

**U.S. Department of Energy (DOE)  
Acquisition of a Hanford Site  
Natural Gas Pipeline and  
Natural Gas Utility Service  
Environmental Impact Statement  
(NGP EIS, DOE/EIS-0467)**

State of Washington Citizens Committee on Pipeline Safety (CCOPS) Meeting

State of Washington Utilities and Transportation Committee Offices (WUTC)

Olympia, Washington

May 23, 2013



**U.S. DEPARTMENT OF  
ENERGY**

# Agenda

- Introductions
- Project Team
- Background
- NGP EIS Scope
- Engineering Feasibility Study (EFS)
- Tribal Nations/Agency Consultations
- Latest EFS/NGP EIS Schedule
- Discussion
- Wrap-up

# Project Team

- Doug Chapin – DOE National Environmental Policy Act (NEPA) Document Manager for the NGP EIS
- Chris Smith – DOE Federal Project Director for the overall NGP Project
- Dave Yexley – Cascade Natural Gas Corporation (Cascade) Project Manager
- Dave Hennen – ProSource (Subcontractor to Cascade)
- Joe Rivers – JAD Environmental (JAD) Project Manager for the NGP EIS

# Project Team

## *(Continued)*

- Cascade Role
  - General Services Administration (GSA) Natural Gas Service Task Order (with DOE)
  - Task Order Phase 1 (authorized): Cascade's support to the NGP EIS process
    - Preparing Engineering Feasibility Study (EFS) which will identify and evaluate alternative NGP route alignments and to identify which routes are more feasible or practical from a technical/engineering, environmental, and landowner perspective
    - Biological and cultural resources field surveys
    - Planning activities to meet requirements and obtain applicable approvals/permits
  - Task Order Phase 2 (not authorized): DOE's authorization for Cascade to complete design and construction, and begin operating and maintaining the proposed NGP subject to:
    - Favorable NGP EIS ROD received (decision point)
    - Completion of independent cost estimate and economic analysis, and DOE contract acquisition authority approval (decision point)
- JAD Role
  - DOE's contractor preparing the Draft and Final NGP EIS documents
  - Information and analyses in EFS will be included and evaluated by JAD in the NGP EIS in order to independently identify, evaluate, and propose a preferred NGP route alternative in the Draft NGP EIS

# Background

- Steam is used for many operations in the DOE Hanford Site's Central Plateau (e.g., 200 West and 200 East Areas)
- 200 East Area:
  - The Waste Treatment Plant (WTP) steam annex boilers are designed to use diesel fuel
  - The 242-A Evaporator steam annex boilers currently use diesel fuel when operational during periodic campaigns
- Combined consumption/generation of diesel fuel
  - ~35,000 gallons of diesel fuel per day
  - ~6 diesel fuel tanker trucks/day
  - ~3 million tons of greenhouse gas (GHG) emissions (facility lifecycle)

# Background

## *(Continued)*

- Benefits of Potential Conversion to Natural Gas for the WTP and 242-A Facilities
  - Expected to reduce lifecycle operating costs by over \$800M
  - Reduce lifecycle GHG emissions by ~1 million tons
  - Eliminate ~6 diesel fuel tanker trucks/day
  - Increase operational reliability by having dual-fired boilers (natural gas + diesel)
- DOE Market Survey Identified Cascade as only viable option for potentially providing natural gas to the DOE Hanford Site
  - The DOE Hanford Site is within Cascade's service territory established by the State of Washington Utilities and Transportation Commission (WUTC), the State's regulatory body

# NGP EIS Scope

- DOE proposes to make natural gas available to its WTP and 242-facilities located in the 200 East Area on the DOE Hanford Site's Central Plateau
- NGP EIS Public Scoping
  - January 23, 2012 – NGP EIS Notice of Intent (NOI) published
  - January 23, 2012 through February 22, 2012 – NGP EIS public scoping period
  - February 09, 2012 – NGP EIS public scoping meeting

# NGP EIS Scope

## *(Continued)*

- Cascade would own, design, construct, operate, and maintain the proposed NGP to service the WTP and 242-A Evaporator facilities
- DOE would provide an easement to Cascade on DOE property for the NGP
- Small above-ground facilities at selected locations
- Two NGP interface alternatives in the 200 East Area – direct connection and external steam plant
- Preliminary/conceptual route of proposed NGP would
  - Begin from a new interconnect tap on the existing Williams NW natural gas pipeline north of the Pasco Airport
  - Cross westerly ~8.5 miles of non-DOE lands and under the Columbia River onto the Hanford Site 300 Area
  - Cross ~20 miles of DOE property from the river crossing northwest along Route 4S terminating at the 200 East Area



# NGP EIS Scope

## *(Continued)*

- Horizontal Directional Drilling (HDD) of the NGP crossing under the Columbia River
  - Recently completed four vertical geotechnical test boreholes to bedrock to support HDD design
  - Would penetrate the ground surface several hundred feet away from the riverbanks
  - NGP would be ~50 -100 feet below the lowest depth of the river bottom
  - Minimizes environmental disturbance at the crossing location
  - Proven, state-of-the-art construction method
  - Video presentation

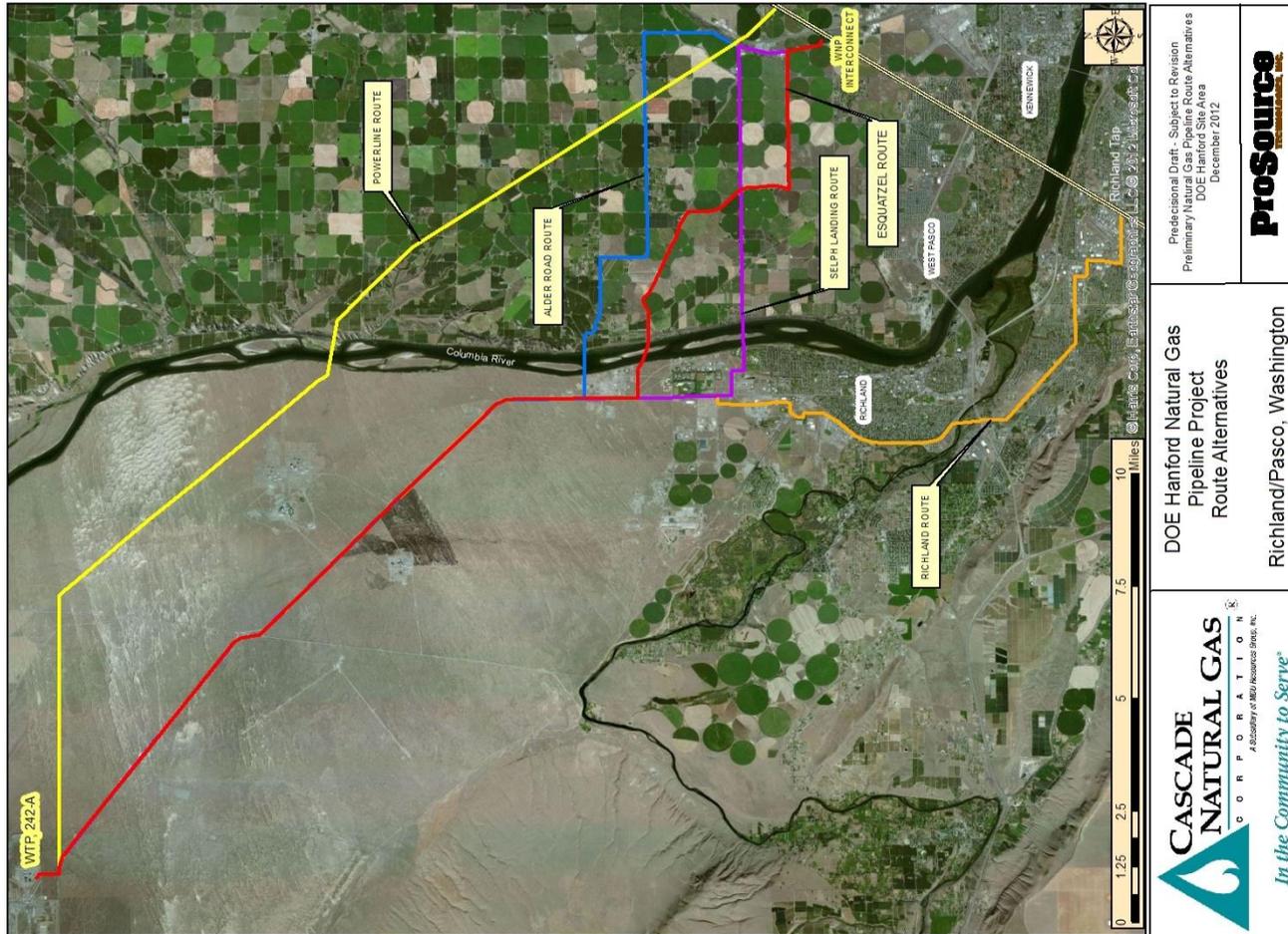
# Engineering Feasibility Study (EFS)

- EFS underway
  - Route selection criteria
  - Preparation of maps (e.g., topographical, aerial)
  - Tax record searches (re: land ownership)
  - Identification of existing land uses
  - Environmental factors (biological, cultural, etc.)
  - Constructability
  - Identification of preliminary/conceptual NGP corridor and preliminary NGP route alternatives
  - EFS will be a primary reference for the NGP EIS

# Engineering Feasibility Study (EFS) (Continued)

- Preliminary NGP Route Corridor
  - To support DOE during the NGP EIS public scoping and initial communications with the Tribes and agencies, Cascade began the EFS process by developing a preliminary and conceptual NGP route corridor (~2-mile width) along the most direct route from the existing Williams NW NGP interconnect to the 200 Area
- In accordance with NEPA guidance to evaluate a range of reasonable alternatives, 5 proposed NGP route alternatives were developed by Cascade that followed the same general route selection criteria (the Alder, the Powerline, the Richland, the Selph Landing, and the Esquatzel)
  - A desktop evaluation of the 5 route alternatives is being prepared by Cascade in the EFS to compare them based on their potential for environmental impacts in several key environmental resource areas
  - Each of the route alternatives has challenges (potential for comparatively more significant impacts in various environmental resource areas); some of which may make the route unlikely to move forward as an alternative to be evaluated in detail in the NGP EIS

# Engineering Feasibility Study (EFS) (Continued)



U.S. DEPARTMENT OF  
**ENERGY**

DOE Status Presentation of Hanford NGP EIS (DOE/EIS-0467)  
May 23, 2013, WA Citizens Committee on Pipeline Safety Meeting  
WUTC Offices, Olympia, Washington

# Engineering Feasibility Study (EFS) (Continued)

- Alder Route Alternative
  - Generally north of the Esquatzel Route and would traverse a significant area of irrigation ditches, vineyards, and orchards
  - This area is heavily saturated with drainage tiles based on preliminary information received and evaluated, causing a higher potential for construction impacts
  - The river crossing location is nearer the unstable bluffs region on the east side of the river and the western side of the river is close to reclaimed areas with past radiological contamination
- Powerline Route Alternative
  - Follows an existing electrical transmission powerline ROW
  - Proceeds north of the other routes and would cross drainage tile areas that could have construction impacts
  - Crosses the river in a potentially geologically-unstable area (White Bluffs) and could impact sensitive cultural sites and biological habitat on the Hanford Site

# Engineering Feasibility Study (EFS) (Continued)

- Richland Route Alternative
  - Would follow an existing, capacity-restrained NGP route, but has significant issues with traversing through heavily developed and populated areas
- Selph Landing Route Alternative
  - Is generally south of the Esquatzel route and would encounter more residences and populated areas than Esquatzel
  - The river crossing location would impact residences and the Washington State University Tri-Cities campus before traversing through a developed and populated area before turning north up Route 4S

# Engineering Feasibility Study (EFS) (Continued)

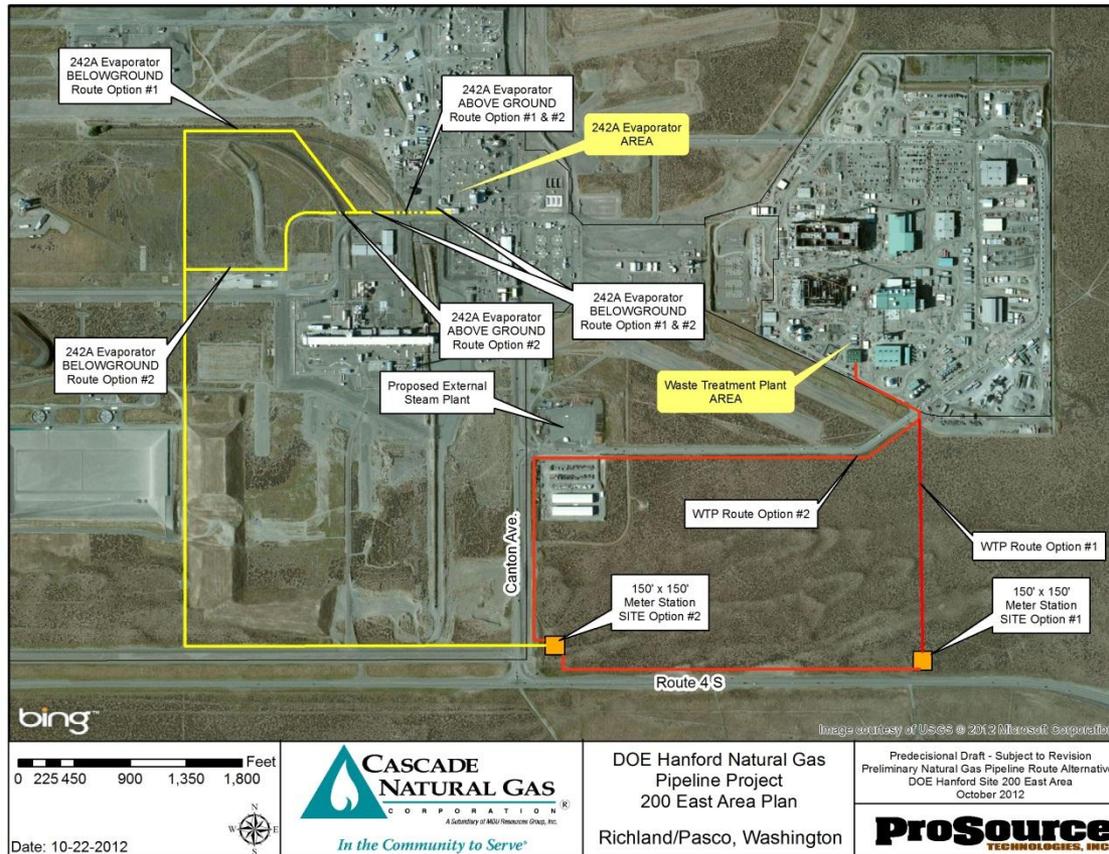
- Esquatzel Route Alternative

- Being further evaluated, based on preliminary analyses of the 5 proposed NGP route alternatives
- Takes advantage of existing right-of-ways (ROWs) and disturbed land, and minimizes the number of landowners and residences that could be impacted
- Follows a more direct path while minimizing impacts to residences and crosses at a geologically-preferred location
- Focuses on most favorable HDD alternative location for the NGP crossing the river, considering elevation changes, geology, span width, and nearby residences or other development
- Preparing an initial design of an HDD alternative at that river location, based on drilling of vertical geotechnical test boreholes (to bedrock) completed on both sides of the river
- Biological field survey and wetland delineations survey have been performed
- Traverses south of facilities in the DOE Hanford Site's 300 Area
- Cultural resources field survey work has been performed

# Engineering Feasibility Study (Continued)

- NGP to 242-A and WTP Steam Boilers Alternative
  - Two options for location of the metering station (pressure reduction)
  - One routing option for low-pressure NGP to WTP (8-inch diameter,  $\leq$  100 psig) for each metering station location
  - Two routing options for low-pressure NGP to 242-A (6-inch diameter,  $\leq$  100 psig)
- External Steam Plant Alternative
  - Construct a new steam plant designed to satisfy steam needs for 242-A evaporator and WTP operations
  - Location of steam plant would be outside of radiologically controlled area
  - Steam would be transferred to 242-A and WTP facilities in above-ground piping

# Engineering Feasibility Study (Continued)



# Tribal Nations/Agency Consultations

- Tribal Nations

- Confederated Tribes of the Umatilla Indian Reservation
- Nez Perce Tribe
- Confederated Tribes and Bands of the Yakama Nation
- The Wanapum

- Agencies

- Federal agencies: the U.S. Army Corps of Engineers; the U.S. Fish and Wildlife Service; the Bureau of Reclamation; the National Oceanic and Atmospheric Administration, National Marine Fisheries Service; and the U.S. Navy
- State agencies: The Washington Utilities and Transportation Commission and the Energy Facility Site Evaluation Council; the Governor's Office of Regulatory Assistance; the Department of Ecology; the Department of Natural Resources; and the Department of Fish and Wildlife
- Local agencies: Benton County, Franklin County, Port of Benton, City of Richland
- Irrigation District: South Columbia Basin Irrigation District

# Current EFS/NGP EIS Schedule

- April 2013 – June 2013 – Vertical geotechnical test borings
- August 2013 – DOE/contractor review of internal draft EFS (includes HQ)
- September 2013 – October 2013 – Tribes/agencies review of draft EFS
- November 2013 – Final EFS published
- January 2014 – Draft EIS published for public comment (includes Tribes and agencies)
- January 2014 – February 2014 - 45-day Draft EIS public comment period (includes Tribes and agencies)
- October 2014 – Final EIS published
- Record of Decision (ROD) –  $\geq$  30 days after Final EIS