DOE/EA-1678

FINDING OF NO SIGNIFICANT IMPACT
DEPARTMENT OF ENERGY LOAN TO NISSAN NORTH AMERICA, INC., FOR THE ELECTRIC VEHICLE PRODUCTION PROJECT IN SMYRNA, TN

AGENCY: U.S. Department of Energy, Advanced Technology Vehicles Manufacturing Loan Program

ACTION: Finding of No Significant Impact

SUMMARY: The U.S. Department of Energy (DOE) conducted an environmental assessment (EA) that analyzed the potential environmental impacts associated with the Nissan North America Inc., (Nissan) Electric Vehicle Production Project (EV Project), which would include construction of an approximately 1.3 million square foot lithium-ion battery plant and reequipping and expanding the existing automobile manufacturing operations at Nissan's Smyrna Manufacturing Plant located in Smyrna, Tennessee. DOE, through its Advanced Technology Vehicles Manufacturing Loan Program, proposes to provide a Federal loan in the amount of $1.6 billion pursuant to Section 136 of The Energy Independence and Security Act of 2007 (P.L. 110-140) to Nissan to support the proposed EV Project. The purpose and need for agency action is to comply with DOE's mandate under Section 136 of the EISA by selecting eligible projects that meet the goals of the Act. DOE is using the NEPA process to assist in determining whether to issue a loan to Nissan to support the proposed EV Project.

The goal of Nissan's EV Project is the manufacturing of zero-emission, fully electric vehicles (EV) in the United States. Fully electric vehicles do not produce emissions, nor do they consume petroleum products. If these electric vehicles displace vehicles powered by fossil fuels, their use could reduce mobile greenhouse gas emissions (carbon dioxide) by approximately 1 million metric tons each year they remain in service, assuming a production rate of 150,000 EVs per year.

In addition to manufacturing the EVs, the proposed EV Project would also involve the manufacture of laminated lithium-ion batteries that would be used to power the EVs. Lithium-ion batteries generate higher electric voltage than either lead-acid batteries or nickel-metal hydride batteries, allowing for higher power output. The proposed EV Project would maximize the performance and safety of lithium-ion batteries by employing a highly efficient laminated battery cell. As opposed to older and less efficient cylindrical-type cells, the laminated structure is expected to provide superior cooling efficiency, keep temperatures from rising even with twice the energy density, and prevent uncontrolled discharge.

All discussion and analysis related to the potential impacts of construction and operation of the proposed EV Project are contained in the Final EA (DOE/EA-1678), which is incorporated by reference. DOE examined potential impacts on the following resources and found none to be significant: land use; visual resources; air quality; noise; geology and soils; water resources; biological resources; cultural resources; socioeconomics and environmental justice; utilities;

transportation; waste management; public and occupational health and safety, including intentionally destructive acts; and cumulative effects, including global climate change.

In accordance with applicable regulations and policies, DOE sent a notification letter regarding the Department's determination to prepare an EA to the Tennessee Department of Environment and Conservation and the City of Smyrna on June 23, 2009. The letter described the Proposed Action and stated that a draft EA would be sent to the state for review. On November 6, 2009, DOE sent the draft EA to the Tennessee Department of Environment and Conservation and the City of Smyrna and invited their comments on the draft. The draft EA was also posted on the DOE Advanced Technology Vehicles Manufacturing Loan Program website. DOE received no comments on the draft EA.

DETERMINATION: On the basis of the Final EA, DOE has determined that providing a Federal loan to Nissan for the manufacture of advanced technology electric vehicles and batteries at Nissan's Smyrna Manufacturing Plant located in Smyrna, Tennessee, will not have a significant effect on the human environment. The preparation of an environmental impact statement is therefore not required, and DOE is issuing this Finding of No Significant Impact.

Copies of the Final EA are available at the DOE Advanced Technology Vehicles Manufacturing Loan Program website at www.atvmloan.energy.gov or from

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Additional information on the DOE NEPA process is available from

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Issued in Washington, DC on the 25 day of November in the year 2009.

Jonathan Silver
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