

All Agency Project Request

2011 - 2013 Biennium

<u>Agency</u>	<u>Institution</u>	<u>Building No.</u>	<u>Building Name</u>
University of Wisconsin	Stevens Point	285-0K-9930	Utility - Site Electrical (above ground)

<u>Project No.</u>	12A1H	<u>Project Title</u>	STP Campus Switchgear Repl
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Project Intent

This project replaces the campus primary electrical switchgear to provide additional distribution capacity and replace equipment that has reached the end of its useful life.

Project Description

Project work includes replacing the 15 KV primary electrical service equipment located adjacent to the Heating Plant. One line-up of exposed metal clad switchgear will be replaced by one line-up of metal clad switchgear in a sheltered aisle enclosure. The line-up will include compartments for one main, and ten feeder draw-out air magnetic or vacuum circuit breakers as well as an AC power transformer/panel, a DC control power supply, and metering. A new capacitor bank will be installed if utility bill savings can be realized. An emergency electrical circuit will be extended from the Heating Plant emergency distribution system to the switchgear to provide power for maintenance in an outage. A brick screen wall will be constructed to enclose the switchgear yard.

The project will also construct approximately 1,000 LF of four 5-inch power conduits and four 4-inch signal conduits ductbank from Pit P60 south along Illinois Avenue to the entry of Parking Lot T and then west along the Moses Creek corridor to Pit P54 parallel to Reserve Street. A radial feeder from the switchgear lineup to the North Campus Chiller Plant will be extended south from the North Campus Chiller Plant to Pit P20 through an existing and a new ductbank, and then extended north back to the campus switchgear for the creation of a new central/south campus loop feeder.

Project Justification

The campus electrical switchgear was installed in 1965, when the Campus Heating Plant was constructed. During the last four years UW-System has replaced 1960s vintage switchgear at six campuses because the equipment had reached the end of its useful life. UW-Stevens Point is the only campus where switchgear equipment of this vintage still needs to be replaced. The configuration of the outdoor gear requires that operation and maintenance activities occur in all types of weather, which is a safety concern.

All buildings on the central and southern portions of campus are served by two feeder loops. With the construction of future facilities identified in the Master Plan this distribution network will not have adequate capacity to supply those facilities if a feeder cable segment were to fail. A new main campus loop circuit is needed to provide adequate redundant capacity to those campus areas. The installation of this circuit will allow the connection of a new approximate Chemistry-Biology building (~165,000 GSF) that is currently in pre-design (11G3A). This is the first of three new facilities to be constructed in the central portion of campus. It is anticipated that construction of the Chemistry-Biology building to be located on the southern portion of Parking Lot X will begin in 2014.

A/E Consultant Requirements

Consultants should have specific expertise and experience in the design and coordination of medium voltage distribution systems serving multiple buildings in a campus setting. Work includes site surveys, acquiring field data, and verifying as-built conditions to assure accurate development of design and bidding documents, and production of necessary design and bidding documents. Consultants should indicate specific projects from past experience (including size, cost, and completion date) in their letter of interest and when known, include proposed consulting partners and specialty consultants.

A/E Selection Required?

Commissioning

- Level 1
 Level 2

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Project Budget

Construction Cost:	\$2,102,400	
Haz Mats:	\$0	
Construction Total:	\$2,102,400	
Contingency: 15%	\$315,400	
A/E Design Fees: 8%	\$168,200	
DFD Mgmt Fees: 4%	\$96,700	
Equipment/Other:	\$10,300	
	\$2,693,000	

Funding Source

	<u>Total</u>
GFSB - Utilities Repair & Renovation [Z080]	\$1,588,900
PRSB - Utilities Repair & Renovation [T570]	\$1,104,100
Agency/Institution Cash []	\$0
Gifts	\$0
Grants	\$0
Building Trust Funds [BTF]	\$0
Other Funding Source	\$0
	\$2,693,000

Project Schedule

SBC Approval: 02/2012
 A/E Selection: 03/2012
 Bid Opening: 03/2013
 Construction Start: 05/2013
 Substantial Completion: 11/2013
 Project Close Out: 08/2014

Project Contact

Contact Name: Paul Hasler
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 Telephone No.: (715) 346-4275 x

Project Scope Consideration Checklist

- | | <u>Y</u> | <u>N</u> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| 1. Will the building or area impacted by the project be occupied during construction? If yes, explain how the occupants will be accommodated during construction.

<i>All project work will be coordinated through campus physical plant staff to minimize disruptions to daily operations and activities. Power outages will be scheduled for off hours. The campus community will be notified of all outages well in advance.</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Is the project an extension of another authorized project? If so, provide the project #... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Are hazardous materials involved? If yes, what materials are involved and how will they be handled? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Will the project impact the utility systems in the building and cause disruptions? If yes, to what extent? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Will the project impact the heating plant, primary electrical system, or utility capacities supplying the building? If yes, to what extent?

<i>Project upgrades the campus primary electrical system.</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Are other projects or work occurring within this project's work area? If yes, provide the project # and/or description of the other work in the project scope. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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7. Have you identified the WEPA designation of the project...Type I, Type II, or Type III?
Type III.
8. Is the facility listed on a historic register (federal or state), or is the facility listed by the Wisconsin Historical Society as a building of potential historic significance? If yes, describe here.
9. Are there any other issues affecting the cost or status of this project?
10. Will the construction work be limited to a particular season or window of opportunity? If yes, explain the limitations and provide proposed solution.
Portions of the project work is seasonal. Preferred project work schedule should be limited to late spring, summer, and/or early fall months if possible.
11. Will the project improve, decrease, or increase the function and costs of facilities operational and maintenance budget and the work load? If yes, to what extent?
Completion of this project will decrease operational maintenance costs.
12. Are there known code or health and safety concerns? If yes, identify and indicate if the correction or compliance measure was included in the budget estimate, or indicate plans for correcting the issue(s).
The new weatherproof sheltered aisle switchgear assembly will allow operation of hazardous high voltage equipment during all weather conditions.
13. Are there potential energy or water usages reduction grants, rebates, or incentives for which the project may qualify (i.e. Focus on Energy <<http://www.focusonenergy.com>> or the local utility provider)? If yes, describe here.
14. If this is an energy project, indicate and describe the simple payback on state funding sources in years and the expected energy reduction here.