
**FINAL
RENEWABLE FUEL HEAT PLANT IMPROVEMENTS
SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
NATIONAL RENEWABLE ENERGY LABORATORY
SOUTH TABLE MOUNTAIN SITE
GOLDEN, COLORADO**

April 9, 2012

U.S. Department of Energy
Golden Field Office
National Renewable Energy Laboratory
1617 Cole Boulevard
Golden, Colorado 80401
DOE/EA-1573-S-I

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FINDING OF NO SIGNIFICANT IMPACT

**RENEWABLE FUEL HEAT PLANT IMPROVEMENTS
NATIONAL RENEWABLE ENERGY LABORATORY
SOUTH TABLE MOUNTAIN SITE
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AGENCY: U.S. Department of Energy, Golden Field Office

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: The U.S. Department of Energy has completed a Supplemental Environmental Assessment (SEA)(DOE/EA-1573-S-I) for the proposed improvements to the Renewable Fuel Heat Plant (RFHP) at the National Renewable Energy Laboratory's (NREL) South Table Mountain (STM) site in Golden, Colorado. The proposed improvements consist of development, construction and operation of a woodchip fuel storage silo including material handling conveyances, and the expansion of the sourcing of woody biomass fuels from Front Range sources to additional available regional sources.

Before DOE can undertake these improvements, DOE must examine the potential environmental impacts of the Proposed Action in accordance with the *National Environmental Policy Act of 1969* (NEPA) (42 U.S.C. 4321 et seq.). DOE has prepared this SEA to comply with NEPA, and the SEA examines the potential environmental impacts of this Proposed Action as well as examines a No-Action Alternative. Under the No-Action Alternative, the DOE would not implement this project and the construction and operation of a woodchip storage silo and use of regional wood sources would not occur.

All discussion, analysis, and findings related to the potential impacts of the RFHP improvements are contained in the *Final Supplemental Environmental Assessment for the Renewable Fuel Heat Plant Improvements National Renewable Energy Laboratory South Table Mountain Site, Golden, Colorado* (DOE/EA-1573-S-I). The Final SEA is hereby incorporated by reference.

DOE prepared this FONSI in accordance with NEPA, the Council on Environmental Quality regulations for implementing NEPA, as amended (40 CFR Parts 1500 to 1508), and DOE NEPA implementing regulations (10 CFR 1021).

ENVIRONMENTAL IMPACTS: DOE concludes the proposed project will not impact the following resources: geologic resources, agriculturally productive soils, biological resources and wetlands, cultural resources, socioeconomics, waste management, and environmental justice. Therefore, these resource areas were dismissed from more detailed analysis in the SEA (Section 3.1 of the SEA).

DOE considered the following resources in more detail as part of its analysis: land use and planning, traffic and circulation, air quality including climate, greenhouse gases and global warming, visual quality, water resources, noise, occupational health and safety, accident risk, and intentional destructive acts.

The proposed location for the RFHP silo is a paved, previously developed area immediately south of the existing RFHP facility and west of the central ephemeral channel. Construction of the proposed RFHP silo will not convert any undeveloped land temporarily or permanently. The proposed silo will be situated near the center of the central campus of the NREL STM site, where it will be generally consistent and compatible with the current land use pattern and ongoing NREL operations.

The DOE does not anticipate that construction of the RFHP silo will impact off-site traffic or parking. Operationally, there will be no traffic impacts because existing personnel will operate the RFHP silo. Delivery of woodchip fuel will not represent an increase over the current on-site truck traffic associated with the RFHP as the number of woodchip fuel deliveries will not change from levels analyzed in the original RFHP NEPA analysis in *Final Environmental Assessment of Three Site Development Projects at the National Renewable Energy Laboratory South Table Mountain Site (DOE/EA-1573)*. The increase in annual average daily traffic (AADT) for trucks will be de minimis along the representative transportation routes analyzed in the SEA for regional fuel sourcing and will not change the percentage of trucks in the overall AADT.

The total estimated air emissions of carbon monoxide (CO), nitrogen oxides (NO_x), and particulate matter (PM) for the Proposed Action (i.e., the sum of CO, NO_x, and PM emissions from construction, operational activities, and transportation) will be below the de minimis thresholds of 100 tons per year (TPY) (90.72 metric TPY). Therefore, the DOE has concluded that further conformity determination under the Clean Air Act is not required. The DOE acknowledges there will likely be additional miscellaneous sources of CO, NO_x, and PM directly or indirectly attributable to the Proposed Action, but these sources will not result in the Proposed Action exceeding allowed air pollutant threshold levels because they will be either short-term or limited in their potential to emit.

The Proposed Action will constitute a short-term minor increase in the use of fossil fuel and associated greenhouse gas (GHG) air emissions during construction. This will result in the one-time generation of approximately 9.4 tons (8.53 metric tons) of carbon dioxide (CO₂) equivalent air emissions. The Proposed Action will also cause a minor increase in the use of fossil fuel and associated GHG air emissions during the transportation of the woodchips from the supplier to the RFHP during the 30-year operation. This component of the Proposed Action will result in the release of approximately 145.35 tons (131.86 metric tons) per year of CO₂ equivalent air emissions, which is far less than the Council on Environmental Quality threshold.

The appearance of the proposed RFHP silo will be similar to other ancillary facilities (e.g., stacks and storage tanks) that have been a part of the STM site for many years. As such, the proposed action will not alter the current visual character of the site. The proposed RFHP silo has been simulated from a representative range of viewing locations. The simulation demonstrates that the RFHP silo will be similar in height to the SERF and the S&TF facilities and, from most off-site observation points, will be partially blocked from view by other STM structures. The proposed RFHP silo's color and texture will blend into the overall view. Based on visual resource analysis, the proposed action will have de minimis impacts to visual resources.

The construction and operation of the proposed RFHP silo will not result in untreated operational discharges of pollutants to surface water or groundwater. Any drains necessary for the RFHP silo will be connected to the STM site's existing stormwater and sanitary sewer lines, and all discharges will be in compliance with applicable federal, state, and local regulations.

The proposed project construction will occur in association with on-going construction activities. Ambient noise levels at the STM site are estimated to range from 40 to 60 A-weighted decibels (dBA), which is typical for urban areas. Because the noise from the silo construction activities will be short-term, mitigated by distance, normally occur during typical weekday working hours, and comply with all applicable noise ordinances, it will not result in a significant adverse impact. Operationally, there will be no noise sources that could generate significant noise impacts to off-site members of the public.

Operation of the proposed RFHP silo will be performed in accordance with a site safety plan to minimize impacts to workers' health and safety, and will address, electrical safety, fire protection, confined space entry and the use of personal protective equipment. In addition, all operational activities will be carried out in compliance with Occupational Safety and Health Administration standards, and NREL and its subcontractors will be required to comply with all other applicable federal, state, and local environmental, health and safety (EHS) standards, laws, and regulations applicable to their activities. Any identified required safety features, including fire and lightning protection measures, will be integrated into the final facility design to ensure that facility workers, site workers, and the public will be adequately protected from any events that may occur after the RFHP silo becomes operational.

The Proposed Action will not offer any credible targets of opportunity for terrorists or saboteurs to inflict significant adverse impacts to human life, health, or safety, nor will the Proposed Action render the STM site as a whole any more susceptible to such acts.

PUBLIC PARTICIPATION IN THE SEA PROCESS: In accordance with applicable regulations and policies, DOE sent a Notice of Scoping on May 25, 2011 to federal, state, and local agencies, elected officials, and nongovernmental organizations providing 21 days to comment on the scope of the SEA. Public notification also was achieved by posting a notice in the NREL Community News Letter (April 2011), by posting a public notice in the *Golden Transcript* on May 26, and June 2, 2011, and DOE publishing the scoping letter on the DOE Golden Field Office Public Reading Room website. DOE received responses from Colorado Department of Transportation, Colorado Department of Public Health and Environment - Air Quality Control Division, Jefferson County, and the Table Mountain Conservation Fund. DOE consulted with the Colorado State Historic Preservation Office (SHPO) for potential impacts to historic and cultural resources under Section 106 of the National Historic Preservation Act. The Colorado SHPO office concurred with DOE's determination of no adverse effect to historic resources. The Appendix B of the Final SEA contains copies of all consultation correspondence. DOE addressed all of the scoping comments in the Draft SEA in Section 1.4.1.

DOE published the Draft SEA on the DOE Golden Field Office Public Reading Room website on February 3, 2012. DOE posted a Notice of Availability (NOA) to announce the availability in the *Golden Transcript* on February 2, and February 9, 2012. A total of 4,755 NOA postcards were sent to businesses and residences in the 80401 zip code. An email notification was sent to agencies and non-governmental organizations. The public comment period began on February 3, and ended on March 5, 2012. DOE received two responses from the U.S. Army Corps of Engineers and Jefferson County. The concerns raised in these two correspondences had already been adequately addressed in the Draft SEA and no changes to the Draft SEA were necessary. DOE's response to comments and copies of these Draft SEA comments can be found in Appendix C of the Final SEA.

DETERMINATION: Based on the information presented in the Final SEA (DOE/EA-1573-S-I), the DOE determined that the RFHP improvements and expansion of the sourcing of woody biomass fuels from Front Range sources to additional available regional sources do not constitute major federal actions significantly affecting the quality of the human environment in the context of NEPA. Therefore, the preparation of an environmental impact statement is not required, and DOE is issuing this FONSI.

The Final SEA is available on the DOE Golden Field Office Public Reading Room website at http://www.eere.energy.gov/golden/Reading_Room.aspx and the DOE NEPA website at <http://energy.gov/nepa/nepa-documents>.


For questions about this FONSI, contact:

Lori Gray
DOE/GO NEPA Compliance Officer
U.S. Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, CO 80401
(720) 356-1568
Lori.gray@go.doe.gov

For further information about the DOE NEPA process, contact:

Office of NEPA Policy and Compliance
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585
(202) 586-4600 or (800) 472-2756

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Carol Battershell
Golden Field Office Manager