



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Deval L. Patrick
GOVERNOR

Timothy P. Murray
LIEUTENANT GOVERNOR

Ian A. Bowles
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1181
<http://www.mass.gov/envir>

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CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME: Palmer Renewable Energy
PROJECT MUNICIPALITY: Springfield
PROJECT WATERSHED: Chicopee River
EEA NUMBER: 14243
PROJECT PROPONENT: Palmer Renewable Energy, LLC
DATE NOTICED IN MONITOR: May 7, 2008

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** the preparation of an Environmental Impact Report (EIR).

Project Description

As outlined in the Environmental Notification Form (ENF), the Palmer Renewable Energy project is a 38-megawatt (MW) biomass energy plant that will use a mixture of recycled and green wood fuel. The proposed plant will be located at a Palmer Paving Corporation site at 1000 Page Boulevard in Springfield. The project will be located on 7 acres of the 13 acre Palmer Paving site; an existing asphalt plant will remain on site. The site is bounded by Page Boulevard (Route 20) and a Friendly's restaurant to the south, Cadwell Drive to the east, a private roadway accessing a Western Massachusetts Electric Company (WMECO) service facility and printing company to the north, and WMECO electrical transmission lines and the Route 291/Route 20 interchange to the west.

The plant will use an average of 900 tons per day (tpd) of wood fuel that will consist of 700 tpd of recycled wood from Construction and Demolition (C&D) processors and 200 tpd of green wood chips. Steam from the project's advanced stoker boiler will feed a steam turbine to generate 38 MW (net) of electricity. Electricity from the plant will be fed to the transmission network via a new connection with existing or reconstructed WMECO 115 kilovolt (kV) transmission lines immediately west of the project site. The Proponent will be required to file an Interconnection Request with the Independent System Operator – New England (ISO-NE) to accomplish the electrical interconnection. The plant will be equipped with an air cooled condenser to dissipate the waste heat generated by the steam turbine. Exhaust from the boiler will be ducted to a scrubber, fabric filter, oxidation catalyst and Regenerative Selective Catalytic Reduction (RSCR) system and then to a 275 foot tall stack. Other equipment on site will include silos for lime, carbon and ash, and a double-walled aqueous ammonia tank for the RSCR.

Water for the project for potable and process uses will be supplied via the Springfield municipal water system. An existing 8 inch water main in Cadwell Drive is available to supply water to the project. The project is anticipated to require 115,000 gallons per day (gpd) of water. The use of air cooling technology instead of a wet-mechanical cooling tower will minimize the water demand for the project; the Proponent estimates that it will save 600,000 gpd through the use of air cooled condensing. The project is anticipated to generate 26,500 gpd of wastewater. Wastewater from boiler blowdown, process and potable uses will be discharged to the Springfield sewer system via an existing 12 inch sewer main manhole at the intersection of Cadwell Drive and Curve Street. The Proponent will install a pump station to access the sewer.

The project site does not appear to contain any wetland resource areas subject to protection under the MA Wetlands Protection Act. In response to a request from the Department of Environmental Protection (MassDEP), the Proponent should submit a Request for a Determination of Applicability (RDA) to the Springfield Conservation Commission regarding the extent and boundaries of any jurisdictional resource areas on site. Clean stormwater runoff from impervious surfaces will be conveyed to an on-site infiltration basin to be combined with a new stormwater collection system for Palmer Paving's existing operations. The combined system will comply with MassDEP's recently revised Stormwater Management Guidelines (January 2008). The Proponent should note comments from MassDEP regarding potential permitting requirements for underground stormwater facilities.

Pre-processed wood fuel will be delivered to the site by 20-ton trucks, 5 to 6 days per week; the project is anticipated to generate 126 daily trips. The Proponent has conducted a traffic study for the project which indicates that the state highway system in the vicinity of the project has ample capacity to accommodate project-related traffic. Although the site abuts Interstate 291, the number of trips associated with the project does not trigger the need for an Indirect Access permit from the Massachusetts Highway Department. Trucks servicing the facility are proposed to use the existing Palmer Paving driveway on Cadwell Drive in addition to a new second driveway approximately 200 feet north from the existing site drive. Vehicles would then travel via Route 20/Page Boulevard to Route 291 and Interstate 90. The Proponent has also evaluated an alternative route where vehicles would exit the site and travel north on Cadwell Drive to the north to access Route 291 via Route 141. This alternative route may become the primary access to and from the site based on consultation with the City of Springfield and the abutting

neighborhood. The Proponent should continue to coordinate with the City to ensure that the project's traffic impacts are adequately mitigated.

Jurisdiction

The project is subject to environmental review pursuant to the following sections of the MEPA regulations: 301 CMR 11.03(7)(b)(1), because the Proponent proposes to construct a new electric generating facility with a capacity of more than 25 MW; and 301 CMR 11.03(8)(b)(1), because the project is considered a new major stationary source that will emit 27 tons per year (tpy) of particulate matter (as PM-10), 167 tpy of carbon monoxide (CO), 0.28 tpy of lead, 47 tpy of sulfur dioxide (SO₂), 22 tpy of volatile organic compounds (VOCs), 134 tpy of nitrogen oxides (NOx), and 23.8 tpy of hazardous air pollutants (HAPs).

The project requires a National Pollutant Discharge Elimination System (NPDES) Construction General Permit from the U.S. Environmental Protection Agency (EPA); a Major Comprehensive Air Plan Approval, a Cross Connection Permit, a Beneficial Use Determination (BUD), and an Industrial and Sanitary Sewer Connection Certification from the Department of Environmental Protection (MassDEP); Massachusetts Department of Public Safety (DPS) Storage Tank Permits; Air Space Review by the Massachusetts Aeronautics Commission (MAC) and the Federal Aviation Administration (FAA); and Site Plan Review, a Special Permit and a Building Permit from the City of Springfield.

While the project did receive funding for a feasibility study from the Massachusetts Technology Collaborative (MTC), the Proponent is not seeking financial assistance from the Commonwealth for the construction or operation of the project and therefore MEPA jurisdiction is limited to the subject matter of required or potentially required state agency actions. In this case MEPA jurisdiction applies to air, noise (reviewed in the MassDEP Air Plan Approval), and solid waste (associated with the MassDEP BUD).

Air

The MassDEP Air Plan Approval permitting process is used to implement federal and state requirements for demonstration of compliance with the National Ambient Air Quality Standards (NAAQS) that regulate criteria air pollutants and compliance with the New Source Performance Standards (NSPS) that regulate air contaminants. As part of the permitting process, the Proponent will need to demonstrate the consistency of the project with the State Implementation Plan (SIP), which outlines how Massachusetts attains compliance with the NAAQS.

The Proponent conducted an air quality dispersion modeling analysis using the AERMOD model to assess the potential impact of the project on ambient air quality. The ENF provided an overview and results of the air modeling study. Modeled air concentrations from the project were added to ambient background conditions for comparison with federal and state standards. The results of the modeling demonstrate that the project will have impacts below

Significant Impact Levels (SILs) which are a small component of the NAAQS. The facility ambient air quality impacts will also be below the Allowable Ambient Limits (AALs) and Threshold Effect Levels (TELs) for non-criteria pollutants.

In its comments on the ENF, MassDEP has noted several issues with the air modeling analysis that should be refined during the permitting process. In particular, the Proponent should address the following points:

- The Proponent should clarify how much total particulate matter (PM), filterable PM-10 and condensable PM-10 will be emitted from the boiler and facility. I also recommend that MassDEP evaluate PM 2.5 (and PM 2.5 precursor) emissions during the Air Plan permitting process;
If there is the potential for fugitive emissions at the site, the Proponent should prepare a fugitive emission control plan;
- The Proponent should provide a more extensive analysis of alternative boiler technologies to demonstrate how the advanced stoker-boiler was selected as the preferred alternative;
The Proponent should work with MassDEP to clarify emission factors used in the air quality dispersion analysis.

To minimize the project's air quality impacts, the project will use a full range of emission controls to meet Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) requirements. The Proponent will install a wood-fired advanced stoker boiler with combustion air and over-fire air controls followed by sorbent injection, a unique dry scrubber system, fabric filter, Regenerative Selective Catalytic Reduction system, and an oxidation catalyst. The system will be designed to control NO_x, CO, VOCs, acid gases, particulate matter including fine particles (PM 2.5) and heavy metals.

The project is also subject to non-attainment New Source Review (NSR) related to ozone as the facility will emit more than 50 tpy of NO_x. Applicable NSP requirements for nonattainment include application of LAER technology and acquisition of emission offsets. For major sources of NO_x in Massachusetts, offsets are required at a minimum ratio of 1.26:1. The Proponent will purchase the necessary NO_x offsets (134 tpy x 1.26 = 168.8 tpy of NO_x offsets). While Massachusetts NO_x banking and trading rules allow offsets to come from anywhere in the state, I encourage Proponent to work with MassDEP to buy NO_x offsets from facilities within the region if available. According to the ENF, the project is not subject to Prevention of Significant Deterioration (PSD) review for criteria pollutants; the Proponent should note comments from MassDEP regarding PSD applicability thresholds.

The Air Plan Approval will include emission limits, stack testing, monitoring, recordkeeping and reporting requirements established by MassDEP for the project. MassDEP will require Continuous Emissions Monitoring Systems (CEMS) for CO, NO_x, ammonia, and opacity. The facility will also be subject to an initial stack test for CO, NO_x, SO₂, hydrochloric acid (HCl), PM, VOC, ammonia, and air toxics. The permit will also require monitoring of the air pollution control system's operation parameters and record keeping of all pertinent data. The Proponent should provide the City with a copy of the facility's operating permit and a copy of the stack testing report.

Solid Waste/Fuel Mix

The ENF provided an overview of the proposed fuel mix for the facility. The project will use approximately 230,000 tons per year (tpy) of C&D wood fuel. Green wood chips will be provided from tree trimming, land clearing or other similar operations. C&D derived wood chips will be supplied from a number of existing or proposed "positive pick" or similar C&D processing facilities. A positive pick operation provides a pre-sorted recycled all wood fuel with insignificant quantities of non-wood materials such as plastics or inorganic materials. The ENF provided an overview of the positive pick process and an overview of a sampling and analysis program conducted by the Proponent at two representative C&D processing facilities. The C&D wood sampling program consisted of a physical analysis to determine the percentage of fines, plastics, painted wood and chromated copper arsenate (CCA)-treated wood in each sample. The Proponent also chemically analyzed the samples for arsenic, chromium, copper, lead, fluorine, cadmium, chlorine, mercury and asbestos.

Based on the results of the sampling program, the Proponent has worked with MassDEP to develop a specification that will limit contaminants in the wood fuel and that will form the basis for routine sampling and monitoring of the fuel to ensure that it meets the specification. The Proponent proposes a fuel specification in the ENF that limits the recycled C&D wood to 4.5% CCA content and 100 mg/kg of arsenic. The Proponent states that this specification, when combined with proposed air pollution control systems will result in emissions that meet MassDEP air toxic limits. The fuel sampling and monitoring combined with continuous emissions monitoring of the exhaust stack from the boiler and air pollution control train will be required by MassDEP as part of the Air Plan Approval.

I note that several commenters have argued that C&D wood chips should be considered solid waste pursuant to MGL c. 111 ss. 150A and that the project should be defined as a solid waste facility and required to obtain a Site Assignment from MassDEP. MassDEP has provided supplemental information to the MEPA office in response to the above mentioned comments. While C&D waste is considered to be solid waste, the Proponent will be purchasing wood separated from the C&D stream. Separated materials are considered to be commodities, and do not meet the definition of solid waste at 310 CMR 16.00 and 19.00. To combust C&D derived wood chips as fuel, the material needs to be declassified as a solid waste through the Beneficial Use Determination (BUD) process. A material that has a BUD is no longer regulated as a solid waste as long as it is used in compliance with the BUD. As the Proponent proposes to use a wood fuel that will obtain a BUD and therefore is not classified as solid waste, it is not required to obtain a site assignment or a solid waste facility permit because it will not be managing solid waste. In addition, as the definition of recycling at 310 CMR 16.00 and 19.00 excludes "recover[ing] energy from the combustion of a material", wood separated from C&D for use as a fuel does not qualify as recycling.

The project will generate fly ash and bottom ash from the boiler as combustion byproducts. The ash will either be used as an input to the Palmer Paving asphalt production process or will be disposed of off-site at a licensed disposal facility. Reuse of the ash as an asphalt amendment or as a possible soil amendment for land application will also require a BUD from MassDEP.

Noise

The Air Plan Approval process serves as MassDEP's mechanism for noise impact review. The Proponent conducted a noise impact modeling analysis and discussed the results in the ENF. The Proponent has committed to measures during construction and operation of the facility to ensure compliance with state and local noise policies. Mitigation measures incorporated in the facility design include natural attenuation by distance and site layout, silences on exhaust stacks, and secondary enclosures on specific noise-producing equipment.

The Proponent states in the ENF that the project will comply with MassDEP's noise policy, which requires that noise levels from the project are less than 10 dBA over existing ambient noise and that no pure tones are generated at the nearest residential receptors. MassDEP notes however that sound levels at the northern and western property lines will exceed 10 dBA based on noise modeling. If the noise policy cannot be achieved at the property line, the Proponent must secure a letter of acceptance from abutting landowners. The City of Springfield also notes that the noise modeling results indicated that sound levels exceed the City's impact criteria at all but one receptor location. The Proponent intends to seek a waiver from the City for these impacts, and may be required to conduct additional noise analyses at the local level. I strongly encourage the Proponent to implement a noise monitoring program, such as the one proposed by the City of Springfield in its comment on the ENF, to ensure that the abutting neighborhood is not adversely impacted due to noise.

Construction Activities

During construction, the Proponent should implement measures to control transient traffic, noise and dust impacts. Construction activities must conform to current MassDEP Air Pollution Control Regulations and Solid Waste Management regulations. The Proponent should note detailed comments from MassDEP regarding the minimization of construction period impacts.

Conclusion

I have determined that the ENF has sufficiently defined the nature and general elements of the Palmer Renewable Energy project and proposed measures to avoid and mitigate environmental impacts. I am satisfied that any remaining issues can be adequately addressed during the state and local permitting and review process. The proposed project, as described in the ENF, requires no further review under MEPA. I strongly encourage the Proponent to continue to coordinate closely with the City and the neighborhood during project permitting, construction and operation.

June 6, 2008

Date



Ian A. Bowles

Comments Received:

5/9/2008 E.L. Harvey & Sons, Inc.
5/9/2008 Construction Materials Recycling Association
5/9/2008 Site Restoration Technologies
5/15/2008 Massachusetts Aeronautics Commission
5/16/2008 Springfield Water and Sewer Commission
5/22/2008 Western Massachusetts Electric Company
5/25/2008 Alexandra Dawson, Massachusetts Association of Conservation Commissions
5/27/2008 Green Seal Environmental, Inc.
5/27/2008 Department of Environmental Protection, Western Regional Office
5/27/2008 Eileen Simonson
5/27/2008 Connecticut River Watershed Council
5/27/2008 Clean Water Action
5/27/2008 Conservation Law Foundation
5/28/2008 Solid Waste Association of North America, Massachusetts Chapter
5/29/2008 Rosemarie Mazza Moriarty, City of Springfield City Council
5/29/2008 Thomas Mackie, Mackie Shea O'Brien
5/30/2008 East Springfield Neighborhood Council
5/30/2008 James Colman, Department of Environmental Protection
5/30/2008 City of Springfield
6/1/2008 Stuart and Lee Ann Warner
6/1/2008 Gregory and Christine Pellerin
6/2/2008 Reed Alper
6/3/2008 Roni Bethell
6/4/2008 Department of Environmental Protection
6/5/2008 Renee N. Leone, Friendly Ice Cream Corporation

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