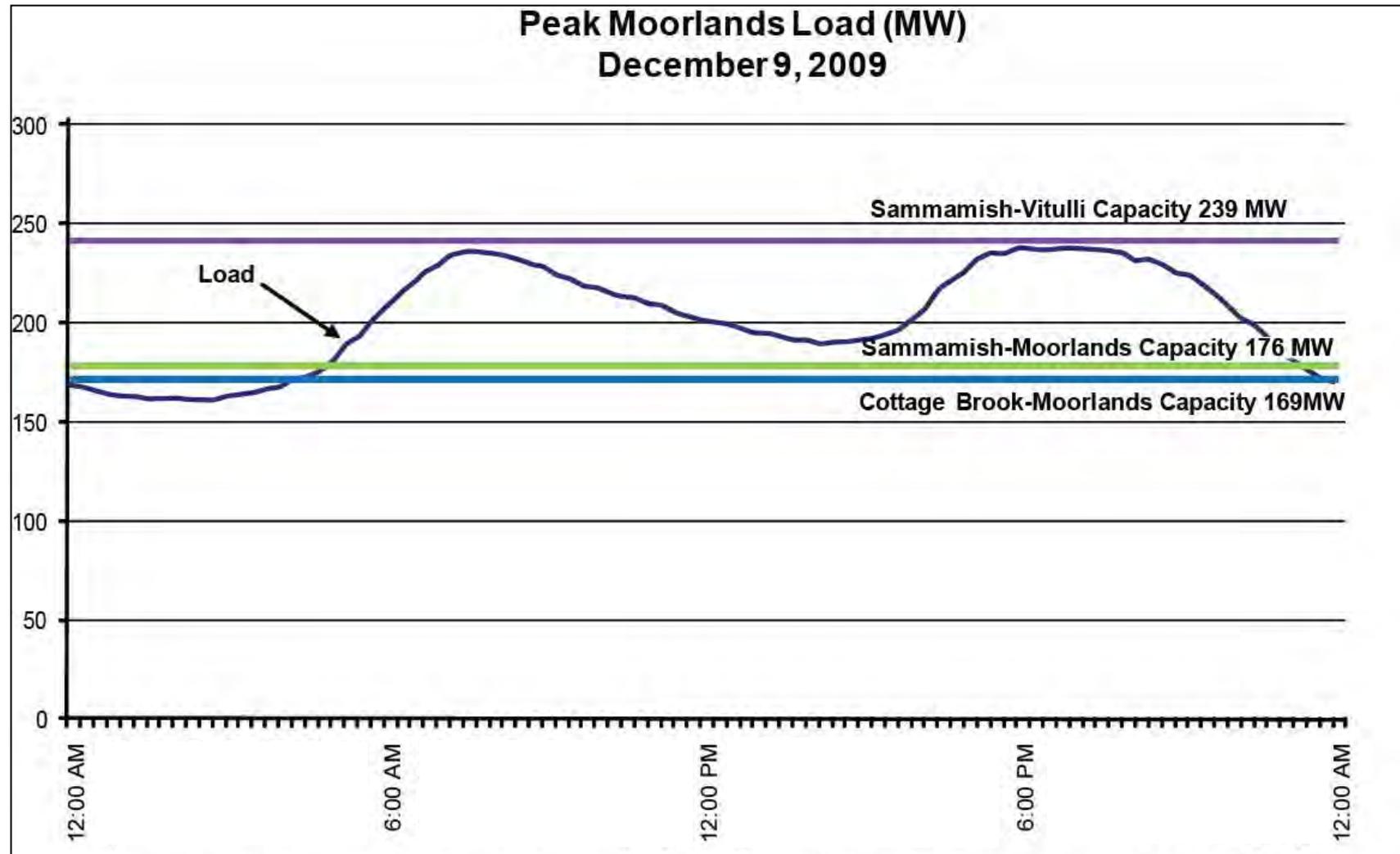
- Expand or rebuild existing infrastructure
- Build new infrastructure
- Energy efficiency
- Alternative energy
- Energy storage

Keeping the power on in the Northern Redmond-Kirkland area





Current Moorlands capacity



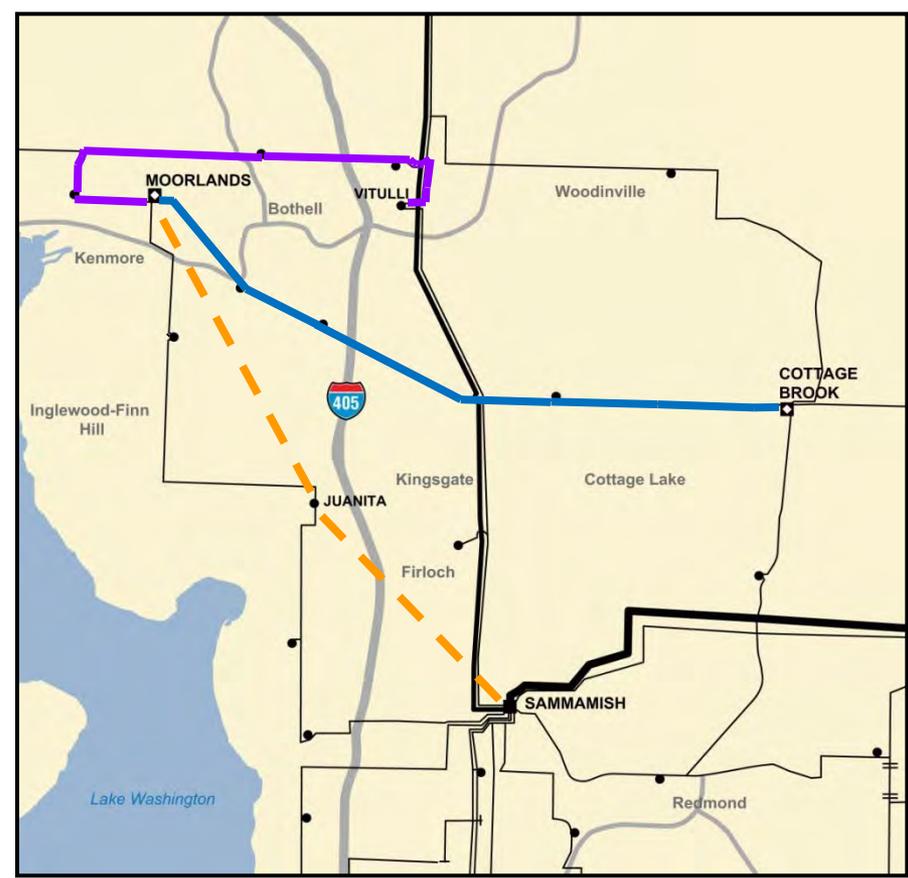
Outage scenario





Moorlands System Projects

-  Cottage Brook-Moorlands Project - Rebuild by 2013
-  Moorlands-Vitulli Project - Rebuild by 2014
-  Sammamish-Juanita-Moorlands Project - New lines in two phases





Sammamish-Juanita 115 kV Project

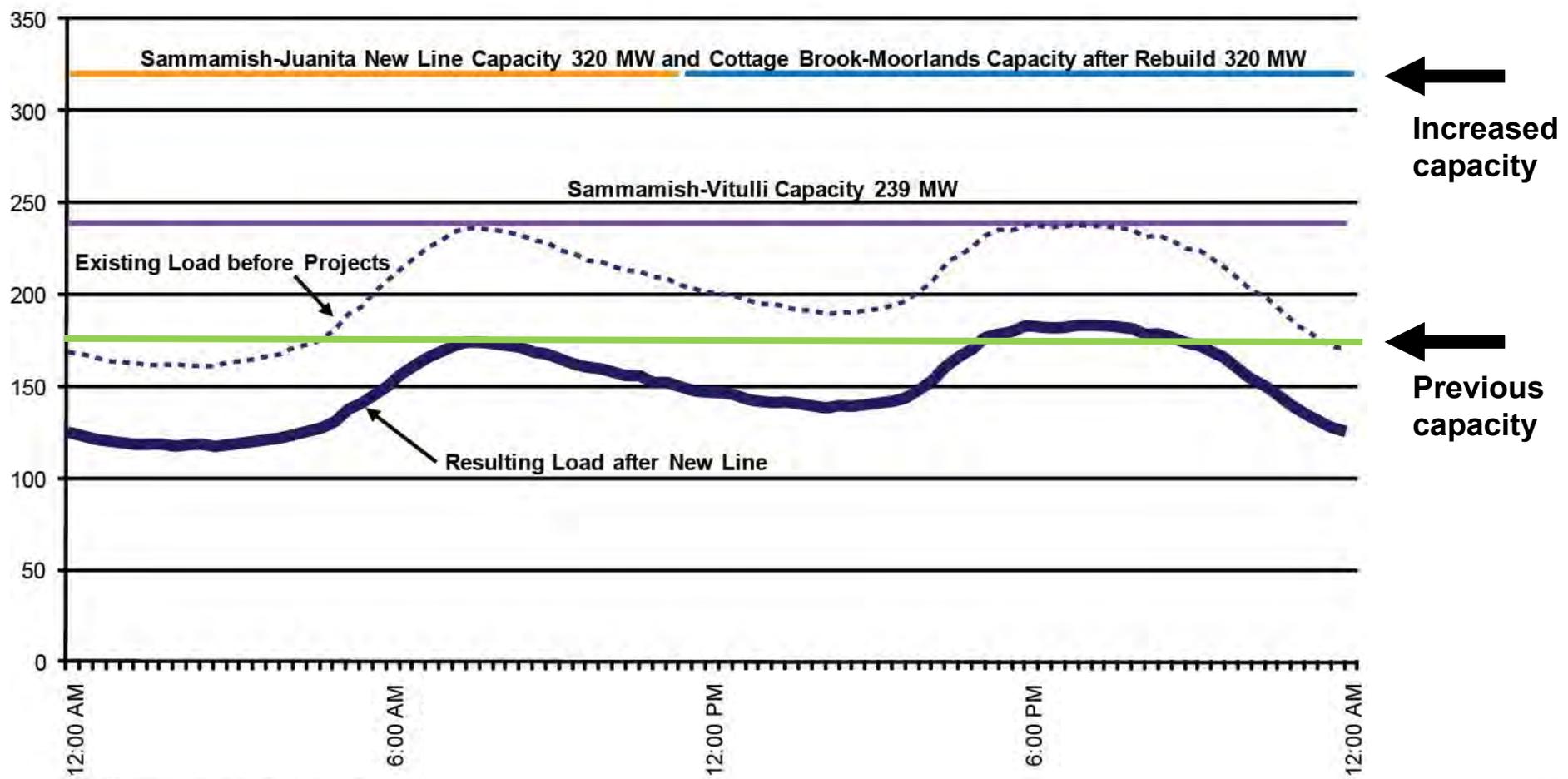
- A new line will:
 - Increase available capacity by transferring two substations off the existing system
 - Improve reliability by adding an additional transmission pathway for the system
 - Ensure dependable power so it is there when you need it





Sammamish-Juanita 115 kV Project

Winter Moorlands Peak Load (MW)
December 9, 2009





PSE's siting goal:

**Develop a community-
acceptable, constructible and
permissible route for the new
transmission line**



Community-involved siting process

Fall 2011

- Convened the stakeholder advisory group
- Learned about the electric system challenges and project purpose
- Discussed past routing process and comments heard
- Identified community siting criteria



Community-involved siting process

Fall 2011

- Advisory group
 - Weighted *avoidance areas and opportunities*
 - Used a geographic information system (GIS) routing model to develop routes for discussion
- PSE hosted a community meeting about the project's progress and shared sample model outputs



Community-involved siting process

Winter 2012

- Advisory group
 - Incorporated community feedback
 - Began identifying route alternatives - started with 30 alternatives, narrowed down to 3
 - Asked PSE to review alternatives for feasibility and constructability

Spring 2012

- PSE reviewed the route alternatives, identified challenges and made minor modifications to each

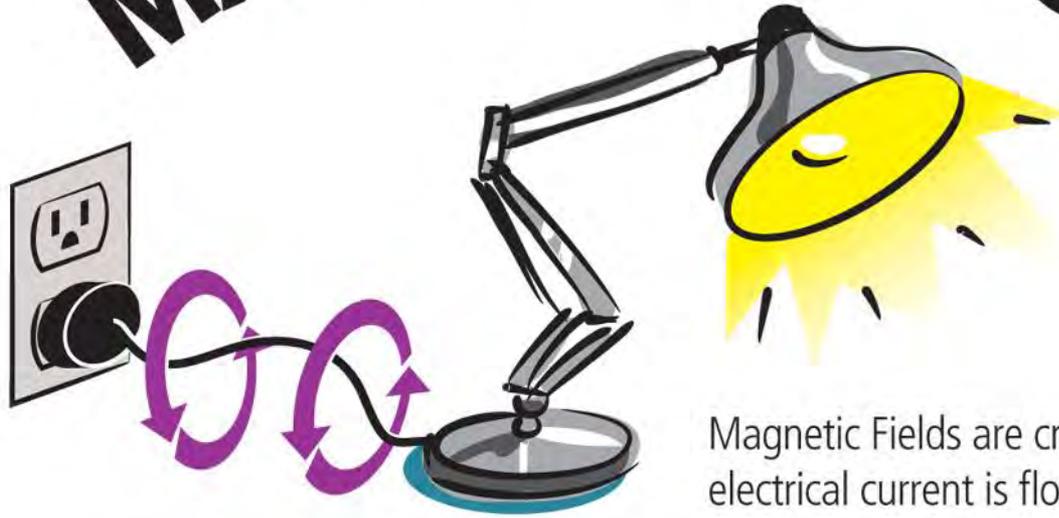


Community-involved siting process

What we've heard from the community

- Avoid residential areas
- Use commercial/industrial areas
- Questions about property values
- Questions about electromagnetic fields and health
- Preferences for one route alternative over another
- Questions about construction effects to businesses along NE 124th Street
- Mixed feedback on use of parks, open space and critical wildlife habitat
- Mixed feedback about siting the line along Willows Road
- Combine with existing power lines
- Questions about vegetation impacts
- What will the new poles look like?

What Are MAGNETIC FIELDS?



Magnetic Fields are created when electrical current is flowing.

What are they NOT?



Ultraviolet

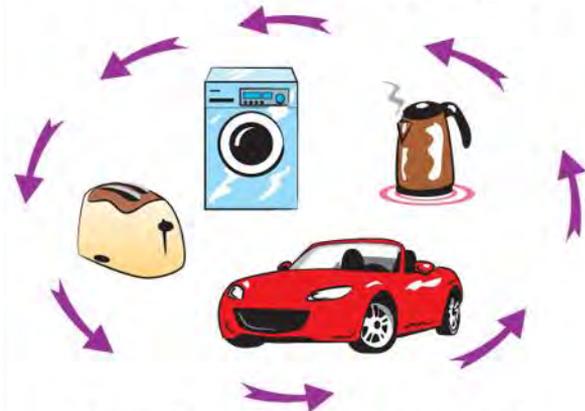


X-Rays



Gamma Rays

WHERE are they?



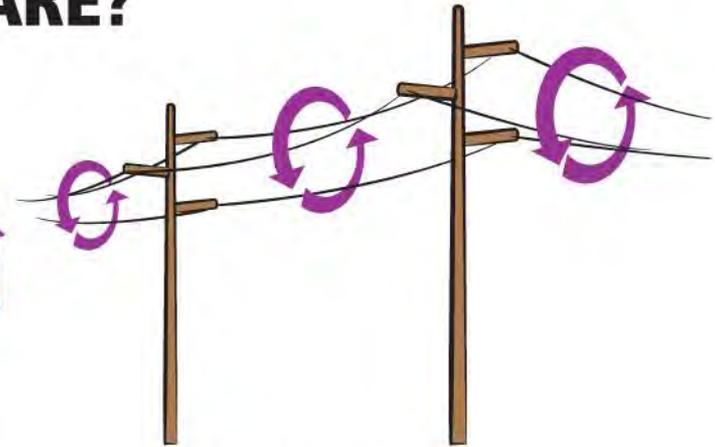
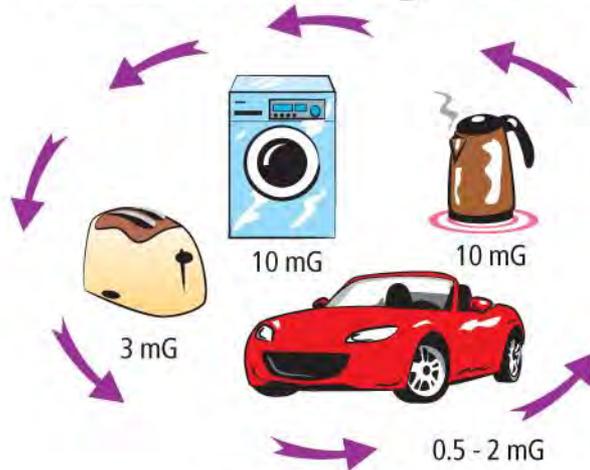
Anywhere electricity is used.

How do they COMPARE?

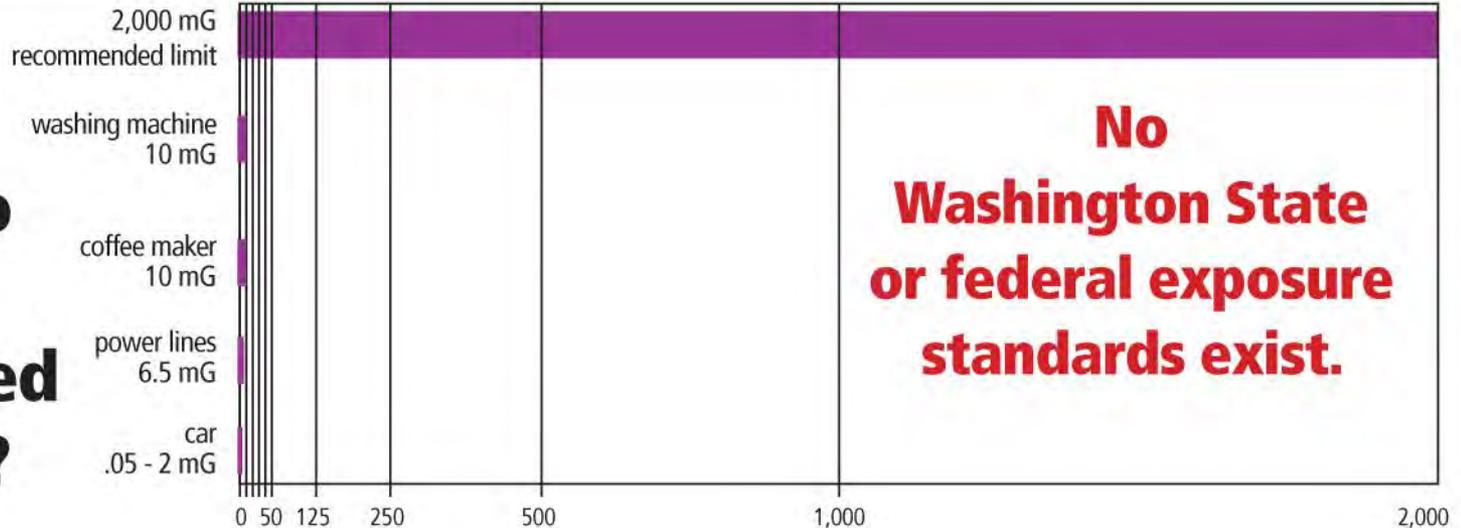


550 mG, static field

mG = milliGauss



How do exposures compare to ICNIRP recommended guidelines?

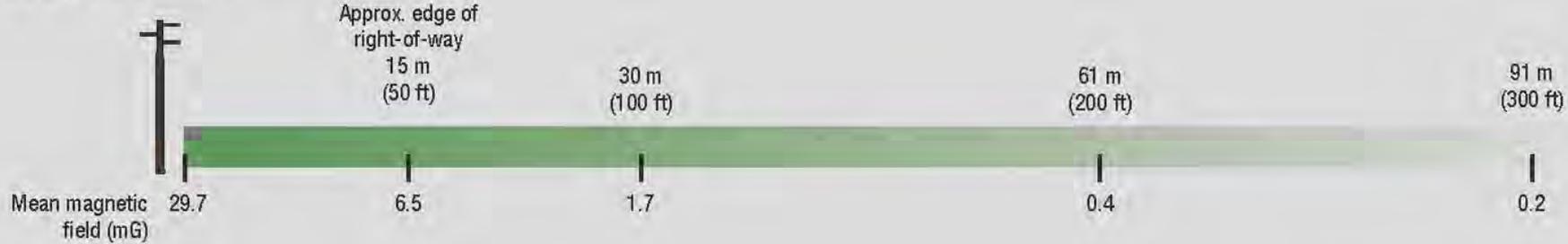




EMF and transmission lines

Magnetic fields decrease as distance from electricity sources increases

115 kV power line



230 kV power line



Source: National Institute of Environmental Health Sciences (NIEHS), EMF Questions and Answers. June 2002.



Public health summary

- EMF is a consequence of using power in our lives and the use of electricity has greatly improved our standard of living
- The World Health Organization and many other scientific panels have found EMF has not been shown to cause any adverse health effects
- The international guideline for public exposure is 2,000 mG
 - 50 feet from a 115 kV line the exposure is 6.5 mG
 - 1 foot from a video screen the exposure is 5 mG
- No exposure standards exist in Washington State or at the federal level



Typical 115 kilovolt transmission lines and poles



Single-circuit 115 kV wood pole with distribution underbuild



Single-circuit 115 kV wood pole with alternating insulator placement



Single-circuit 115 kV wood pole with insulators on one side



Single-circuit 115 kV steel pole



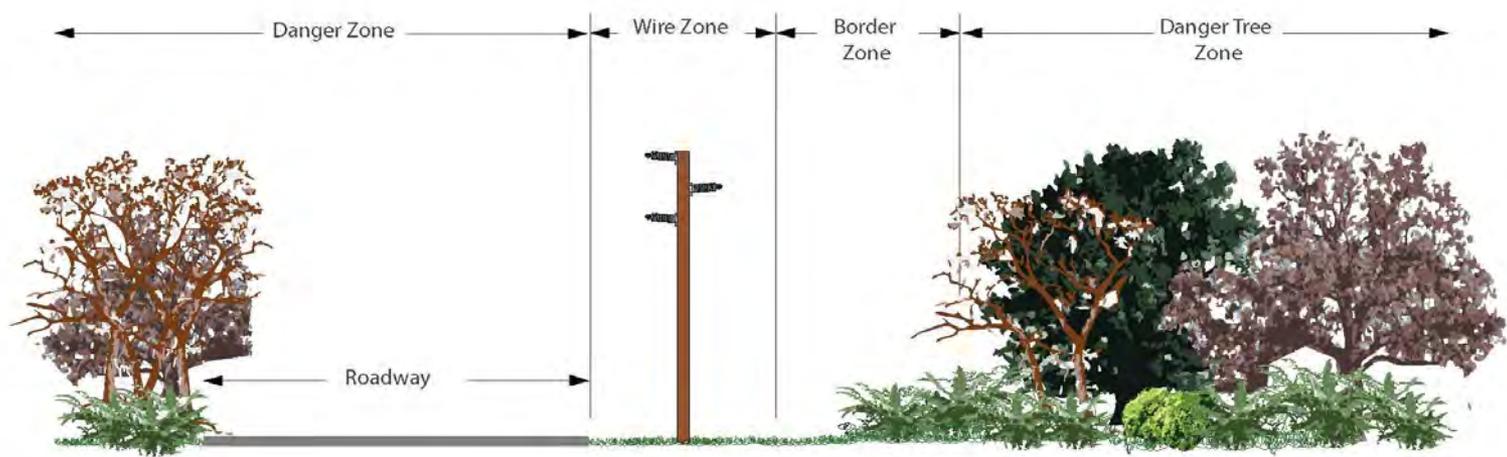
Single-circuit 115 kV glu lam pole

Average heights range from 65-75 feet



Vegetation management

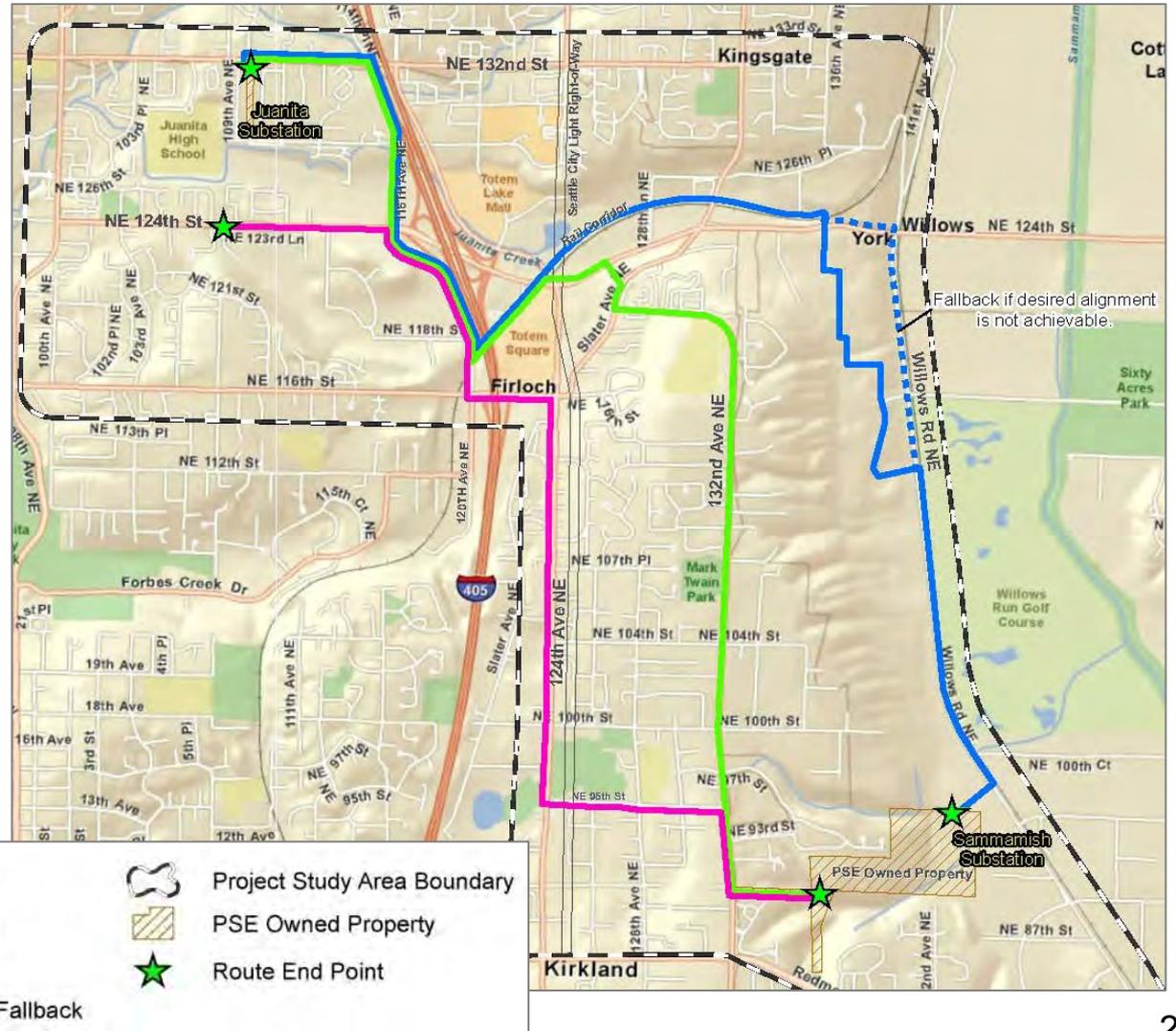
PUGET SOUND ENERGY UTILITY LANDSCAPING ZONE





About the Route Alternatives

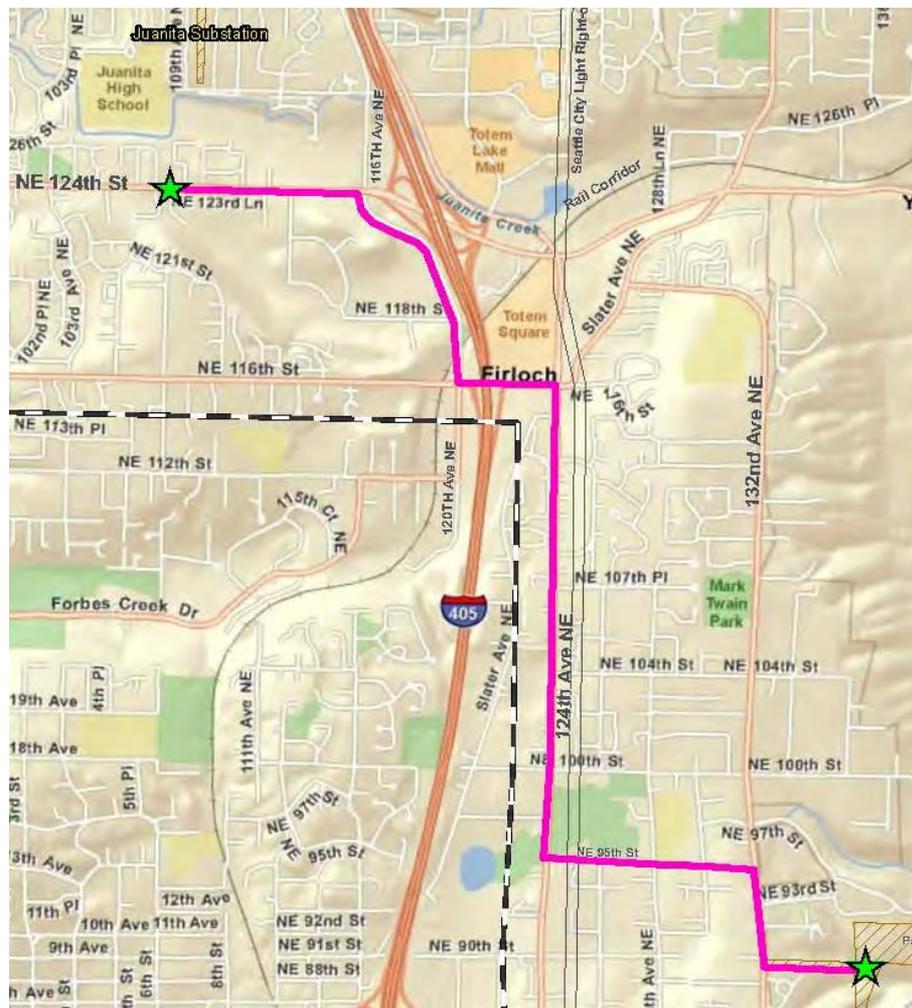
- Alternative 1
- Alternative 2
- Alternative 3





Route Alternative 1

- Challenges
 - Tree removal and maintenance
 - Crossing Seattle City Light lines
 - Community feedback on residential and school areas





Route Alternative 1

Photo simulation along 124th Avenue Northeast



Existing view

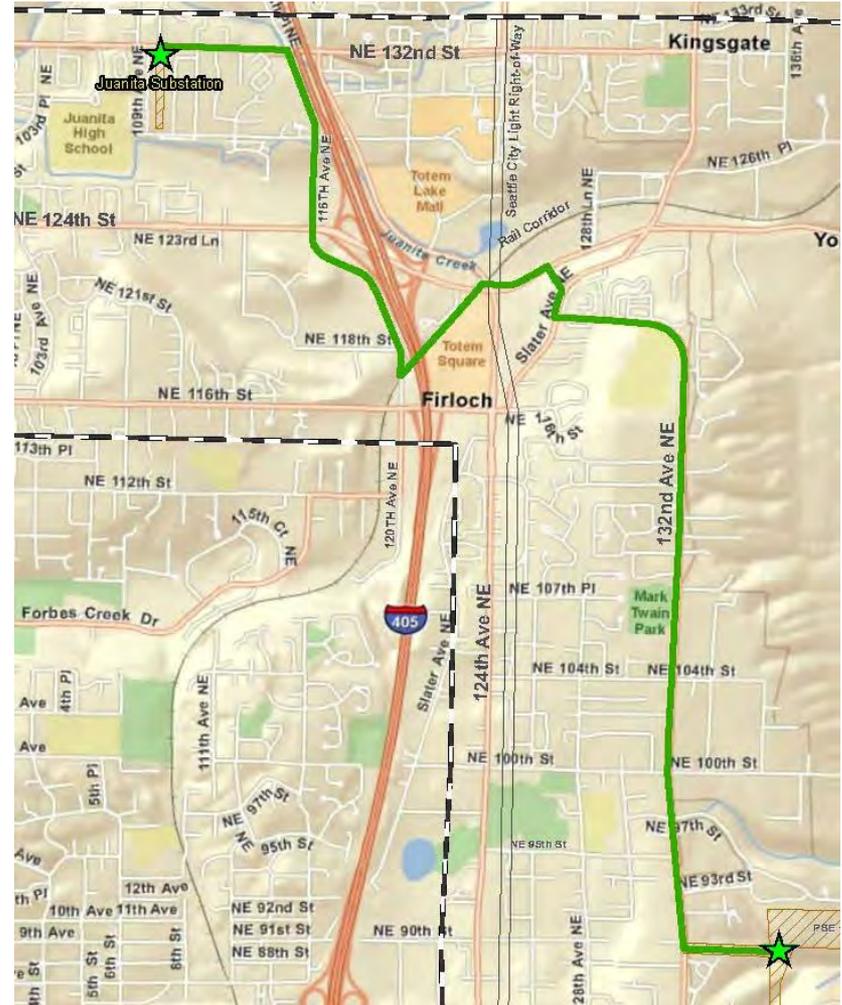


Proposed view



Route Alternative 2

- Challenges
 - Crossing the Seattle City Light lines
 - Crossing Interstate 405
 - Community feedback on residential areas





Route Alternative 2

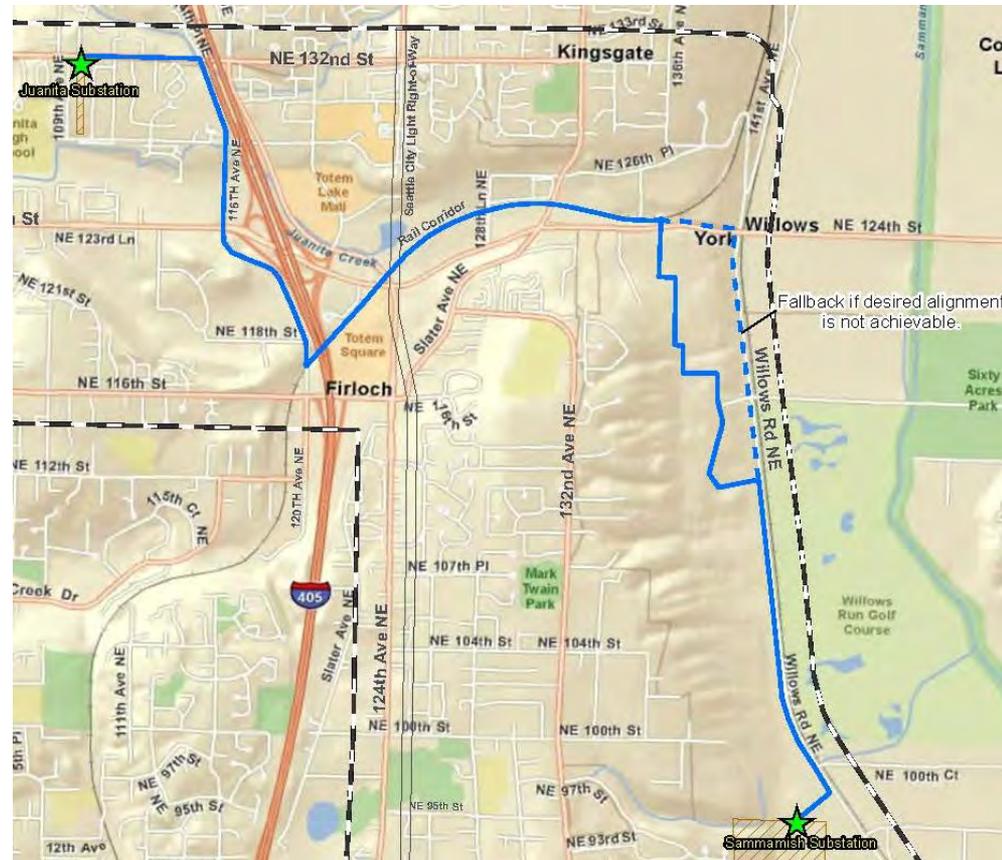
Photo simulation along 132nd Avenue Northeast





Route Alternative 3

- Challenges
 - “Threading the needle”
 - Building setbacks and restrictions
 - Transfer of Development Rights (TDR) restrictions
 - Native Growth Protection Easements (NGPE)
 - Critical areas
 - Tree removal
 - View corridor





Route Alternative 3

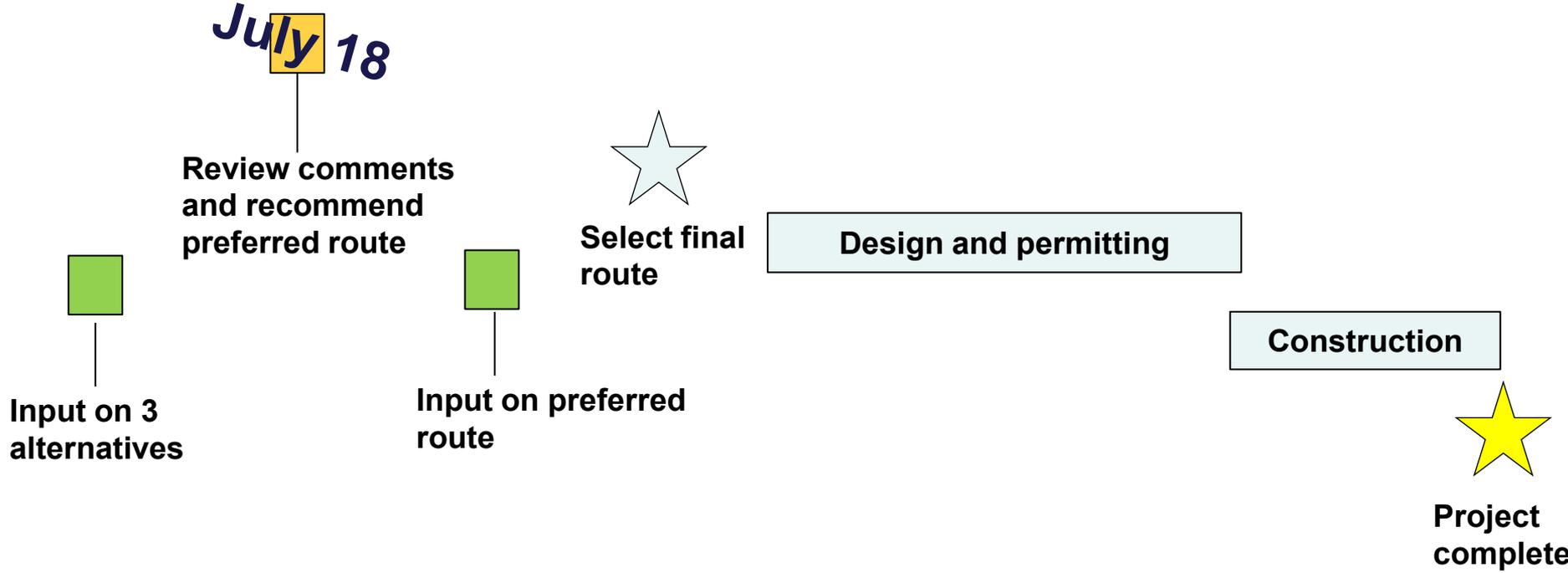
Photo simulation along Willows Road





Next steps for the siting process

2012			2013	2014
Summer	Fall	Winter		



Stakeholder advisory group meetings

Community meetings

Puget Sound Energy



What's next?

- We want to hear from you
- Ask questions tonight or via email at info@sammjuan115.com
- Tell us what you think
 - Complete the comment form tonightOR
 - Complete the route alternatives questionnaire on the project webpage (PSE.com/SammJuan115)



Questions?

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Questions?