

**Commonwealth of Massachusetts**  
**Executive Office of Environmental Affairs ■ MEPA Office**

**ENF Environmental Notification Form**

*For Office Use Only*  
*Executive Office of Environmental Affairs*

EOEA No: **14243**  
 MEPA Analyst: **Brian Angus**  
 Phone: 617-626-**1029**

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Palmer Renewable Energy		
Street: Cadwell Drive		
Municipality: Springfield	Watershed: Chicopee River	
Universal Transverse Mercator Coordinates:	Latitude: 42°, 8', 55.5" N	
UTM (Zone 18) 702809 , 4669207	Longitude: 72°, 32', 43.8" W	
Estimated commencement date: 10/2008	Estimated completion date 12/2010	
Approximate cost: \$140 million	Status of project design: 15 % complete	
Proponent: Palmer Renewable Energy, LLC		
Street: 40 Shawmut , Suite 200		
Municipality: Canton	State: MA	Zip Code: 02021
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Corinne Snowdon		
Firm/Agency: Epsilon Associates, Inc.	Street: 3 Clock Tower Place, Suite 250	
Municipality: Maynard	State: MA	Zip Code: 01754
Phone: 978-897-7100	Fax: 978-897-0099	E-mail: csnowdon @epsilonassociates.com

- Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?  
 Yes  No
- Has this project been filed with MEPA before?  
 Yes (EOEA No. \_\_\_\_\_)  No
- Has any project on this site been filed with MEPA before?  
 Yes (EOEA No. \_\_\_\_\_)  No
- Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:
- a Single EIR? (see 301 CMR 11.06(8))  Yes  No
  - a Special Review Procedure? (see 301CMR 11.09)  Yes  No
  - a Waiver of mandatory EIR? (see 301 CMR 11.11)  Yes  No
  - a Phase I Waiver? (see 301 CMR 11.11)  Yes  No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres):

MTC funding for development - \$250,000

Are you requesting coordinated review with any other federal, state, regional, or local agency?  
 Yes (Specify\* \_\_\_\_\_)  No

List Local or Federal Permits and Approvals: FAA Notice of Proposed Construction or Alteration, coverage under the EPA NPDES General Stormwater Permit for Construction, City of Springfield Special Permit including Site Plan Review, potentially variances (structure heights) from Zoning Board of Appeals, and Building Permit.

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Land                            | <input type="checkbox"/> Rare Species         | <input type="checkbox"/> Wetlands, Waterways, & Tidelands      |
| <input type="checkbox"/> Water                           | <input type="checkbox"/> Wastewater           | <input type="checkbox"/> Transportation                        |
| <input checked="" type="checkbox"/> Energy (ENF, >25 MW) | <input checked="" type="checkbox"/> Air (ENF) | <input type="checkbox"/> Solid & Hazardous Waste               |
| <input type="checkbox"/> ACEC                            | <input type="checkbox"/> Regulations          | <input type="checkbox"/> Historical & Archaeological Resources |

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
<b>LAND</b>				<input type="checkbox"/> Order of Conditions <input type="checkbox"/> Superseding Order of Conditions <input type="checkbox"/> Chapter 91 License <input type="checkbox"/> 401 Water Quality Certification <input type="checkbox"/> MHD or MDC Access Permit <input type="checkbox"/> Water Management Act Permit <input checked="" type="checkbox"/> New Source Approval <input type="checkbox"/> DEP or MWRA Sewer Connection/ Extension Permit <input checked="" type="checkbox"/> Other Permits <i>(including Legislative Approvals) – Specify:</i> Mass DEP Major Comprehensive Air Plan Approval, Mass DEP Cross Connection Permit;
Total site acreage	13.2			
New acres of land altered		+ 3.2		
Acres of impervious area	0.8	+ 3.2	4.0	
Square feet of new bordering vegetated wetlands alteration		0.0		
Square feet of new other wetland alteration		0.0		
Acres of new non-water dependent use of tidelands or waterways		0.0		
<b>STRUCTURES</b>				Mass DEP Industrial and Sanitary Sewer Connection Certification (< 50,000 gpd) – (not a permit), Beneficial Use Determination; Mass DPS Storage Tank Permits.
Gross square footage ( <i>buildings</i> )	~ 22,000	+ 51,200	~ 73,000	
Number of housing units	0	0	0	
Maximum height (in feet)	65	110 boiler bldg 275 stack	110 boiler 275 stack	
<b>TRANSPORTATION</b>				
Vehicle trips per day (operational phase)	400	+ 196	596	
Parking spaces	15	18	33	
<b>WATER/WASTEWATER</b>				
Gallons/day (GPD) of water use	500 (max)	City: +115,000	City: 115,500	
Gallons/day water withdrawal	0	0	0	
GPD wastewater generation/ treatment	500 (septic)	+ 26,000 (sewer)	26,500 (sewer)	
Length of water/sewer mains (in miles)	0	0	0	

**CONSERVATION LAND:** Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

Yes (Specify \_\_\_\_\_)  No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

Yes (Specify \_\_\_\_\_)  No

**RARE SPECIES:** Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

Yes (Specify \_\_\_\_\_)  No

**HISTORICAL /ARCHAEOLOGICAL RESOURCES** Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

Yes (Specify \_\_\_\_\_)  No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

Yes (Specify \_\_\_\_\_)  No

**AREAS OF CRITICAL ENVIRONMENTAL CONCERN:** Is the project in or adjacent to an Area of Critical Environmental Concern?

Yes (Specify \_\_\_\_\_)  No

**PROJECT DESCRIPTION:** The project description should include (a) a description of the project site, (b) a description of both on-site and off-site alternatives and the impacts associated with each alternative, and (c) potential on-site and off-site mitigation measures for each alternative (You may attach one additional page, if necessary.)

The proposed *Palmer Renewable Energy* project is a 38-MW renewable biomass energy plant using recycled wood in a state-of-the-art advanced stoker boiler. The plant will be located at the 1000 Page Blvd site in Springfield, MA, owned by Palmer Paving Corporation. Approximately 7 acres of the existing 13 acre site will be dedicated to the PRE project. See USGS Map, Figure 1; Orthophoto (aerial), Figure 2.

The project plans to use an advanced stoker boiler to be housed in an acoustically treated building. The boiler will be fed at an annual average rate of 900 tons per day (tpd) of wood fuel (700 tpd of recycled wood from Construction and Demolition (C&D) processors, and 200 tpd of green wood chips). Pre-processed wood fuel will be delivered to the site by 20 ton trucks five to six days per week during daytime hours. The trucks will be unloaded by hydraulic truck dumpers and their contents will be conveyed to a screen/grinder in a building for sizing, and then into a 5000 ton bulk storage shed. Front end loaders will dress the wood pile and reclaim wood fuel as needed via conveyor to an 8-hour fuel metering bin at the boiler. The front end loaders will not need to operate overnight. Steam from the boiler will feed a steam turbine to generate 38 MW (net) of electricity. 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, as described further below (Mitigation) and in Appendix B. Other ancilliary equipment will include silos for lime, carbon, and ash, and a double walled aqueous ammonia tank for the RSCR. See Site Plan (Figure 3); Process Flow Diagram (Figure 4) and Process Diagram – Wood Handling System (Figure 5).

An existing Palmer Paving 3,800 SF maintenance building/garage will be used by PRE, and a new building will be located in the southern part of the Palmer Paving site.

Electricity from the plant will be fed to the transmission network via a new connection with existing or reconstructed WMECO 115-kV transmission lines immediately west of the project site. See Alternatives in Appendix A.

### ***Project Site Description***

The project site comprises 7 acres of an existing 13 acre site, occupied by Palmer Paving whose 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 WMECO service facility and printing company to the north, WMECO electrical transmission lines and the Route 291/Route 20 interchange to the west. To the north east are commercial buildings. To the immediate east are a vacant wooded lot and parking lot, both owned by Palmer Paving, and a restaurant. A residential neighborhood is located east of these lots. To the south of Page Boulevard are industrial and commercial land uses including an oil terminal, and a fencing company. The site is zoned Industrial A.

### ***Need and Alternatives***

For discussion of Need and Alternatives considered, please see Appendix A.

### ***Project Benefits***

The proposed project will result in important benefits for the Commonwealth, western Massachusetts and the City of Springfield, including the following:

- The project will provide approximately 200 construction jobs, 27 long-term jobs and increase the industrial tax base.
- Provide the City of Springfield and the Region with cost-effective renewable power
- Position the City of Springfield as a national leader in renewable energy generation and use
- Reduce the Commonwealth's reliance on fossil fuels, and provide fuel diversity
- Beneficially Use Recycled Wood as fuel, keeping C&D wood out of landfills, as required by DEP Solid Waste Regulations
- Reduce greenhouse gas emissions
- PRE will provide cogeneration steam to Palmer Paving which will reduce use of oil

### ***Environmental Justice***

The project is subject to the Environmental Justice Policy of the Executive Office of Environmental Affairs (the "Policy") as a project that exceeds the ENF threshold for air and is within one mile of an Environmental Justice Population. As such, the project is required to provide for enhanced public participation as it undergoes MEPA review. The project has provided enhanced public participation by publishing the ENF notice in the Spanish language newspaper *El Pueblo Latino*. A copy of the ENF will also be provided to the regional community action group, New North Citizen's Council, located in Springfield. A Spanish-language project description will be available at the public scoping meeting for the project, and will also be available upon request at any time during the comment period for the project.

Because the project does not exceed the mandatory EIR threshold for air, solid and hazardous waste, or wastewater and sewage sludge treatment and disposal, the project does not require enhanced analysis of impacts and mitigation under the Policy.

### ***Mitigation Measures***

The proposed project will include measures to reduce air quality impacts, noise, water use, wastewater impacts, stormwater runoff, traffic and visual impacts. To minimize air quality impacts, the proposed project will employ a full array of emission controls to meet Best Available Control Technology (BACT) and Lowest Achievable Emissions Rate (LAER) requirements including a TurboSorp Scrubber to control acid gases and

heavy metals, Fabric Filter (particulate matter (PM), and hazardous air pollutants (HAPs) (heavy metals, organic products of incomplete combustion), Carbon Injection (mercury) and Regenerative Selective Catalytic Reduction (RSCR) for NOx control, with an Oxidation Catalyst (CO, VOC and organic HAPs). These levels are discussed in Appendix B, Air Quality. The positively picked (or equivalent) recycled wood fuel will be trucked from offsite C&D processors who will be required to meet a stringent fuel specification approved by MassDEP via a Beneficial Use Determination (BUD) and Air Plan Approval. These permits will require routine sampling and monitoring of the fuel to ensure it meets the fuel specification, and continuous emission monitoring systems (CEMS) on the exhaust gases for CO, NOx and opacity (surrogate for PM).

A principal project mitigation measure is the use of an air cooled condenser instead of a wet-mechanical cooling tower, greatly minimizing water use. Plant water supply (potable and process uses) will be via the Springfield municipal water system which has sufficient capacity. A demineralizer system will be used to provide the very high quality water required for use in the boiler. PRE will discharge its wastewater (boiler blowdown, process and potable uses) to the Springfield sewer system. Clean stormwater runoff from impervious surfaces (roofs and paved roadways) 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 the MassDEP Stormwater Management Guidelines, rev. January, 2008 (see Appendix D).

The boiler is designed to operate 24/7, but the wood handling system will operate no more than 16 hours per day and trucks will not be received more than 6 days per week, 12 hours per day. Most deliveries will occur from 7AM to 5 PM. A traffic study has been completed (Appendix E) and indicates the site has good access to Route 20 and Route 291 adjacent to the site, and can also use an alternative route via Cadwell Drive to the north to access Route 291 via Route 141. Improvements will be made to the existing site entrance.

Noise and visual impacts will be minimized by the site layout – the base elevation of the site is almost 20 feet below the grade of Cadwell Drive and the outdoor operations (wood handling, sizing, front end loaders) are located in the western part of the site, screened by the elevation change and the boiler building from neighbors to the east. The stack is also located in the center of the site. The stack will be visible from some vantage points around the site but is compatible with the viewshed which includes commercial and industrial structures such as electric transmission towers, communication towers, and commercial signage. The use of an air cooled condenser eliminates visible steam plumes that would occur in cooler months. Noise will also be mitigated by use of acoustic treatment as needed to limit noise increases below thresholds defined by MassDEP and the City of Springfield Ordinance. (see Appendix F for noise study, and Appendix G for visual study).

Please also see Appendix C, Mitigation.

**LAND SECTION – all proponents must fill out this section**

**I. Thresholds / Permits**

A. Does the project meet or exceed any review thresholds related to **land** (see 301 CMR 11.03(1) \_\_\_  
 \_ Yes X No; if yes, specify each threshold:

**II. Impacts and Permits**

A. Describe, in acres, the current and proposed character of the project site, as follows:  
 Project site footprint:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Footprint of buildings	<u>0.5</u>	<u>+1.3</u>	<u>1.8</u>
Roadways, parking, and other paved areas	<u>0.3</u>	<u>+ 2.0</u>	<u>2.3</u>
Other Altered Areas (non-impervious landscaping, etc.)	<u>9.9</u>	<u>-2.8</u>	<u>7.1</u>
Undeveloped Areas	<u>2.5</u>	<u>-1.5</u>	<u>1.0</u>