University of Minnesota

Revitalization of Electric Power Engineering Education

Project Description

Building on their current electric power engineering program, the University of Minnesota (UMN) is revitalizing U.S. power engineering education by creating a consortium of a large number of universities that will share state-of-the-art laboratories in power engineering. Programs are collectively designed and shared with consortium universities who disseminate laboratories and curricula to non-member regional universities, and technical and community colleges. This method of dissemination enables flexibility in fulfilling each university's needs and facilitates information sharing with novel laboratories. The consortium is also supporting faculty development and providing new classroom materials. Establishing a foundation for graduate education and research in the areas of renewable energy such as wind, solar, storage, and energy conservation is also a part of these revitalization efforts.

Goals/Objectives

- Form a large and diverse learning/teaching community of approximately 80 universities by establishing a consortium that represents diversity in terms of geography, size, service to underrepresented groups, and mission
- Facilitate the implementation of laboratories for courses in power electronics, electric drives, and power systems
- Collectively develop and share laboratory experiments
- Support participating universities to further disseminate laboratories and curricula beyond participating universities

Benefits

- Educated workforce in energy conservation and in the areas of renewable energy such as wind, solar, and energy storage
- Increased investment in advanced laboratory equipment, faculty development, and research in academia
- Cleaner, smarter, and more reliable energy grid

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PARTNERS

Electric Power Research Institute, University of Minnesota Institute for Renewable Energy and the Environment, Schweitzer Engineering Laboratories, Electrocon International Inc, Nayak Corporation Inc, Midwest ISO, National Electric Reliability Corporation, Utility Wind Integration Group

PROJECT DURATION

7/30/2010–7/30/2013

COST

Total Project Value
$4,175,423

DOE/Non-DOE Share
$2,500,000/$1,675,423

PROJECT LOCATION

Minnesota

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