

Perfect Power at IIT Celebrates Completion of Phase One of Five Year Project (As Seen in IIT Today)

Illinois Institute of Technology, Galvin Electricity Initiative, S&C Electric Company, and Intelligent Power Solutions, LLC gathered in Siegel Hall Friday to announce that the first phase of Perfect Power at IIT has recently been completed. The system consists of smart micro-grids featuring a high-reliability distribution system (HRDS) loop design and redundant electricity. It will allow IIT to eliminate costly outages, minimize power disturbances, moderate an ever-growing demand, and curb greenhouse gas emissions. Part of a five year project, the completion of phase one means that the first high-reliability distribution loop, serving Hermann Hall, Alumni Hall, Perlstein Hall, Wishnick Hall and Siegel Hall is complete, as is the automation of the university's north substation. The buildings included in the first phase now have automatic fault detection and distribution information that will allow for greater understanding of electricity usage. The automation of the south substation, and the installation of the high reliability distribution loops that serve other campus buildings, will be completed in the next four years of the project. The nation's first Perfect Power System, Perfect Power at IIT, is an example of how government, utilities, businesses and municipalities can collaborate in the development and implementation of advanced power systems that are required to meet rising 21st century power demands. The project, developed by IIT, is the result of an uncommon partnership among the U.S. Department of Energy (DOE), local utility Exelon/ComEd, the entrepreneurial electricity distribution developer Intelligent Power Solutions, the Chicago-based global provider of electric power systems, S&C Electric Company, and the Galvin Electricity Initiative. Perfect Power at IIT is based on a smart micro-grid, a small, local, modernized version of the electricity grid that carries bulk power across the country. These micro-grids focus on rapidly bringing the economic and environmental benefits of modern grid technology to consumers. They engage entrepreneurial innovators and investors to install the smart digital technology that allows the instantaneous, two-way, flow of electricity and real-time pricing and demand information between utilities and consumers. This is in stark contrast to today's antiquated, electromechanical-controlled bulk power grids that effectively hold consumers prisoner behind an iron curtain electricity meter. Projections indicate that the Perfect Power at IIT will pay for itself within five years after it is completed. For IIT, the Perfect Power System will generate significant savings - at least \$10 million over 10 years. Following the short payback period, the university will make money from Perfect Power through cheaper power costs, such as grid infrastructure improvements, allowing IIT to purchase electricity based on real-time prices rather than the traditional contracted average. IIT will also be able to sell electricity back to local energy markets and to employ more efficient energy conservation efforts by integrating local power generation from clean sources, like solar.