PMC-EF2a

(2.04.02)

# U.S. DEPARTMENT OF ENERGY
# EERE PROJECT MANAGEMENT CENTER
# NEPA DETERMINATION

**RECIPIENT:** IL Department of Commerce & Economic Opportunity **STATE:** IL

**PROJECT TITLE:** Sterling Community Unit School District 5; SPS CMS and Washington geothermal

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE-FOA-0000052 | EE0000119 | GFO-10-457 | EE119 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**

Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The Illinois Dept. of Commerce and Economic Opportunity will provide $363,000 of Recovery Act funds to the Sterling Community Unit School District 5 to cover the costs associated with the ongoing installation of a ground source heat pump (GSHP) system at the Challand Middle School and the proposed installation of a GSHP system at the Washington Elementary School.

DOE performed a Challand Middle School site visit on June 15, 2010 to inspect the project and to determine whether any significant environmental impacts occurred during project construction. The installation of the GSHP at the Challand Middle School is underway. Drilling of the well field is almost complete and was observed on the DOE site visit. Installation of the interior components of the GSHP system is underway. Project plans are to restore the well field to a grass play area upon completion of the system installation.

The new GSHP system at Challand Middle School is a vertical, closed loop system and will have a heating and cooling capacity of 246-tons. The system uses 120 boreholes drilled to a depth of 300 feet. The drilling is being performed by a drilling company licensed to work in the state of Illinois. The well field contractor is required to follow the IGSHP Association guidelines. All boreholes will be grouted with a thermally enhanced Cetco grout that is designed to withstand cracking from the changes in temperature between the ground and the heat exchange pipe. This ensures that the area around the borehole is sealed to keep any surface runoff from contaminating ground water. The system uses high density polyethylene pipe that is heat fused at the joints which greatly minimizes the risk of leaks in the system. The system will use a non-toxic refrigerant that is a mixture of propylene glycol and potable water. The well field is being drilled on what was a large open grass field that was used as a play area between the Challand Middle School and the Jefferson Elementary School. (Note: Jefferson Elementary School had a GSHP system installed several years ago under separate funding.)

No specific permits were required other than standard local building permits. No waste is being generated as all cuttings from drilling are being re-used on site. The site location for the geothermal well field was formerly a grass lawn to the east of the existing school building. The area surrounding the site location is all residential, with the Jefferson Elementary School sharing the same property, immediately east of the Challand Middle School. There were no impacts to threatened and endangered species. There are no wetlands, floodplains or coastal zones in proximity to the proposed site location.

DOE performed a Washington Elementary School site visit on June 15, 2010 to inspect the project site and to assess the potential for environmental impact. Installation of the GSHP system at Washington Elementary has not started. The proposed GSHP system is a vertical, closed loop system with a heating and cooling capacity of 73-tons. The system will require 60 boreholes drilled to a depth of 300 feet. The drilling is to be performed by an Illinois-licensed

drilling company who is required to follow the IGSHP Association guidelines. All boreholes will be grouted with a thermally enhanced Cetco grout that is designed to withstand cracking from the changes in temperature between the ground and the heat exchange pipe. The system will use a high density polyethylene pipe that is heat fused at the joints to minimize the risk of leaks in the system and will use a non-toxic refrigerant that is a mixture of propylene glycol and potable water. The well field is to be drilled on what is now an open grass field that is used as a play area. No specific permits are required other than standard local building permits. No wastes are anticipated as all cuttings from drilling will be re-used on site. The area surrounding the site location is all residential. No impact to threatened and endangered species is expected. There are no wetlands, floodplains or coastal zones in proximity to the proposed site location.

After a thorough review of the submitted information and a site visit to both schools, it has been determined that the projects will not have a significant impact to human health and/or environment. Based on the information obtained, the work outlined is consistent with activities identified in Categorical Exclusion B5.1.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

According to the project officer, funding for this project is $363,000. Absent a significant change in the scope of this effort, a change in funding will not affect my determination.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/25/10

NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.

☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____

Field Office Manager

PMC-EF2a
(2.06.02)

# U.S. DEPARTMENT OF ENERGY
## EERE PROJECT MANAGEMENT CENTER
## NEPA DETERMINATION

**RECIPIENT:** IL Department of Commerce & Economic Opportunity **STATE:** IL

**PROJECT TITLE:** Public Building Commission of Peoria; Geo-Exchange System for New Harrison Birth through 8th Grade School.

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE-FOA-0000052 | EE0000119 | GFO-10-454 | EE119 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**

Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The Illinois Department of Commerce and Economic Opportunity will provide $211,000 in Recovery Act funds to the Public Building Commission of Peoria to install a 211-ton, vertical closed-loop ground source heat pump (GSHP) system as part of the current construction of the new 109,000 square-foot single-story Harrison Birth through 8th Grade Community Learning Center located at 2702 W. Krause, Peoria, IL. The Learning Center is in the final stages of construction and is expected to be complete by the beginning of the fall 2010 semester. Installation of the GSHP system is complete.

DOE performed a site visit on June 16, 2010 to inspect the project and to determine whether any significant environmental impacts occurred during project construction. The building is designed for four separate learning villages surrounding a central core. Construction of the building is complete and the interior spaces are mostly complete. The outside areas need to be landscaped.

The geothermal system is used to provide heating and cooling of the entire school except for the gymnasium, the multi-purpose room, and the kitchen. The geothermal system design has the capability of incorporating a cooling tower in the event increased cooling capacity is required for future operations. A boiler system will supplement the geothermal system to ensure occupant comfort in the school during seasonal extremes and provide thermal relief for the well fields.

The well field is divided into four zones (corresponding to the four learning villages), located in a total disturbed area of approximately 1 acre. The wells for the GSHP system consist of 118 bore holes each approximately 250 feet deep. The geothermal wells feed 66 geothermal heat pumps with a total cooling load of 192.8 tons. The school site was originally a subsidized housing development and derelict land, which was removed for construction of the new school. Thus, drilling and installation of the well field has occurred on previously disturbed land. The surrounding area is a highly developed, urban area. The project is unlikely to have an adverse effect on threatened and endangered species.

Installation of the geothermal wells was completed by Kickapoo Drilling Company. The Company is licensed with the Illinois Department of Health, certified with the National Ground Water Association, and accredited with the International Ground Source Heat Pump Association. The boreholes were grouted in a thermally enhanced bentonite grout that is designed to withstand cracking from the changes in temperature between the ground and the heat exchange pipe. This ensures that the area around the borehole is sealed to keep any surface runoff from contaminating ground water. The system employs high density polyethylene pipe that is heat fused at the joints to minimize the risk of leaks in the system. The system uses potable water and propylene glycol as the heat exchange fluid.

An erosion control plan is in place for the entire construction site to ensure that mitigation and best management practices are implemented during construction. The main geothermal well fields will be seeded for grass, and will be located under a soccer field. Another well field is located under what will be the employee parking lot.

The project site is located in the City of Peoria, which resides atop a sand and gravel aquifer. The project will not impact the City's water supply as the City draws its water through the Illinois American Water Company per requirements of the Illinois Environmental Protection Agency. Likewise, the City has an ordinance prohibiting private groundwater wells for use as a potable water supply.

Geothermal wells are considered Class V Underground Injection wells and are subject to the criteria and standards applicable to Class V wells under Subpart F of 35 Illinois Administrative Code Part 730, which requires a permit to install and operate the wells. Therefore, a UIC permit was obtained from the Illinois Environmental Protection Agency, in accordance with 35 Illinois Administrative Code Part 705.

After a thorough review of the submitted information and a post-construction assessment of project site, it has been determined that the project has not had a significant impact to human health and/or environment. Based on the information obtained, the work outlined is consistent with activities identified in Categorical Exclusion B5.1.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

According to the project officer, funding for this project is $211,000. As the work sponsored by DOE Recovery Act funds is nearly complete (absent landscaping), payment based on submitted invoices for the work completed may be warranted.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/25/10

NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.

☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____

Field Office Manager

PMC-EF2a

(2.04.02)

# U.S. DEPARTMENT OF ENERGY
## EERE PROJECT MANAGEMENT CENTER
## NEPA DETERMINATION

**RECIPIENT:** IL Department of Commerce & Economic Opportunity **STATE:** IL

**PROJECT TITLE:** Public Building Commission of Peoria; Geo-Exchange System for New Glen Oak School.

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE-FOA-0000052 | EE0000119 | GFO-10-459 | EE119 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**

Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The Illinois Dept. of Commerce and Economic Opportunity will provide $275,000 in Recovery Act funds to Peoria Public Schools to cover the costs associated with the ongoing installation of a ground source heat pump (GSHP) system at the New Glen Oak Birth through 8th Grade Learning Center in Peoria, Illinois. The project site is located at 809 E. Frye Ave., Peoria, IL 61603.

DOE performed a site visit on June 16, 2010 to inspect the project and to determine whether any significant environmental impacts occurred during project construction. The New Glen Oak Birth through 8th Grade Learning Center is in the final stages of construction and is expected to be complete by the beginning of the fall 2010 semester. Installation of the GSHP system, well field, and the interior components of the GSHP system are complete. Final landscaping of the affected grounds is yet to be completed.

The new ground source heat pump system is a vertical, closed loop system and has a heating and cooling capacity of 275 tons. The system required 110 boreholes drilled to a depth of 475 feet. The drilling was performed by an Illinois-licensed drilling company who was required to follow the IGSHP Association guidelines. The boreholes were grouted with a thermally enhanced bentonite grout designed to withstand cracking from the changes in temperature between the ground and the heat exchange pipe. The system uses high density polyethylene pipe that is heat fused at the joints to minimize the risk of leaks in the system and a non-toxic refrigerant that is a mixture of propylene glycol and potable water. No specific permits were required other than standard local building permits. No waste was generated as all cuttings from drilling were re-used on site.

The site location for the geothermal well field is part of the 4-city-block property acquired for the new school. The property contains the old Glen Oak School, which will be demolished under current plans. Plans for the old Glen Oak School building are independent of the ARRA-funded GSHP project. The rest of the property formerly contained single-family dwellings that were acquired and demolished to make space for the new school. This acquisition and demolishing of the homes happened before the GSHP project was implemented and is independent of the Recovery Act-funded GSHP project. The area surrounding the site location is residential. In view of the location, no impacts to threatened and endangered species was likely. There are no wetlands, floodplains or coastal zones in proximity to the proposed site location.

After a thorough review of the submitted information and a site visit, it has been determined that the GSHP project has not had a significant impact to human health and/or environment. Based on the information obtained, the work conducted is consistent with activities identified in Categorical Exclusion B5.1.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

According to the project officer, funding for this project is $275,000. As the work is complete and the State is paying in arrears, DOE funding based on invoices may be warranted.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/25/10
NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____
Field Office Manager

PMC-EF2a

(2.04.02)

# U.S. DEPARTMENT OF ENERGY
# EERE PROJECT MANAGEMENT CENTER
# NEPA DETERMINATION

**RECIPIENT:** Illinois Department of Commerce & Economic Opportunity **STATE:** IL

**PROJECT TITLE :** Peoria Public Schools District 150; Geo-Exchange System for Renovated Thomas Jefferson K through 6th Grade School.

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE-FOA-0000052 | EE0000119 | GFO-10-456 | EE119 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**
Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The Illinois Dept. of Commerce and Economic Opportunity will provide $150,000 of Recovery Act fund to Peoria Public Schools to cover the costs associated with the ongoing installation of a ground source heat pump (GSHP) system at the Thomas Jefferson Kindergarten through 6th grade community learning center. The learning center is located at 918 W. Florence St., Peoria, IL 61604.

The Thomas Jefferson Kindergarten through 6th grade community learning center is in the final stages of renovation following a fire in the building that occurred in 2008. The school renovation is expected to be complete by the beginning of the fall 2010 semester. Installation of the GSHP system and interior components is underway. The well field is almost complete and will be restored to a grass play area. DOE performed a site visit on June 16, 2010 to inspect the project and to determine whether significant environmental impacts occurred during project construction.

The new ground source heat pump system is a vertical, closed loop system with a heating and cooling capacity of 210 tons. The system required 130 boreholes drilled to a depth of 200 feet. The drilling was performed by an Illinois-licensed drilling company who was required to follow the IGSHP Association guidelines. All boreholes were grouted with a thermally enhanced bentonite grout designed to withstand cracking from the changes in temperature between the ground and the heat exchange pipe. The system uses a high density polyethylene pipe that is heat fused at the joints to minimize the risk of leaks and will employ a non-toxic refrigerant that is a mixture of propylene glycol and potable water. No specific permits were required other than standard local building permits. No waste was generated as all cuttings from drilling were re-used on site. The site location for the geothermal well field was formerly a grass lawn to the east of the existing school building. The area surrounding the site location is all residential and light commercial in use. Given the site location, no impact to threatened and endangered species was likely. There are no wetlands, floodplains or coastal zones in proximity to the proposed site location.

After a thorough review of the submitted information and a site visit, it has been determined that the project has not had a significant impact to human health and/or environment. Based on the information provided, the work outlined is consistent with activities identified in Categorical Exclusion B5.1.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

According to the project officer, funding for this project is $150,000. As work on this project is nearing completion and the State will pay for the work in arrears, DOE funding of the project based on submitted invoices may be warranted.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/25/10
NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.

☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____
Field Office Manager

PMC-EF2a

(2.04.02)

# U.S. DEPARTMENT OF ENERGY
## EERE PROJECT MANAGEMENT CENTER
## NEPA DETERMINATION

**RECIPIENT:** Moraine Valley Community College **STATE:** IL

**PROJECT TITLE:** Southwest Education Center

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| | EE0000119 | GFO-10-453 | 0 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**

Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The State of Illinois will provide $116,00 in Recover Act funds to Moraine Valley Community College to help cover the cost of a ground source heat pump (GSHP) system that has been installed at the new Southwest Education Center. The project is located at 17900 94th Avenue, Tinley Park, IL 60477.

The Moraine Valley Community College project is in the final stages of construction and is expected to be complete by October 2010. The interior of the building is being completed and the outside areas need to be landscaped. The parking lots have not yet been paved. The building was designed to meet LEED Gold standards and in addition to the GSHP, will incorporate a green roof and other energy saving features.

DOE performed a site visit on June 15, 2010 to inspect the project and to determine whether any significant environmental impacts occurred during project construction. The ground source heat pump system is a 116 ton, vertical closed loop system. The system has 45 boreholes over 18,000 square feet drilled to a depth of 320 feet. The well field was completed in early 2010 using a licensed (Licensed by the Department of Health) and certified (IGSHPA) well driller. The recipient required the installing contractor to perform all work in accordance with IGSHPA design and installation standards, installation guide, grouting procedure for GSHP systems, and Grouting for vertical Geothermal Heat Pump Systems. The project also required that the work be performed in accordance with the IGSHPA installation guide and piping manufacturer's instructions for polyethylene pipe fusion techniques. The recipient required the installing contractor to follow and confirm to all IGSHPA, US-EPA, Illinois Water Well Construction Code 415 ILCS 3 and the National Ground Water Association manual (NGWA) rules, regulations and guidelines. All boreholes have been grouted with GEOPRO TG LITE 1.0 with the top finished with Baroid Benseal 20% solids plug designed to withstand cracking from the changes in temperature between the ground and the heat exchange pipe. The grouting of the wells was required to confirm to EPRI TR-109169 to ensure that the area around the borehole is sealed to keep any surface runoff from contaminating ground water. The system uses high density polyethylene 1 1/4" DR-9 pipe that is heat fused at the joints to minimize the risk of leaks in the system and a non-toxic refrigerant that is a 20% mixture of propylene glycol and potable water. The following permits were obtained: Village of Tinley Park Illinois - Building Permit; Cook County Highway Department Access Permit; Illinois EPA Watermain Permit; Illinois EPA Sanitary Permit; and Metropolitan Water Reclamation District (MWRD) Sanitary and Stormwater Permit.

LEED-NC (New Construction) standards for erosion and sedimentation control were followed during the GSHP installation, including prevention of stormwater runoff, prevention of sedimentation of storm sewer or receiving streams, prevention of wind erosion and air pollution with dust and particulate matter. The area of the GSHP system will be re-vegetated using sod and perennial plant groundcover.

The recipient required that all drilling waste and water be disposed of in accordance to City of Tinley Park, State requirements, and Federal laws. The collection of waste materials is performed daily and managed by construction manager. The removal of waste material is being performed by an authorized waste company.

A detailed area hydrology investigation was completed as part of the MWRD permitting process. There were no sole-source aquifers or potential drinking water sources identified on the project site. The wells were drilled to a depth of 320 feet at the request of MWRD and well above any subsurface aquifers.

Prior to the construction of the Southwest Education Center, the area was actively farmed for growing corn and soy beans. The land was cleared specifically for the construction of the Southwest Education Center. DOE has determined that clearing the area for construction of the Education Center and installation of the GSHP are not connected actions. DOE has also determined that the area impacted by the project was not likely to have an adverse affect to threatened and endangered species. Consultation with Illinois Historic Preservations Society was conducted in 2007, which determined that there was no impact on cultural resources from the installation of the ground source heat pump at this location. DOE's analysis of the National Wetland Inventory on the EPA's NEPAssist indicates that there are no floodplains or coastal zones in proximity to the proposed site location. The proposed site location is 0.35 miles from the nearest wetland providing an ample buffer against any adverse effects.

After a thorough review of the submitted information and a post-construction assessment of project impacts, it has been determined that the project has not had a significant impact to human health and/or environment. Based on the information obtained, the work outlined is consistent with activities identified in Categorical Exclusion B5.1.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

According to the project officer, funding for this project is $116,000. Given that work on this project is about complete and the State will be paying in arrears, DOE funding based on submitted invoices may be warranted.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/25/10

NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.

☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____

Field Office Manager

PMC-EF2a
(2.04.02)

# U.S. DEPARTMENT OF ENERGY
## EERE PROJECT MANAGEMENT CENTER
## NEPA DETERMINATION

**RECIPIENT:** IL Department of Commerce & Economic Opportunity **STATE:** IL

**PROJECT TITLE:** Le Roy Community Unit School Distrit #2; Le Roy Elementary School Geo Thermal System

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE-FOA-0000052 | EE0000119 | GFO-10-461 | EE119 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**
Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The Illinois Dept. of Commerce and Economic Opportunity will provide $125,000 in Recovery Act funds to LeRoy Elementary School to cover the costs associated with the installation of a ground source heat pump (GSHP) system. The school and project site is located at 805 N. Barnett Street, LeRoy, IL 61752.

Installation of the GSHP system was completed by the beginning of the fall 2009 semester. DOE performed a site visit on June 16, 2010 to inspect the project and to determine whether any significant environmental impacts occurred during project construction. The GSHP system is a vertical, closed loop system with a heating and cooling capacity of 149 tons. The system required 74 boreholes drilled to a depth of 300 feet. The drilling was performed by an Illinois-licensed company and the field contractor was required to follow the IGSHP Association guidelines. All boreholes were grouted with a thermally enhanced bentonite grout designed to withstand cracking from the changes in temperature between the ground and the heat exchange pipe. The system uses high density polyethylene pipe that is heat fused at the joints to minimize the risk of leaks and a non-toxic refrigerant that is a mixture of propylene glycol and potable water. A construction permit was issued by the State of Illinois State Board of Education. No waste was generated as all cuttings from drilling were re-used on site.

The site location for the geothermal well field was a grass play area to the east of the school building. Following completion of the well field, the area was restored to its original use. The area surrounding the site is residential to the south and west and agricultural cropland to the north and east. Based on the surrounding area, no impact to threatened and endangered species was likely. There are no wetlands, floodplains or coastal zones in proximity to the proposed site location.

After a thorough review of the submitted information and a site visit, it has been determined that the GSHP project has not had a significant impact to human health and/or environment. Based on the information obtained, the work outlined is consistent with activities identified in Categorical Exclusion B5.1.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

According to the project officer, funding for this project is $125,000. As the work is complete and the State is paying in arrears, DOE funding based on submitted invoices may be warranted.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/25/10

NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.

☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____

Field Office Manager

PMC-EF2a
(2.06.02)

# U.S. DEPARTMENT OF ENERGY
## EERE PROJECT MANAGEMENT CENTER
## NEPA DETERMINATION

**RECIPIENT:** Illinois Department of Commerce & Economic Opportunity **STATE:** IL

**PROJECT TITLE:** Prairieview Ogden CCSD 197; Prairieview Ogden CCSD Geothermal Project

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE-FOA-0000052 | EE0000119 | GFO-10-462 | EE119 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**
Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The Illinois Dept. of Commerce and Economic Opportunity will provide $53,000 in Recovery Act funds to Prairieview-Ogden CCSD #197 to cover the costs associated with the installation of a ground source heat pump (GSHP) system at its South Elementary School. The school and project site is located at 304 N. Market, Ogden, IL.

Installation of the GSHP system was completed by the beginning of the fall 2009 semester. DOE performed a site visit on June 17, 2010 to inspect the project and to determine whether any significant environmental impacts occurred during project construction.

The GSHP system is a vertical, closed loop system with a heating and cooling capacity of 53 tons. The system required 48 boreholes drilled to a depth of 200 feet. The drilling was performed by an Illinois-licensed drilling company and the field contractor was required to follow the IGSHP Association guidelines. The boreholes were grouted with a thermally enhanced bentonite grout designed to withstand cracking from the changes in temperature between the ground and the heat exchange pipe. The system uses high density polyethylene pipe that is heat fused at the joints to minimize the risk of leaks and a non-toxic refrigerant that is a mixture of propylene glycol and potable water. No specific permits were required other than standard local building permits. No waste for disposal was generated as all cuttings from drilling were re-used on site. During construction, silt fences and other erosion control methods were used to minimize erosion.

The site location for the geothermal well field was a grass play area to the east of the school building. The concrete play area on the east of the building was trenched to gain access to the boiler room. The grass and concrete areas have been restored to their original condition. The area surrounding the site location is residential to the south and west and agricultural cropland to the north and east. Interstate 74 is located north of the school. In view of the project location, no impact to threatened and endangered species was likely. There are no wetlands, floodplains or coastal zones in proximity to the GSHP project.

After a thorough review of the submitted information and a site visit, it has been determined that the GSHP project has not had a significant impact to human health and/or environment. Based on the information obtained, the work outlined is consistent with activities identified in Categorical Exclusion B5.1.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

According to the project officer, funding for this project is $53,000. Considering that the project is complete and the State will be paying in arrears, DOE funding based on submitted invoices may be warranted.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/25/10

NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.

☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____

Field Office Manager

PMC-EF2a
(2.04.02)

# U.S. DEPARTMENT OF ENERGY
## EERE PROJECT MANAGEMENT CENTER
## NEPA DETERMINATION

**RECIPIENT:** Minnesota Department of Commerce SEP ARRA **STATE:** MN

**PROJECT TITLE :** EMERGING RENEWABLES INDUSTRIES: Silent Power Manufacturing Expansion

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| | DE-EE0000164 | GFO-09-157-003 | 0 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**
Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The State of Minnesota will provide $560,000 of Recovery Act funds to Silent Power, Inc. to partially offset the cost of tools and equipment for an expanded workforce and added equipment for expanded shipping capacity. Silent Power is located at 8175 Industrial Park Rd, Baxter MN 56425.

Silent Power manufactures inverters and battery storage devices for renewable energy installations. The company anticipates a significant increase in demand for its grid-connected PV/battery storage product – OnDemand Energy Appliance - that combines a proprietary inverter technology with renewable power input, battery storage and remote interface to provide dispatchable renewable power for utility demand response applications. To meet the anticipated demand, Silent Power will use Recovery Act funds to expand its workforce, offset a declining portion of new employee costs, and partially offset the cost of tools and equipment for the expanded workforce.

The project will take place in the company's existing manufacturing facility located in the Baxter Industrial Park. The project will not increase the footprint of the facility, involve new construction, or require new operation permits. Equipment purchases include sheet metal assemblies, cabinets, electronic assemblies and sub-assemblies, controls and batteries. The project will not significantly impact the waste-streams generated from the plant operations, which consist of routine, nonhazardous material that can be disposed in municipal solid waste landfill.

Neither the Industrial Park or the manufacturing facility currently qualify for inclusion on the Historic Register.

Based on the information provided by the State and recipient, the work outlined is consistent with activities identified in Categorically Exclusion B5.1 "Actions to Conserve Energy".

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

According to the project officer, funding for this project is $560,000. Absent a significant change in the scope of this effort, a change in funding will not affect my determination.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/28/10

NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.

☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____

Field Office Manager

PMC-EF2a

(2.04.02)

# U.S. DEPARTMENT OF ENERGY
## EERE PROJECT MANAGEMENT CENTER
## NEPA DETERMINATION

**RECIPIENT:** State of Wisconsin SEP ARRA -Wisconsin Center for Manufacturing & Productivity, Inc. **STATE:** WI

**PROJECT TITLE:** Sustainability Implementation Plan

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE FOA0000052 | DE EE0000163 | GFO-10-300-004 | 0 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**

Description:

**A9** Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.

**A11** Technical advice and planning assistance to international, national, state, and local organizations.

Rational for determination:

The State of Wisconsin will provide $875,000 of Recovery Act funding to the Wisconsin Manufacturing Extension Partnership (WMEP) for the purpose of conducting 50 intensive energy assessments of Wisconsin manufacturing businesses and to identify and provide accessible financing information for energy efficiency improvements in those facilities. The funding will be made through the State's Job Creation & Retention Through Industrial Facilities Reduction of Fossil Fuel Use. These activities will be performed under the WMEP Profitable Sustainability Initiative. At least 50 companies have so far been identified for the energy assessments.

Based on the information provided by the State, the work outline is consistent with activities identified in Categorical Exclusion A9 and A11.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Insert the following language in the award:

You are required to:
Notify the DOE project officer and NEPA Compliance Officer if any of the Recovery Act funds distributed through MWEP are to be used to support actual energy efficiency projects in any of the 50 facilities.

Note to Specialist :

According to the project officer, funding for this project is $875,000. Absent a significant change in the scope of this effort, for example, should the funds provided by MWEP lead to actual energy efficiency projects at any of the member facilities, a change in funding will not affect my determination.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/28/10
NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____
Field Office Manager

PMC-EF2a

(2.04.02)

# U.S. DEPARTMENT OF ENERGY
## EERE PROJECT MANAGEMENT CENTER
## NEPA DETERMINATION

**RECIPIENT:** State of Wisconsin SEP ARRA EE0000163-Sun Power Biodiesel, LLC **STATE:** WI

**PROJECT TITLE :** Biodiesel Production Expansion

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE FOA 0000052 | DE EE0000163 | GFO-10-479 | 0 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**

Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The State of Wisconsin will provide $800,000 in Recovery Act funds to Sun Power Biodiesel, LLC to purchase equipment and working capital that will enable the company to expand their biodiesel production capacity from 3 million gallons to 5 million gallons. The project consists of two phases, esterification and glycerolysis. Recovery Act funds will be used for purchasing a piece of glycerolysis equipment called the MGEN and for the purchase of feedstock for both esterification and glycerolysis.

Esterification implementation will enable Sun Power to process a wider variety and quality of feedstock. Additionally, it may allow for the expansion of the processing capacity to 6 million gallons. The glycerolysis implementation phase consists of purchasing and installing a MGEN, which is the actual glycerolysis system. Like Esterification, it removes the impurities in oil; however, glycerolysis uses heat to drive the reaction instead of acid. Both processes are necessary to attain higher production levels. The equipment will not require new permitting or licensing or lead to significant changes in the routine operations of the plant. Likewise, the Recovery Act project will not expand the footprint of the existing building, nor will it require significant construction or repairs of the building.

The new plant capabilities will lead to an increase in air emissions. The State, upon reviewing the information submitted, determined that the operation as proposed qualified "to be exempt from the need to obtain an air pollution control permit under ss. NR 406.04(1q) and NR 407.03(1m), Wis. Adm. Code". "The determination was based on the understanding that the proposed biodiesel operation will emit less than the reporting threshold of 6000 pounds of VOC per year and is subject only to the recordkeeping requirements of ch. NR 440, Wis. Adm. Code, New Source Performance Standards, NSPS because the design capacity will not allow the faciltiy to produce more than 1,100 tons per year of glycerin".

Waste Stream Requirements:

Prior to the expenditure of Federal funds to implement any of the above-mentioned activities, the State of Wisconsin has the affirmative responsibility to ensure or certify that it has been provided by its sub-recipients a waste management plan addressing waste generated by their proposed actions. The plan will describe the sub-recipients plan to dispose of any sanitary or hazardous waste, e.g. construction and demolition debris, old light bulbs, lead ballasts, piping, roofing materials, discarded equipment, debris, asbestos, etc. generated as a result of the proposed project. The sub-recipients must ensure that it will comply with all federal, state and local regulations for waste disposal.

NHPA Requirements:

Prior to the expenditure of Federal funds to implement any of the above activities, the State of Wisconsin has the affirmative responsibility to ensure the sub-recipient is in compliance with Sec. 106 of the National Historic

Preservation Act (NHPA), consistent with DOE's 2009 letter of delegation of authority regarding the NHPA. If applicable, the sub-recipient must contact the State Historic Preservation Officer.

Based on the information provided by the State and Recipient, it has been determined that the project is not likely to have a significant impact to human health and/or environment. The work outlined is consistent with activities identified in Categorical Exclusion B5.1 "Actions to Conserve Energy."

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

According to the project officer, funding for this project is $800,000. Absent a significant change in the scope of this effort, a change in funding will not affect my determination.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/28/10

NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.

☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____

Field Office Manager

PMC-EF2a

(2.06.02)

# U.S. DEPARTMENT OF ENERGY
## EERE PROJECT MANAGEMENT CENTER
## NEPA DETERMINATION

**RECIPIENT:** State of Wisconsin SEP ARRA EE0000163-Milwaukee Metropolitan Sewerage District **STATE:** WI

**PROJECT TITLE :** Waste to Energy

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE FOA 0000052 | DE EE0000163 | GFO-10-475 | 0 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**

Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The State of Wisconsin will provide $5,000,000 of Recovery Act funds to Milwaukee Metropolitan Sewerage District (MMSD) to install three turbine generators in the Jones Island Water Reclamation Facility. The funds will be used as working capital and for the purchase of three Recuperating Gas Turbine Generator Sets and related engineering design work. The Recovery Act funds are through the State's Job Creation & Retention Through Industrial Facilities Reduction of Fossil Fuel Use market title.

The turbine generator sets will use captured landfill gas to provide electricity for the Water Reclamation Facility. This is a two phase project with Recovery Act funds being used for Phase 2, which is estimated at $20,400,000. The Recovery Act funded portion of this project will not expand the footprint of the existing building and no construction or repairs of the building will be undertaken in the project. The recipient has applied for a Construction Air Permit with the Wisconsin DNR; they are currently operating under Permit No. 241029250-P01.

The Jones Island Water Reclamation Facility is a historical site and all materials have been submitted to the Wisconsin SHPO Office for review. The WI SEO is awaiting approval from SHPO before initiating work.

DOE is aware that the Recovery Act funding to be used in Phase 2 of the project may have connected action with the Phase 1 effort of the project. DOE is required to review potential significant impacts from the entire project as the Recovery Act funding being provided is essential to complete the project. A review of Phase 1 of the project has concluded the following:

The first phase of the proposed project will not receive Recovery Act funding, which consists of the construction of a pipeline to carry landfill gas generated at Emerald Park landfill to the Jones Island Water Reclamation Facility. The landfill is currently flaring the gas by burning it in a tower, which is causing large air emissions. The new pipeline will be approximately 13 miles long and connect to an existing 6 mile length of pipeline. Two thirds of the new pipeline will be installed using directional drilling to reduce ground disturbance and the rest will be installed through conventional trenching. The pipeline alignment and design was intended to minimize property acquisition. There was no need to acquire property for this phase of the project as most of the pipeline is in the public right of way. There are a couple of easements that are being finalized, but no zoning changes are necessary. The recipient has stated that they have not received any written comments from the public and they are not aware of any public commentary expressed to the regulatory/review agencies to date concerning Phase 1 of the proposed project. The recipient has provided a comprehensive listing and status of all permits required for Phase 1 and 2 as well as letters from local, state, and federal agencies detailing any consultation required.

After a thorough review of the information submitted for both Phase 1 and Phase 2 of the project, DOE has determined that no significant impacts to human health and/or environment are likely due to the actions involved with the proposed project. Based on the information provided, the work outlined is consistent with activities identified in Categorical Exclusion B5.1 "actions to conserve energy."

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Insert the following language in the award:

You are required to:
Provide the DOE Project Officer with documentation from the WI SHPO stating project approval, or the terms and condition by which the State may proceed with the project.

Note to Specialist :

According to the project officer, funding for this project is $5,000,000. Absent a significant change in the scope of this effort, a change in funding will not affect my determination.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/28/10

NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.

☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____

Field Office Manager

PMC-EF2a
(2.04.02)

# U.S. DEPARTMENT OF ENERGY
## EERE PROJECT MANAGEMENT CENTER
## NEPA DETERMINATION

**RECIPIENT:** The University of Oklahoma **STATE:** OK

**PROJECT TITLE :** OKLAHOMA SEP ARRA - Utility Plant 4 Combined Heat & Power System

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE-FOA-0000052 | | GFO-10-480 | 0 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**
Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

**B2.2** Installation of, or improvements to, building and equipment instrumentation (including, but not limited to, remote control panels, remote monitoring capability, alarm and surveillance systems, control systems to provide automatic shutdown, fire detection and protection systems, announcement and emergency warning systems, criticality and radiation monitors and alarms, and safeguards and security equipment).

Rational for determination:

The State of Oklahoma will provide $2,500,000 of Recovery Act funds to The Board of Regents, University of Oklahoma, to install cogeneration (i.e., combined heat and power) equipment in the University's Utility Plant No. 4, which is currently under construction. The total project cost of the power plant is estimated at $74.4-million. The University's existing emissions permit will be modified for CHP operation.

Utility Plant #4 is to be a combined heat and power (CHP) facility that will consist of two 7.5 MW (nominal) Solar Taurus 70 combustion turbine generators, each paired with a 91 MMBtu/hr Rentech heat recovery steam boiler. A standby packaged 72 MMBtu/hr steam boiler and 600 kW diesel fuel blackstart generator will also be located at the facility. The two combustion turbine generators with heat recovery boilers are projected to run at base-load to produce steam and electricity to serve the Norman campus. Operation of the turbines has been assumed continuous for 11 months (8,000 hours) of the year, with one month (arbitrarily selected as January) allowed for turbine maintenance shutdown. The heat recovery boilers feature supplemental duct firing controls to allow increased steam production during the winter months to meet campus steam demand.

Based on manufacturers information, the CHP potion of the plant is projected to have the following emissions profile:
Two Solar Taurus Turbines:
i) NOx: 0.061 lb/MMBtu
ii) CO: 0.062 lb/MMBtu
Rentech heat recovery steam generators:
i) NOx: 0.069 lb/MMBtu
ii) CO: 0.071 lb/MMBtu
Rentech 60,000 PPH saturated-steam packaged D-type water tube boiler:
i) NOx: 0.037 lb/MMBtu, natural gas
ii) CO: 0.077 lb/MMBtu, natural gas)

The estimated emissions projections are below the federal and state emission limits set for the plant. A Continuous Emissions Monitoring System (CEMS) system will be provided for turbine/HRSG emissions monitoring as required per 40 CFR 60 Subpart KKKK, which governs new turbine installations.

Construction of the plant and installation of the CHP are not viewed as connected actions for this determination. The decision to build the plant and the initation of plant's construction preceded the university's decision to install CHP capability in the plant. Installation of the CHP will not increase or otherwise impact the footprint of the current plant

design.

Based on the information provided by the State and recipient, that the projected emission levels of the to-be-installed turbines and supporting boilers are not expected to exceed the State and Federal limits imposed on the plant and that the University will obtain the necessary operation permits for the utility plant inclusive of the CHP system, the work outlined is consistent with activities identified in Categorical Exclusion B5.1 and B2.2.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

According to the project officer, funding for this project approximates $2,500,000. Absent a significant change in the scope of this effort, a change in funding will not affect my determination.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 6/28/10

NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.

☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____

Field Office Manager