FINDING OF NO SIGNIFICANT IMPACT FOR THE PUBLIC SERVICE COMPANY OF NEW MEXICO PHOTOVOLTAIC PLUS BATTERY FOR SIMULTANEOUS VOLTAGE SMOOTHING AND PEAK SHIFTING PROJECT, BERNALILLO COUNTY, NEW MEXICO

RESPONSIBLE AGENCY: U.S. Department of Energy (DOE)

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: DOE completed the final Environmental Assessment (EA) for the *Public Service Company of New Mexico Photovoltaic Plus Battery for Simultaneous Voltage Smoothing and Peak Shifting Project,* Bernalillo County, NM. Based on the analysis in the EA, DOE determined that the Proposed Action—providing federal assistance to Public Service Company of New Mexico (PNM) to facilitate the installation of an advanced absorbed valve-regulated lead acid battery for voltage smoothing and peak shifting—would result in no significant adverse impacts. The EA concluded that PNM's proposed project could provide a minor reduction of greenhouse gas emissions and have a net beneficial impact on air quality in the region. In addition, there would be a positive socioeconomic benefit resulting from the infusion of $5.8 million into the regional economy.

BACKGROUND: As part of the American Recovery and Reinvestment Act of 2009 (Recovery Act) (Public Law 111-5, 123 Stat. 115) DOE's National Energy Technology Laboratory (NETL), on behalf of the Office of Electricity Delivery and Energy Reliability, is providing up to $435 million of federal funding for competitively awarded agreements to facilitate deployment of Smart Grid Demonstrations in the following areas: (1) regionally unique demonstration projects to quantify smart grid costs, benefits, and cost-effectiveness, verify technology viability, and validate new business models at a scale that can be readily replicated around the country; and (2) energy storage demonstration projects for major utility-scale installations to help establish costs and benefits, verify technical performance, and validate system reliability and durability at scales that can be readily replicated.

The federal action of providing funding for these projects requires compliance with the National Environmental Policy Act of 1969, as amended (42 U.S.C. §§ 4321 *et seq.*), Council on Environmental Quality regulations (40 CFR Parts 1500 to 1508), and DOE NEPA implementing procedures (10 CFR Part 1021). DOE prepared an EA to evaluate the potential environmental consequences of providing a grant for this proposed project under the Smart Grid initiative.

PURPOSE AND NEED: The overall purpose and need for DOE's action - pursuant to the Smart Grid Demonstrations Program and the funding opportunity under the Recovery Act - is to accelerate the development and production of a smarter, more efficient, more resilient electrical grid. The program will help verify technology viability, quantify costs and benefits, and validate new business models at a scale that can be readily replicated. DOE determined that PNM's proposed project can meet these objectives.

DESCRIPTION OF THE PROPOSED ACTION: DOE's proposed action is to provide financial assistance to partially fund installation and operation of PNM's proposed project in Bernalillo County, NM. The project would include: (1) a 2 to 4 megawatt-hour advanced absorbed valve-regulated lead acid battery; (2) an access road; (3) a parking lot; and (4) a 3,000-foot underground electrical tie-in to the existing power distribution system. In addition, PNM would install a photovoltaic solar array nearby with an output of about 500 kilowatts at its own expense. The combination of the battery and array, along with a sophisticated control system, would turn solar energy into a reliable, dispatchable generation resource. DOE would provide $1.8 million in financial assistance under a cooperative agreement to PNM. The cost of the project is estimated at $5.9 million.

ALTERNATIVES CONSIDERED: In addition to the proposed action, DOE considered the No-Action Alternative as required under NEPA. Under the No-Action Alternative, DOE would not provide funds for the proposed project. For the purposes of the EA, DOE assumed that the project would not proceed without DOE funding. This assumption established a baseline against which the potential environmental impacts of the proposed project were compared.

ENVIRONMENTAL CONSEQUENCES: DOE evaluated the potential environmental consequences of the proposed project and the No-Action Alternative. DOE considered 14 environmental resource areas in the EA. However, not all areas were evaluated at the same level of detail. For some of the resource areas (waste; utilities, energy, and materials; noise; health and safety; aesthetics and visual resources; and transportation) DOE determined there would be no impacts or potential impacts would be small, temporary, or both, and therefore did not carry these areas forward for additional analysis. DOE focused its more detailed analyses on those resources that could require new or amended permits, have the potential for significant impacts or controversy, or interest the public. These resource areas included air quality, water resources, land use, biological resources and soils, historic and cultural resources, and socioeconomics and environmental justice.

During construction air emissions would include emissions generated from vehicles and heavy-duty equipment as well as fugitive dust from site preparation activities. These emissions would have short-term adverse impacts that PNM would mitigate through best construction management practices. Operation of the battery along with the solar array would not generate air emissions. The solar array would add about 500 kilowatts of electricity for 20 or more years with no increase in criteria pollutants or greenhouse gas emissions. Therefore the project would have no cumulative adverse carbon impact, would result in a minor reduction of greenhouse gas emissions, and have a net beneficial impact on air quality in the region.

Site preparation and construction would require small amounts of water for dust suppression. PNM would design the slope of the site to direct storm water away from Tijeras Arroyo and implement a soil erosion management plan. Operations would not require surface water or ground water. PNM would not discharge wastewater and would not need permits for operations. The advanced absorbed valve-regulated lead acid battery would include hazardous and toxic substances in the form of an electrolyte gel; however, the system is designed to contain the gel in the event of an accidental release from the battery. Therefore DOE does not expect impacts to groundwater or the

Tijeras Arroyo from operations. The proposed site is not in a designated 100-year floodplain, and there are no wetlands on the proposed site.

Site preparation and construction would occur on an 8-acre area within a larger PNM owned 27-acre parcel. The site would change from undeveloped to developed with installation of the battery and other features of the proposed project. Changes to the land would include an access road, internal site roads, and a 3,000-foot underground electrical tie-in from the battery to the existing power distribution system. PNM would plant any disturbed areas not covered by project facilities with vegetation indigenous to the region. Operations would not entail further land use impacts. DOE does not expect changes to land use near the proposed project site.

It is assumed that during construction, most wildlife could avoid the project area. DOE determined that no suitable habitat for threatened or endangered species occurs on the site. Based on this information DOE determined there would be no effects to federally listed (threatened, endangered, or candidate) species. DOE consulted with the U.S. Fish and Wildlife Service (USFWS), which agreed that the project would not likely affect threatened or endangered species. Impacts to biological resources from operations would be unlikely with the possible exception of a vehicular related wildlife incident and limited noise during site visits. There would be very minor operations-related soil disturbances; therefore there would be no impacts to soils.

There are no known historic or cultural resources in the areas PNM would disturb. The company has designed the project to avoid disturbances to one previously identified site that is eligible for inclusion in the *National Register of Historic Places*. DOE consulted the New Mexico State Historic Preservation Officer (SHPO) and interested Native American tribes. DOE determined there would be no impacts to federally listed or eligible historic properties. The SHPO and two of the tribes responded and agreed with DOE's determination.

The proposed project is unlikely to create jobs except during the short 4-month construction period, so there would be no changes to population, infrastructure, or the level of social services in the area. There would be indirect economic consequences because vendors and equipment suppliers would benefit from the orders for the battery, solar array, and support systems. The positive economic benefits would be small.

DOE determined that no high and adverse impacts would occur to any member of the community, including socioeconomic impacts, so there would be no high and adverse impacts to any minority or low-income population.

In terms of cumulative impacts, PNM has ongoing actions to reduce use of carbon-based fuels and greenhouse gas emissions; to increase the use of renewable energy sources such as solar and wind energy and biogas power; and to increase energy efficiency. The PNM initiatives would have net beneficial cumulative impacts. The proposed project is consistent with PNM's initiatives and would therefore contribute to those positive benefits. It would increase the amount of land converted from undeveloped to other uses by 8 acres. Disruption due to the underground electrical tie-in would be temporary in that the disrupted corridor would revert to indigenous vegetation. The proposed project is consistent with the goals of the Mesa del Sol master-planned community in

terms of being an environmentally friendly community that uses renewable energy sources and other green technologies.

For the No-Action Alternative DOE assumed that PNM would not proceed with the project without DOE assistance. As a result, there would be no impacts to any resource category from the No-Action Alternative. Consequently, the positive socioeconomic impacts; the potential to reduce new conventional power plant construction; and the potential reduction in greenhouse gases would also not occur under the No-Action Alternative. Therefore, DOE's ability to achieve its objectives under the Smart Grid Demonstrations Program and the Recovery Act would be impaired.

PUBLIC AVAILABILITY: DOE issued the draft EA on August 8, 2010, and advertised its release in the *Albuquerque Journal* on August 8, 9, and 10. In addition, DOE sent copies for public review to the *Albuquerque/Bernalillo County Public Library System*. DOE established a 21-day public comment period that began August 8, 2010 and ended August 28, 2010, and announced it would accept comments by mail, e-mail, and facsimile. The draft EA was also sent to the applicable federal, state, and local agencies. DOE received one comment letter from the U.S. Environmental Protection Agency and responded to it in the final EA.

Copies of the final EA and this FONSI were sent to stakeholders that provided comments or consultation; they are also available at DOE's NETL website: http://www.netl.doe.gov/publications/others/nepa/ea.html and DOE's NEPA website: http://nepa.energy.gov/DOE_NEPA_documents.htm.

DETERMINATION: On the basis of the evaluations in the final EA, DOE determined that the proposed federal action—to provide $1.8 million in financial assistance to partially fund installation and operation of PNM's proposed project—would have no significant impact on the human environment. Therefore, based on the context and intensity of the projects impacts, the preparation of an environmental impact statement is not required and DOE is issuing this FONSI.

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