Syracuse University

Multi-Institutional Curriculum Development and Delivery to Create the New Smart Grid Workforce

Project Description

Syracuse University and collaborating partners are creating an innovative curriculum to deliver regional and distance offerings of associate, undergraduate, and graduate degrees in Smart Grid technologies. This multi-institutional, multi-disciplinary effort includes participation from academic and industry partners, and technology manufacturers. The curriculum includes a comprehensive spectrum of knowledge and skills from Smart Grid basics to the technical requirements associated with the design, security, and operation of communication and control devices. Curriculum courses include topics such as Advances in Grid Infrastructure, Smart Grid Security, Monitoring and Diagnostics, Bulk Power Transmission Systems, Wireless Networking, and Modern Power Systems. The project will be conducted at four locations in upstate New York: Buffalo, Rochester, Syracuse, and Potsdam. Courses will be delivered in the classroom, online, in cyber laboratories, and will include site visits to installations of Smart Grid components. Students will have the opportunity to gain hands-on experience by working with National Grid's Smart Technology Centre in Liverpool, New York. Plans also include the establishment of a Power Systems Laboratory at the University of Buffalo and Buffalo State College, and a Sensor and Measurement Laboratory and a Monitoring and Diagnostics Laboratory at Syracuse University.

Goals/Objectives

- Create an innovative, multi-institutional, academic-industry partnership that delivers Smart Grid curricula
- Offer associate, undergraduate, and graduate degrees, and certification in cutting-edge technologies
- Incorporate project management, public policy administration, public communications, and environmental sustainability into the curriculum
- Enhance institutional facilities at partner institutions through Smart Grid laboratory equipment
- Leverage microgrid and demonstration project research
- Redeploy displaced workers from transitional industries

Benefits

- Job retention and employee growth
- Workforce trained in technical and professional skills that can provide leadership in transforming existing power systems to a Smart Grid
- Re-train displaced workers and prepare them for careers in the high-tech electric power industry
- Active industrial participation in power energy education

Highly skilled, electric power workforce trained in cutting-edge Smart Grid technologies

CONTACTS

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PARTNERS

SUNY Buffalo
Buffalo State College
Clarkson University
University of Rochester
Onondaga Community College
National Grid

PROJECT DURATION

08/09/2010–08/09/2013

COST

Total Project Value
$3,159,080

DOE/Non-DOE Share
$2,500,000/$659,080

Project Location

New York

CID: OE0000495

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