



Department of Energy

Golden Field Office
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DOE/EA-1858

MITIGATED FINDING OF NO SIGNIFICANT IMPACT AND FLOODPLAIN STATEMENT OF FINDINGS FOR THE NIPPON PAPER INDUSTRIES USA COMPANY BIOMASS COGENERATION PROJECT PORT ANGELES, WASHINGTON

AGENCY: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy

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 Washington State Department of Commerce under the State Energy Program (SEP). The State proposes to provide a \$600,000 grant and \$1.4 million loan from its SEP funds to the Nippon Paper Industries USA Company (Nippon) to construct and operate a new biomass-fueled cogeneration facility that would produce both heat and power at its existing paper mill in Port Angeles, Clallam County, Washington (proposed project). DOE's Proposed Action is to authorize the State's expenditure of Federal funding under the SEP for the new facility.

Before the Washington State Department of Commerce can award funding for Nippon's proposed project, DOE must examine the potential environmental impacts of DOE's Proposed Action in accordance with the *National Environmental Policy Act* (NEPA). All discussion, analysis, and findings related to the potential impacts of construction, operation, and eventual decommissioning of the Nippon Biomass Cogeneration Project, including the required mitigation measures, are contained in the *Final Environmental Assessment for Nippon Paper Industries USA Company Biomass Cogeneration Project, Port Angeles, Washington* (Final EA; DOE/EA-1858) and associated Mitigation Action Plan (MAP). The Final EA and MAP are hereby incorporated by reference. Through the *National Historic Preservation Act* (NHPA) Section 106 consultation process, DOE participated in the development of an Archaeological Resources Management Plan (ARMP) and a Memorandum of Agreement (MOA) with the Washington State Historic Preservation Officer (SHPO), Nippon, and an American Indian Tribe regarding potential effects to cultural resources.

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 regulations (10 CFR Part 1021).

ENVIRONMENTAL IMPACTS: The Final EA examined the potential environmental impacts of the Proposed Action and No-Action Alternatives. Under the No-Action Alternative, DOE would not authorize the use of SEP funds for the Nippon Biomass Cogeneration Project, which DOE assumes for purposes of the EA would not proceed without SEP funding. This assumption allows a comparison between the potential impacts of the project as proposed and the impacts of not proceeding with the project. In response to public comments, the EA also analyzed, as a subcategory under the No-Action Alternative, a project alternative that involves replacing the existing biomass boiler with a new, more efficient, similar-sized boiler, which would only supply the mill's steam needs and not generate electricity for the grid (no cogeneration). DOE considers this project alternative as a subcategory of the No-Action

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Alternative because it might occur if DOE did not fund the proposed project. It is important to note that the No Action project alternative has not been proposed by Nippon and does not represent an alternative action that DOE could select for the authorization of federal funding.

The Nippon Biomass Cogeneration Project would be constructed on mill property that is already developed and would consist of a new boiler that would replace an existing oil and biomass-fired boiler. As in the current boiler, the biomass fuel that would be used in the new boiler is primarily forest biomass, consisting of forest residues left behind from logging activities and lumber mill waste, and would also include dewatered sludge from the mill's wastewater treatment plant and small amounts (less than 1 percent of the total fuel feed) of post consumer wood waste that meets specific criteria already established by the regional air quality agency. The new boiler would be larger, requiring about twice as much biomass fuel as the current boiler, and would produce sufficient steam to supply paper mill demands as well as operate a 20-megawatt steam turbine generator. Electricity from the turbine generator would be sold to an electrical utility. Under the proposed project, two existing buildings would be demolished and a new boiler building, an adjacent turbine generator building, and a building for storing biomass fuel would be constructed. The new boiler would include air pollution control equipment with best available control technology.

Based on the information presented within the Final EA and using the sliding-scale approach, DOE concludes that Nippon's proposed project would not impact the following resources: land use, geology and soils, groundwater, and intentional destructive acts. Therefore, these resource areas were analyzed and then dismissed from more detailed analysis in the EA. DOE discusses all resource areas in the EA, but only carries through for detailed discussion impacts on air quality, cultural resources, surface water, biological resources, aesthetics and visual resources, noise, human health and safety, transportation, socioeconomic, environmental justice, waste and hazardous materials, and utilities and energy. The discussion below summarizes impacts related to the Proposed Action for select resource areas considered to be of particular concern for this project.

Cultural resources are a primary concern for the Nippon Biomass Cogeneration Project because there is archaeological evidence that the site of the paper mill (in continuous operation since 1920) and nearby areas have been used by aboriginal people for several thousand years. Tse-whit-zen, an ancient Klallam village unearthed on land just to the southeast of the Nippon paper mill, is considered one of the most important archaeological sites in the State. Past excavation and construction activities on the mill site have uncovered artifacts and other evidence of aboriginal people, and it is believed that the ground-disturbing actions required for the proposed project could do likewise. This archaeological evidence and history of the surrounding area resulted in DOE's finding of potential adverse effect to archaeological and cultural resources under Section 106 of the NHPA. As a mitigation measure, DOE, the SHPO, the Lower Elwha Klallam Tribe, and Nippon have entered into an MOA as an element of the consultation process required under Section 106. The MOA incorporates an ARMP that describes onsite responsibilities, chain of command, and a stepped approach to identify, evaluate, and recover any significant archaeological resources that may be in the project area. The MAP establishes conditions for issuing this FONSI. The primary condition in the MAP is implementation of the MOA and its associated ARMP. DOE's finding that the proposed project would have no significant impacts on cultural resources is predicated on the commitments that the State and project proponent have made in these documents.

Air quality is a concern for the proposed project, but because of the new boiler's improved efficiency and air pollution control equipment that would be installed, most air emissions would be lower than at present, even though the new boiler would burn about twice as much biomass fuel as the existing boiler. Assuming both boilers were operating at near capacity, only emissions of nitrogen dioxide would be expected to be higher from the new boiler; emissions of other criteria air pollutants would be reduced. Ambient air quality modeling performed for the proposed boiler's emissions indicate the area's air quality

would remain in compliance with standards. In evaluating greenhouse gases (GHG), the Final EA recognizes that the accounting of GHG for biomass energy recovery projects is currently a subject of debate. Calculations presented in the EA show that, in the short-term, the proposed project could involve an increase of about 43,000 tons per year of GHG compared with GHG emissions from the existing boiler combined with production of 20 megawatts of power elsewhere on the grid. If the slow release of GHG from the natural decay of forest biomass materials that would occur without the proposed project is included in the calculation, the proposed project would result in a decrease in GHG emissions of over 100,000 tons per year. In either case, the difference would be relatively small compared with the 8,026 million tons of carbon dioxide equivalent GHGs emitted in the United States in 2007 and the 54 billion tons of carbon dioxide equivalent anthropogenic GHGs emitted globally in 2004.

DOE has made a “No Effect” determination pursuant to the *Endangered Species Act* for the proposed project, thereby concluding that there would be no impacts to threatened or endangered species or critical habitat. Biological resources in the form of forest biomass would be affected by the proposed project because there would be added incentive for these materials to be removed from forested areas. Removing too much forest biomass could potentially cause negative impacts to the forest ecosystem because the organic materials are essential to forest health; however, leaving too much in place can slow forest growth, be conducive to disease, and increase the severity of wildfires. The Washington State Department of Natural Resources is actively managing these concerns, collecting information on how much logging residues should be left in place, and establishing rules that would require commercial collectors of forest biomass to obtain permits and be in compliance with the State’s strict forest practice rules.

Surface water is an identified concern because the Nippon mill receives its industrial water from the Elwha River, which is currently undergoing a significant National Park Service project to remove two dams in order to restore the River’s ecosystem and native fisheries. The proposed project would involve additional water removal from the River, which, although a relatively small quantity and within Nippon’s existing contracted water rights, could incrementally worsen conditions during periods of low flow, already a concern with regard to protecting fisheries habitat. It will take up to 10 years for the river system to stabilize after the dam removal, and during this period the mill’s water demand would have no impact on fishery habitat beyond that of the dam removal project. Once the river stabilizes, the City of Port Angeles has committed to a plan that would require it to develop water conservation measures for implementation during times of low flow to protect the fisheries. The City of Port Angeles provides industrial water to the mill and is the largest user of water diverted from the Elwha River. It is unknown at the present time what these conservation measures might be or how they might affect the mill’s operations, with or without the proposed project.

FLOODPLAIN STATEMENT OF FINDINGS: Portions of the Nippon paper mill, including parts of the proposed project site, are located in a base floodplain (that is, a 100-year floodplain). As identified in the Final EA, it was DOE’s intent that the EA meet the requirements of a floodplain assessment pursuant to Executive Order 11988, *Floodplain Management*, and DOE implementing regulations at 10 CFR Part 1022, “Compliance with Floodplain and Wetland Environmental Review Requirements.” The conclusions from the floodplain assessment are that the proposed project does not represent a change in the current use of the project area and would not be expected to have any adverse impacts on the area’s natural and beneficial floodplain values beyond those already attributed to the location’s existing development. Further, there would be no added adverse impacts to lives or property in the area because the project would not alter the areas that would be inundated by severe flooding or alter the depths of floodwaters.

PUBLIC PARTICIPATION IN THE EA PROCESS: A Notice of Availability and Notice of Floodplain Action for the Draft EA was placed in the *Peninsula Daily News* on March 18, 2011. The

Notice of Availability was also mailed to Federal, State, tribal, and local agencies, as well as to special interest groups and members of the general public who previously had requested notification. The Notice informed recipients that the Draft EA was available on the DOE Golden Field Office Reading Room Website at http://www.eere.energy.gov/golden/Reading_Room.aspx and the DOE NEPA Website at <http://nepa.energy.gov> and that DOE would accept comments until April 2, 2011. DOE subsequently extended the public comment period to April 18, 2011. The Notice of Extension was announced by mailing postcards to all those receiving the initial notice, plus others identified in the interim, and by posting the Notice of Extension on the same websites.

DOE received 2 formal requests for extensions, 12 comment documents, 1 expression of interest, and 1 request for additional information during the public comment period. Comment documents included 1 from a State agency, 2 from an Indian tribe, 3 from members of the public, and 6 from individuals representing interest groups. The Final EA summarized the comments and, as appropriate, included specific DOE responses or modifications to Draft EA text.

DETERMINATION: Based on the information presented in the Final EA (DOE/EA-1858), DOE determined that the Proposed Action would not constitute a major Federal action significantly affecting the quality of the human environment within the context of NEPA. Therefore, preparation of an environmental impact statement is not required, and DOE is issuing this FONSI. This FONSI is conditioned on Nippon Paper Industries USA Company meeting its commitments in the Final EA, the MAP, and the NEPA Requirements clause of the financial assistance award.

The Final EA is available at the DOE Golden Field Office Reading Room Website, http://www.eere.energy.gov/golden/Reading_Room.aspx, and the DOE NEPA Website at <http://www.nepa.energy.gov>.

For questions about this FONSI, please contact:

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