

**Environment and Natural Resources Trust Fund  
2011-2012 Request for Proposals (RFP)**

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**LCCMR ID: 173-F3+4**

**Project Title:** Midway Organic Power Project

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**Category:** F3+4. Renewable Energy

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**Total Project Budget:** \$ \$5,000,000

**Proposed Project Time Period for the Funding Requested:** 1 yr, July 2011 - June 2012

**Other Non-State Funds:** \$ 0

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**Summary:**

An anaerobic digestion/electric generation facility will be constructed in an industrial area of Saint Paul to process 50,000 tons/year of organic waste and generate 11.9 million kWh/year.

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**Name:** Peter Klein

**Sponsoring Organization:** Port Authority of the City of Saint Paul

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**Location**

**Region:** Metro

**Ecological Section:** Minnesota and NE Iowa Morainal (222M)

**County Name:** Ramsey

**City / Township:** Saint Paul

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<input type="checkbox"/>	Funding Priorities	<input type="checkbox"/>	Multiple Benefits	<input type="checkbox"/>	Outcomes	<input type="checkbox"/>	Knowledge Base				
<input type="checkbox"/>	Extent of Impact	<input type="checkbox"/>	Innovation	<input type="checkbox"/>	Scientific/Tech Basis	<input type="checkbox"/>	Urgency				
<input type="checkbox"/>	Capacity	<input type="checkbox"/>	Readiness	<input type="checkbox"/>	Leverage	<input type="checkbox"/>	Employment	<input type="checkbox"/>	TOTAL	<input type="checkbox"/>	%

# 2011-2012 MAIN PROPOSAL

**PROJECT TITLE:** Midway Organic Power Project

## I. PROJECT STATEMENT

### **Why this project needs to be done:**

Experts estimate that 389,000 tons of “readily available” organic waste (not including yard waste) are generated annually in the Twin Cities metropolitan area. Organic waste burns poorly in garbage burners, and organic waste releases methane in landfills. Separate processing of organic waste is necessary to achieve State and local solid waste management goals. Composting and feeding organic waste to livestock are partial solutions, but these options fail to capture the energy value of organic waste. Delivering readily available organic waste to a central anaerobic digestion/electric generation facility is the most economical and environmentally beneficial large-scale solution.

### **Overall goals of the project:**

1. Reduce the amount of solid waste landfilled or burned; increase overall recycling rates.
2. Reduce emissions of greenhouse gases and pollutants.
3. Implement a “clean-energy” technology.
4. Produce and deliver reliable baseload power generated entirely with renewable fuel.
5. Demonstrate an expandable and replicable model for organic waste management that is environmentally beneficial and economically viable.

### **Direct outcomes:**

1. Organic waste processing: 50,000 tons/year
2. Renewable energy production: 1700 kilowatts; 11.9 million kilowatt-hours/year
3. Greenhouse-gas reductions: 80,000 tons/year of carbon dioxide-equivalents (comparable to eliminating the emissions of 14,000 motor vehicles)

### **How the project will achieve these goals:**

An anaerobic digestion/electric generation (1700 kW) facility will be constructed on a property in the vicinity of Highway 280 and Interstate 94 in St. Paul. Ideal sites are available in this industrial area for an organic waste processing facility to serve the entire metropolitan area. Available properties already have infrastructure and usable buildings, and they are large enough to accommodate future expansion. Because this is a central location with excellent transportation access, organic waste collectors will deliver organic waste directly to the facility instead of a transfer station. This will minimize the cost of organic waste handling.

The total capital budget for this anaerobic digestion/electric generation facility will be \$28.0 million (\$25.0 for engineering, procurement and construction, and \$3.0 million for other development expenses), which the Port Authority of Saint Paul will finance. A taxable Project Business Entity will own the project, thereby qualifying the project for a 30% federal investment tax credit worth \$7.5 million (under IRC Section 45). The remainder of the capital budget will be financed with a tax-exempt facility bond (under IRC Section 142). With a \$5.0 million LCCMR grant, projected annual revenues (tipping fees plus power sales) will equal annual costs (operating costs plus debt service).

Initially, this facility will receive 50,000 tons/year of organic waste from local governments and private waste haulers. Anaerobic digestion will yield about 150,000 MMBtu of biogas annually.

The biogas will be fired in two generators (1100 kW and 600 kW) to produce 11.9 million kWh of electricity, which will be sold to Xcel Energy.

In the future, this facility could be expanded to handle more organic waste, and the additional biogas production could be used to generate electricity or replace fossil fuels for thermal energy needs in nearby industrial plants. Such expansions will be economical without government grants or operating subsidies because infrastructure and operational processes will already be in place.

## II. DESCRIPTION OF PROJECT ACTIVITIES

All \$3 million of pre-construction development activities for the Midway Organic Power Project will be completed before the LCCMR grant period and paid with funds currently controlled by the Port Authority. Among these activities are: obtaining site control; engineering and design; permitting; conducting bids; negotiating and executing contracts (for construction, operations, waste deliveries, and electric power sales); establishing permanent project ownership; and all tasks necessary for financing (due diligence, underwriting, documents production, etc.). Financing will be completed on or shortly after July 1, 2011. No costs associated with pre-construction development activities will be charged to the LCCMR grant.

**Activity 1:** Construction of the Midway Organic Power Project      **Budget:** \$5,000,000

The only activity of this proposal is the construction of the anaerobic digestion/electric generation facility. The amount of an Engineering-Procurement-Construction (EPC) contract for this project will be approximately \$25.0 million, and \$5.0 million of this contract amount will be charged to the LCCMR grant. Site preparation and construction will begin as soon as possible after July 1, 2011. Construction and commissioning will be completed before June 30, 2012.

Outcome	Completion Date
1. Site preparation, structure construction and equipment installation	Before June 30, 2012

## III. PROJECT STRATEGY

### A. Project Team/Partners

1. Port Authority of Saint Paul. Role: Finance and develop project.
2. Project Business Entity. Role: Own and operate facility.
3. Counties of Hennepin, Ramsey and Washington; City of Minneapolis. Role: Supply organic waste.
4. Xcel Energy. Role: Purchase electric power.

The Port Authority will be the only project partner to receive dollars from the Environment and Natural Resources Trust Fund.

### B. Timeline Requirements

All construction work will be completed between July 1, 2011 and June 30, 2012.

### C. Long-Term Strategy and Future Funding Needs

This proposal is not for a component of a larger or longer-term project that will require additional investment over time, except that the proposed facility could be expanded in the future (without capital grants or operating subsidies) based on demand for additional processing capacity.

## 2011-2012 Detailed Project Budget

### IV. TOTAL TRUST FUND REQUEST BUDGET: One year (July 2011 to June 2012)

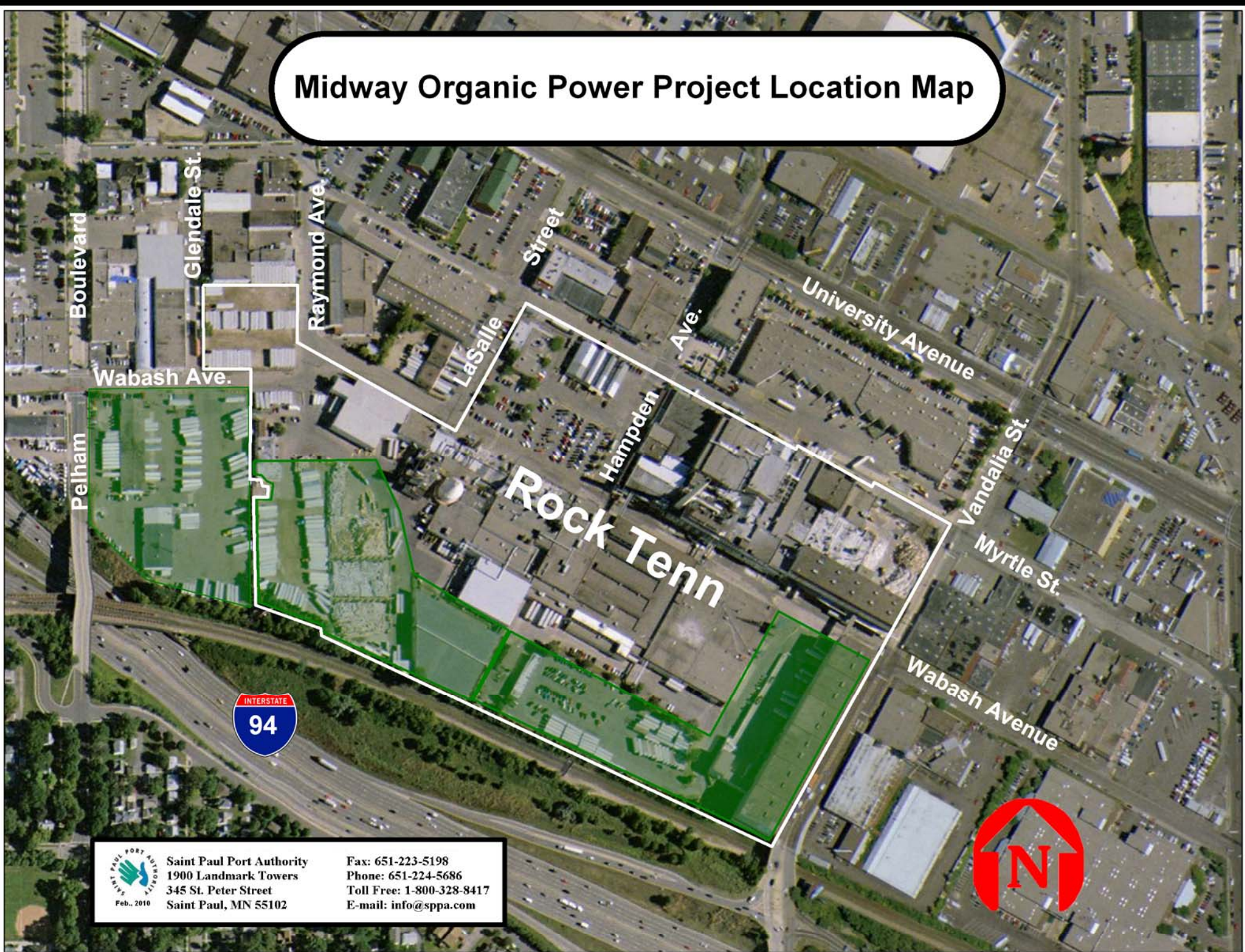
<u>BUDGET ITEM</u>	<u>AMOUNT</u>
<b>Personnel:</b>	N/A
<b>Contract:</b> Engineering-Procurement-Construction (EPC) contract with an engineering/construction contractor for the design and construction of the anaerobic digestion/electric generation facility.	\$5,000,000
<b>Equipment/Tools/Supplies:</b>	N/A
<b>Acquisition (Fee Title or Permanent Easements):</b>	N/A
<b>Travel:</b>	N/A
<b>Additional Budget Items:</b>	N/A
<b>TOTAL ENVIRONMENT &amp; NATURAL RESOURCES TRUST FUND \$ REQUEST</b>	<b>\$5,000,000</b>

### V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
<b>Other Non-State \$ Being Applied to Project During Project Period:</b>		
Federal investment tax credit under IRC Section 45	\$ 7,500,000	<i>Pending</i>
Tax-exempt facility bonds under IRC Section 142	\$12,500,000	<i>Pending</i>
<b>Other State \$ Being Applied to Project During Project Period:</b>	N/A	
<b>In-kind Services During Project Period:</b>	N/A	
<b>Remaining \$ from Current ENRTF Appropriation (if applicable):</b>	N/A	
<b>Funding History:</b>	N/A	



# Midway Organic Power Project Location Map



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Feb., 2010

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## **Project Manager Qualifications:**

Peter Klein has issued over \$650 million of bonds to finance projects for the expansion of private businesses, not-for-profits and public infrastructure during his time at the Port Authority. The projects include the expansion of the downtown district energy system, the Regions and St. Joseph Hospital's expansions, and the new headquarters for the Wilder Foundation, Minnesota Public Radio, Second Harvest, and Memorial Blood Centers. These projects have created over 10,000 jobs, redeveloped hundreds of acres of polluted properties and generated \$30 million of new real estate taxes. He successfully led the award winning Rock-Tenn community advisory process to develop renewable fuel projects throughout the state. He has successfully lobbied the State Legislature for \$5 million to create a revolving loan fund for businesses to implement energy conservation projects and save over 1 trillion Btus of energy every year. He also manages a large district energy system that serves residential, commercial and industrial customers.

## **Organization Description:**

Today's Saint Paul Port Authority is a self-funded, community based organization that offers unique transactional expertise in the areas of energy conservation, environmental remediation and Brownfield redevelopment, business expansion financing, and workforce development. We are truly a multifaceted development organization that works with a variety of partners and resources to help businesses conserve energy to make them more competitive, to clean up dirty land, and to use imaginative mechanisms to attract – or retain – businesses that will create competitive-paying jobs.

In addition to our specific expertise, we pride ourselves on the breadth and depth of our experience in virtually all areas related to economic development. With a professional staff of 20, we have the ability to help our customers in nearly all matters to business growth. Creativity, thoroughness and finding the right answer have always been hallmarks of our work, but we are also very practical. We listen carefully to our customers, make sure we thoroughly understand their needs and expectations, and work within their timetables and budgets. We know that the efficient application of our skills to accomplish our customers' goals is the smartest way to achieve an end result that is acceptable to the customer.

The Port Authority affects the environment in a very personal way. It has since it was organized in 1932. The air we breathe, the water we drink, and the soil beneath our feet is improved by the Port's work. We begin the job cycle by acquiring sites considered too risky to develop because they are polluted and then clean them up to Minnesota Pollution Control Agency standards with a smorgasbord of federal, state and city loans and grants. We then sell them for as little as \$1 to businesses that agree to add Saint Paul residents to their workforces and develop their property to specific development and design standards. Today we have 19 fully developed business centers, carved from 150 acres of polluted and abandoned inner-city land. The result is nearly \$170 million in private real estate investment in the neighborhoods that ring downtown. Over the past 15 years, we helped create or retain about 30,000 jobs in Saint Paul and the remainder of the East Metro through our various workforce and redevelopment programs.

The Port Authority has over 30 years of experience operating a district energy system that provides the energy needs to over 3 million square feet of residential, commercial, and industrial space. The Energy Park Utility Company was developed by the Port Authority as a system to provide efficient energy and continues to do so, reducing our use of fossil fuels and their associated emissions.

On the energy conservation front, we recently developed a program to assist large energy users implementing off-the-shelf energy conservation improvements. Companies that enroll in our Trillion BTU program will not have to use their own resources to make the energy conservation improvements but will realize half or more of the net financial benefits from those improvements. The program is a natural extension of the kind of work the Port Authority has been doing for nearly 80 years.