Department of Energy
Golden Field Office
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DOE/EA-1875

FINDING OF NO SIGNIFICANT IMPACT

THE JACKSON LABORATORY BIOMASS ENERGY CENTER PROJECT, BAR HARBOR, MAINE

AGENCY: U.S. Department of Energy, Golden Field Office

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: The U.S. Department of Energy (DOE) provided Federal funding appropriated under the American Recovery and Reinvestment Act of 2009 to the Maine Public Utility Commission (PUC) under the Energy Efficiency and Conservation Block Grants (EECBG) Program. The Maine PUC proposes to provide $1 million of EECBG funds to The Jackson Laboratory (the Laboratory) for its Biomass Energy Center Project. DOE's Proposed Action is to authorize the expenditure of Federal funding under the EECBG Program to design, permit, and construct a Biomass Energy Center on the Laboratory's campus at 600 Main Street in Bar Harbor, Maine. The Biomass Energy Center would include a new building to house a wood pellet biomass boiler, a pellet storage silo, a burner assembly and associated equipment, and an ash collection system. The Laboratory would purchase about 11,000 tons of pellets each year from regional wood pellet manufacturers.

Before the Maine PUC can award a subgrant for the Biomass Energy Center Project, DOE must examine the potential environmental impacts of its Proposed Action in compliance with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 et seq.). DOE prepared an Environmental Assessment (EA) to comply with NEPA.

Based on the information and analyses in the Final EA, DOE has determined that its Proposed Action does not constitute a major Federal action that would significantly affect the quality of the human or natural environment within the meaning of NEPA. Therefore, an environmental impact statement is not required and DOE is issuing this FONSI.

All discussion, analysis, and findings related to the potential impacts of construction and operation of the Biomass Energy Center Project, including best management practices to which the Laboratory has committed, are contained in the *Final Environmental Assessment for The Jackson Laboratory Biomass Energy Center Project, Bar Harbor, Maine* (DOE/EA-1875). The Final EA 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 1500 to 1508), and DOE NEPA regulations (10 CFR Part 1021).

ENVIRONMENTAL IMPACTS: The Final EA examined the potential environmental impacts of the Proposed Action and the No-Action Alternative. Under the No-Action Alternative, DOE would not authorize the use of EECBG funds for the Biomass Energy Center Project. For the purpose of the EA, DOE assumes for the No-Action Alternative that the Laboratory would not proceed without EECBG funding. This approach provides a basis of comparison for the potential impacts of the proposed project.

The Laboratory proposes to construct a 4,400-square-foot Biomass Energy Center on the Laboratory's 150-acre campus in an area that is currently a mix of grass, paved parking, and modular buildings. The proposed wood-fired boiler would burn about 11,000 tons of pellets per year and reduce the amount of fossil fuel oil the Laboratory uses from 1.28 million to 300,000 gallons per year (about 80 percent). The six existing oil-fired boilers would remain in place to provide the balance of steam for plant operations during unusually high-demand periods and would also operate as standby steam generators for maintenance periods or unplanned system down time. The Laboratory would purchase the wood pellets from regional suppliers that produce wood pellets in Maine from sustainable woodlands that are owned and managed by loggers, sawmills, and other wood product users.

Based on the information in the Final EA, DOE concludes that the design, permitting, construction, and operation of the Biomass Energy Center would have no, minimal, or temporary impacts to the following resources: geology and soils; land use; water resources; biological resources including threatened and endangered species; socioeconomics; environmental justice; waste and hazardous materials; utilities, energy, and materials; and occupational health and safety. Therefore, these resource areas were dismissed from more detailed analysis in the EA (Section 3.2.1 of the EA).

The EA evaluated air quality, transportation, noise, aesthetic and visual resources, and historic and cultural resources in more detail.

Construction of the Biomass Energy Center would permanently commit 4,400 square feet of previously disturbed land owned by the Laboratory. The area surrounding the proposed project site would remain as it is today. The Biomass Energy Center would not result in any direct or indirect land use impacts or any irretrievable commitment of resources beyond the life of the project (Sections 3.2.4 and 3.2.5 of the EA). The Laboratory's 10-year master plan for campus facilities includes building replacements, additions, and removals in already disturbed areas of the campus. The only planned expansions outside the boundaries of the existing development are for an additional parking lot and a new operations village to the west of the existing facilities. The existing public entrance would be closed to through-traffic and a new employee entry would be created from Schooner Head Road (Section 4 of the EA).

The proposed wood boiler would increase particulate matter, nitrogen oxide, carbon monoxide, and volatile organic compounds but would decrease sulfur dioxide emissions. However, all

emissions would be within permitted levels. The Laboratory would remain a minor source, and its emissions and associated air quality and visibility impacts would be negligible in relation to the regulatory requirements for Class I areas in the adjacent Acadia National Park. Increased truck traffic for the delivery of wood pellets would result in a corresponding increase in heavy truck air emissions, but these would be negligible when placed in context of the traffic baseline. Because the wood boiler would displace energy currently being supplied via fossil fuels, there would be an expected reduction in regional greenhouse gas emissions. A baghouse would filter the combustion gases through the chimneystack and collect particulate matter such as ash from the burned wood pellets. The ash would be collected in a rollout container dumpster and hauled off the site two to four times per year and disposed of at an approved landfill or, with State of Maine approval, used in agriculture as a soil conditioner or in concrete applications.

Construction workers and delivery trucks would increase commuter traffic by 1 to 5 percent of the average annual daily traffic during the 6-month construction period on roads near the Laboratory. The operation of the Biomass Energy Center would not require additional workers and therefore would not affect current commuter traffic volumes. Truck traffic would increase for the delivery of the wood pellets. However, deliveries would occur between 7:00 p.m. and 5:00 a.m. and thereby avoid typical congestion periods. There would be about 348 truck deliveries per year of wood pellets (less than one truck per day, on average), which would displace 142 fuel oil truck deliveries. The increase of about 200 truck trips per year would have a negligible effect on traffic congestion and traffic accidents along transportation corridors or roads near the Laboratory.

Sensitive receptors nearest the Energy Center include a residence (1,400 feet away) and visitors to Acadia National Park (93 feet away), who experience average ambient noise levels that range from 50 to 51 A-weighted decibels (dBA), which the EPA considers as typical of "small town residential" land use. Construction equipment during the project's 6-month construction period would increase noise levels to about 77 dBA at the project site. However, distance attenuation would reduce the noise level at the nearest residence to about 48 dBA, which would likely be below the existing ambient noise levels. Because construction noise would be temporary and intermittent during daytime hours, adverse effects from construction noise would not be likely.

During operations, noise-generating equipment would include the baghouse, the system that transfers the pellets from the silo to the boiler, the hammermill that crushes the pellets, the trucks that deliver the fuel pellets, and the system to transfer pellets to the silo. The Jackson Laboratory has committed to meet State of Maine and local regulatory limits for noise by incorporating sound attenuation features into the facility design. The pellet transfer system and the hammermill would be inside the building in a sound-insulated room. The baghouse would also have sound insulation in order to meet the regulatory limits. The addition of less than one truck trip per day would increase average traffic noise levels by less than 1 decibel, which is generally unnoticeable for most people.

The Laboratory borders Acadia National Park, where park visitors could have a heightened sensitivity to visual changes in the landscape. The Laboratory is a large industrial-looking complex that has been at the current location since 1929. It is visible from several locations in the Park including hiking trails and the Park Loop Road that overlook the Laboratory. The

proposed Energy Center would be similar in appearance to many of the existing buildings, but would have a 60-foot chimneystack that would stand out as a contrasting element. The Energy Center and chimneystack would be neutral to earth tone in color to reduce the contrast with the background landscape. The Laboratory would also install full cutoff exterior lighting fixtures that are International Dark-Sky Association-approved to reduce night sky light pollution. In coordination with the National Park Service, the Laboratory would plant white pine trees on the east side of the proposed Energy Center, which when mature would provide partial buffering and screening of exterior equipment.

There are no known historic properties or archeological resources at the project site. The Laboratory abuts the Acadia National Park, and the proposed Energy Center is 93 feet from the property boundary. The nearest historic properties are in Acadia National Park overlooking the Laboratory campus. Historic properties include the Park Loop Road and two hiking trails that are eligible for listing in the *National Register of Historic Places*. In accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. 470 et seq.), and based on discussions with the National Park Service (NPS), the Maine State Historic Preservation Office (SHPO), and the analysis in the EA, DOE determined that the proposed Energy Center would have no adverse effect to historic properties or cultural resources. The SHPO also determined that the proposed project would have no adverse impacts to historic properties. DOE consulted with four American Indian tribes and received responses from the Penobscot Indian Nation and the Passamaquoddy Tribe. Both tribes expressed no objections to the proposed project (Section 3.2.2.5.2 and Appendix A of the Final EA).

PUBLIC PARTICIPATION IN THE EA PROCESS: In accordance with applicable regulations and policies, DOE sent a Notice of Scoping on October 14, 2010, to Federal, State, and local agencies, tribal governments, elected officials, and nearby residents providing 15 days to comment on the scope of the EA. DOE published the scoping letter on the DOE Golden Field Office Reading Room website. DOE received responses from the National Park Service and the U.S. Environmental Protection Agency (EPA). DOE sent consultation letters to the U.S. Fish and Wildlife Service (FWS), the Maine SHPO, the Houlton Band of Maliseet Indians, the Penobscot Indian Nation, the Aroostook Band of Micmacs, and the Passamaquoddy Tribe. The FWS concurred with DOE's conclusion that the proposed project would not affect any Federally listed threatened or endangered species. The Maine SHPO responded with a determination of no historic properties affected. The most notable comments from these scoping and consultation letters came from the EPA and the NPS and requested consideration of noise and visual impacts to the adjacent Acadia National Park and historic resources in the park. The Final EA contains copies of these letters. DOE addressed all of the scoping comments in the Draft EA.

DOE published the Draft EA on the DOE Golden Field Office Public Reading Room website on April 28, 2011. DOE sent a Notice of Availability to announce the availability of the Draft EA to identified stakeholders and published a notice of availability in the *Bangor Daily News*. The public comment period began on May 2 and ended on May 16, 2011. DOE received two responses from nearby residents. Concerns included increased nighttime noise and traffic on Schooner Head Road and in Acadia National Park, odors, air pollution from combustion gases, wildlife conflicts, impacts to dark skies, road maintenance, and the size of the trees that would be

planted for a visual buffer. The Final EA contains copies of the comment letters in Appendix A. DOE addressed all of the comments in the Final EA.

DETERMINATION: Based on the information in the Final EA (DOE/EA-1875), DOE determined that the Proposed Action would not constitute a major Federal action significantly affecting the quality of the human environment in the context of NEPA. Therefore, preparation of an environmental impact statement is not required, and DOE is issuing this FONSI.

The Laboratory has committed to obtain and comply with all Federal, State, and local permits and applicable regulations for the construction and operation of the Biomass Energy Center. As noted in the Final EA, the Laboratory has committed to certain best management practices to avoid or reduce impacts (Section 2.2.3). These measures shall be incorporated and enforceable through DOE's funding award documents to the State of Maine through the Main PUC. The Maine PUC will be required to ensure compliance with the requirements of the Laboratory-committed measures identified in the EA and this FONSI.

The Final EA is available on the DOE Golden Field Office Reading Room website at http://eere.energy.gov/golden/Reading_Room.aspx and the DOE NEPA website at http://nepa.energy.gov/DOE_NEPA_documents.htm.

For questions about this FONSI, contact:

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