

FINDING OF NO SIGNIFICANT IMPACT TENNESSEE VALLEY AUTHORITY

POWER PURCHASE AGREEMENT FOR RENEWABLE ENERGY FROM LANDFILL GAS - INSTALLATION OF GENERATING CAPACITY AT THE WEST CAMDEN SANITARY LANDFILL

The Tennessee Valley Authority (TVA) proposes to enter into a power purchase agreement (PPA) with Waste Management Renewable Energy LLC (WMRE) for the acquisition of electric power generated at the West Camden Sanitary Landfill in Benton County, Tennessee. This power would be generated by three new landfill gas (LFG)-powered reciprocating engines at a proposed facility at the landfill site.

TVA produces or obtains electricity from a diverse portfolio of energy sources such as nuclear, fossil, hydro, solar, wind, and biomass. In order to help fulfill the objectives of its 2011 Integrated Resource Plan, 2007 Strategic Plan and 2008 Environmental Policy, TVA has recently undertaken efforts to expand the contribution of renewable and low greenhouse gas-emitting sources in its generation portfolio. The utilization of LFG from biomass for the production of electricity would qualify as a renewable power source. The more energy generated from renewable resources such as LFG, the less energy would need to be generated from nonrenewable resources such as fossil fuels. The proposed project is to utilize LFG as an energy source for generating electricity, which would otherwise be combusted by flares into the atmosphere.

The installation of three reciprocating engine systems would result in an electric generating capacity of 4.8 megawatts (MW) at the landfill, thereby also reducing the amount of LFG being incinerated in the flares or escaping directly into the air (i.e., fugitive emissions) and reducing methane (a greenhouse gas) emissions from the landfill.

The proposed action is the subject of an environmental assessment (EA) prepared by TVA (Attachment 1) which is incorporated by reference.

Alternatives

This environmental assessment (EA) evaluated two alternatives – the No Action Alternative and the Action Alternative.

Under the No Action Alternative, TVA would not purchase power from the facility, and three LFG-fueled engine systems would not be installed by WMRE. The excess LFG produced by the landfill would continue to be flared to the atmosphere up to 4,000 scfm.

Under the Action Alternative, TVA would enter into a PPA to purchase electric power generated from the proposed WMRE facility. Site preparation would occur. Three LFG-fueled engine systems would be installed by WMRE along with the building, new flare, and associated facilities. The LFG produced by the landfill and collected by WMRE would be used in the engines to produce up to 4.8 MW of power.

TVA's Preferred Alternative is the Action Alternative under which TVA would enter into a PPA with WMRE to purchase power generated from the installation of three LFG engine systems at the West Camden Sanitary Landfill.

Impacts Assessment

The project would not have impacts on hazardous and nonhazardous wastes, native plants and terrestrial animals, aquatic ecology, wetlands or environmental justice. The project's impacts on noise level, transportation, water quality, and invasive species would be minimal and insignificant. The project's impacts on air quality are considered beneficial but insignificant.

The project location is not located within a floodplain, and the proposed addition of LFG-fueled engine systems would not affect floodplain values or functions. Thus, the proposed action is consistent with Executive Order 11988 Floodplain Management. No direct, indirect, or cumulative effects to wetlands are anticipated from the proposed project. Thus, the proposed action would not require permitting under Sections 401 and 404 of the Clean Water Act and complies with Executive Order 11990 Protection of Wetlands. Adoption of the Action Alternative is not expected to cause direct or indirect impacts to any threatened or endangered terrestrial or aquatic plant or animal species or their habitats. Thus, the requirements of Section 7 of the Endangered Species Act are satisfied.

The proposed project area does not contain archaeological or cultural resources, and because the integrity of setting of the area has been destroyed, the proposed undertaking has no potential to affect historic properties. Pursuant to 36CFR Part 800.3(1), the requirements of Section 106 of the National Historic Preservation Act are satisfied.

Public and Intergovernmental Review

The renewal of a major source operating permit, with the addition of LFG-fueled generating capacity, was the subject of a public notice issued by the Tennessee Air Pollution Control Division on December 24, 2009 for a 45-day review period.

Mitigation

Best management practices and other routine measures will be implemented during installation activities. TVA has not identified the need for any other nonroutine mitigation measures to reduce potential environmental impacts.

Conclusion and Findings

Based on the findings listed above and the analyses in the EA, TVA concludes that the proposed action of PPA approval of this project would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required.



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Date Signed

Attachments

Attachment 1 - Environmental Assessment