Department of Energy

DOE/EA-2033

FINDING OF NO SIGNIFICANT IMPACT
REBUILD OF THE NORTH LOOP
230 KV ELECTRICAL TRANSMISSION LINE
HANFORD SITE, WASHINGTON

AGENCY: U.S. Department of Energy

ACTION: Finding of No Significant Impact

SUMMARY: The U.S. Department of Energy (DOE) completed the *Environmental Assessment for the Rebuild of the North Loop 230 kV Electrical Transmission Line, Hanford Site, Washington* (EA; DOE/EA-2033), which analyzed the potential environmental impacts of the Proposed Action. The DOE proposal is to rebuild a deteriorating electrical system that was built in the 1940s to provide reliable electric power to the Hanford cleanup mission, backup power for the Columbia Generating Station (a commercial nuclear energy facility operated by Energy Northwest), and transmission service to electric utilities in the Tri-Cities (i.e., Richland, Kennewick, and Pasco).

In addition to the Proposed Action, the Environmental Assessments (EA) analyzed a No Action Alternative as required by the DOE National Environmental Policy Act (NEPA) regulations (10 CFR Part 1021). Based on the analyses in the Final EA and consultations with tribes, DOE determined that the Proposed Action would not constitute a major federal action significantly affecting the quality of the human environment within the meaning of the NEPA. Therefore, the preparation of an environmental impact statement is not required, and DOE is issuing this Finding of No Significant Impact (FONSI).

PUBLIC AVAILABILITY AND CONTACT INFORMATION: The FONSI and the Final EA are available at:

- http://www.hanford.gov/page.cfm/EnvironmentalAssessments and
- http://www.energy.gov/node/2552865

- U.S. Department of Energy Public Reading Room
  Washington State University, Tri-Cities
  Consolidated Information Center, Room 101-L
  2770 University Drive
  Richland, WA 99352

For questions about this FONSI or EA:

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For information about the DOE NEPA process:

Office of NEPA Policy and Compliance
Department of Energy
1000 Independence Avenue SW
Washington, D.C. 20585
http://energy.gov/nepa/office-nepa-policy-and-compliance

PROPOSED ACTION: The Proposed Action is to rebuild the existing 230 kV North Loop electrical transmission system, decommission and remove the deactivated portions of the existing North Loop system, and conduct operations and maintenance of the completed system. The Proposed Action would replace the components (conductors, hardware, and support structures), shorten the 28-mile circuit length (by approximately 8 miles), provide separate circuits for Bonneville Power Administration (BPA) and Hanford-Richland Operations, and improve long-term reliability of the system. The existing system would be decommissioned and removed following completion of the replacement system.

ALTERNATIVES CONSIDERED: Under the No Action Alternative, the existing North Loop system would continue operating as currently configured. An assessment of the existing system determined that many of the structures, conductors, and other electrical hardware are in a deteriorating condition. Unplanned outages related to equipment failures have occurred and would be expected to occur in the future at an increased frequency. The amount and cost of maintenance of the North Loop system under the No Action Alternative is expected to increase over time.

Under the Proposed Action, DOE considered four alternative routes with multiple segments for the replacement system. Because the alternative routes share some common segments (i.e., segments shared by two or more alternatives), a preferred route could comprise segments from multiple route alternatives. One of the alternative routes, designated as AR-4, was identified as the preferred route. The preferred alternative would best satisfy the requirement of providing redundancy and independence to ensure operational reliability, and would minimize potential impacts to biological and cultural resources and accident risks.

Operations and maintenance activities for the rebuilt North Loop system would be similar to those for the existing system, and would include surveillances, planned maintenance, and emergency repairs. Because the rebuilt system would consist of mostly new transmission components, maintenance would be less than that on the existing system.

ENVIRONMENTAL CONSEQUENCES: The EA considered potential environmental impacts to geology and soils; water resources; air quality and climate; biological resources; flooding and floodplains; wetlands; cultural resources and historic properties; land use; visual resources; noise; transportation; health and safety; utilities and infrastructure; waste management; socioeconomics and environmental justice; and also intentional destructive acts as required by the DOE NEPA guidance. The analysis of potential environmental consequences in the EA is incorporated here by reference. A summary is provided below.

Under the No Action Alternative, the impacts of the Proposed Action, to rebuild the deteriorating North Loop system, would not occur. However, continued operation of the existing system in its current condition could result in the following potential environmental impacts:

- Risks of wildland fire caused by sparks and arcs from deteriorated electrical components
- The continued presence of system components in sensitive cultural locations
- Increased maintenance of the degraded system with an increase in health and safety risks to workers
- Increased unplanned outages that could disrupt Hanford's cleanup mission, and BPA's routine and backup electrical service.

Under the Proposed Action, all alternative routes would potentially affect known cultural resources. However, AR-4 lessens the probability of encountering unknown archaeological resources, as the other routes are closer to the Columbia River (where there is higher potential for encountering cultural resources). Mitigation of the potential impacts of the Proposed Action on cultural and historic resources would be further accomplished by employing the management practices specified in Hanford Site policies, plans and procedures and in compliance with the *Hanford Cultural Resources Management Plan*. DOE would also adhere to requirements under Section 106 of the *National Historic Preservation Act*. Construction activities would be monitored for potential inadvertent discovery of any cultural resources.

Under the Proposed Action, construction of AR-4 would potentially disturb the least amount of land of the four alternatives. Best management practices already in place at Hanford and identification of compensatory mitigation measures for ecological resources, consistent with the *Hanford Site Biological Resources Management Plan,* would further reduce potential impacts.

Under all alternative routes, constructing new transmission lines adjacent to an existing energized line poses a potential safety risk to workers and project components from accidental contact between equipment and energized lines. AR-4 minimizes this potential risk by avoiding construction adjacent to longer portions of the existing system.

DETERMINATION: Based on the analysis in the EA, I have determined that the Proposed Action, would not constitute a major federal action significantly affecting the quality of the human environment within the meaning of the NEPA. Therefore, the preparation of an environmental impact statement is not required, and DOE is issuing this FONSI.

Issued in Washington, D.C., this 7th day of May 2018.

Anne Marie White
Assistant Secretary for Environmental Management
U.S. Department of Energy