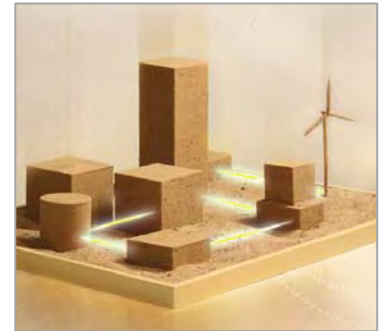


GALVIN CENTER FOR ELECTRICITY INNOVATION ILLINOIS INSTITUTE OF TECHNOLOGY



The Galvin Center for Electricity Innovation (Galvin Center) at Illinois Institute of Technology (IIT) has established IIT as a global leader in microgrids, smart grid technology, and sustainable energy. Galvin Center has become a leading advocate for the smart grid technological revolution, a pioneer in electricity delivery and infrastructure, and a sandbox for new research and innovations in the Chicago area. Galvin Center is affiliated with the Wanger Institute for Sustainable Energy Research (WISER) at IIT.



Galvin Center has secured \$40 million in funding from the government and private sectors for research and technology development in energy and sustainability. Galvin Center has grown in just three years to over 150 participating members from academia and industries worldwide and 50 PhD researchers and scholars in just three years. The major funded projects in the Galvin Center include:

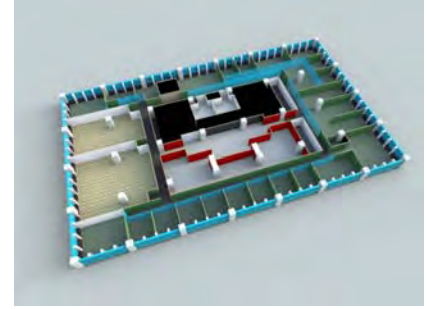
Perfect Power – In 2008, the Galvin Center leadership entered into a \$13 million partnership with the U.S. Department of Energy to build the first-ever Perfect Power microgrid – an electric system that will not fail – at IIT in Chicago. The revolutionary microgrid is equipped for smart switches for enhancing reliability, sustainable energy sources (roof-top solar panels, wind generation units, flow batteries, and charging station for electric vehicles), and smart buildings (equipped with campus and building controllers.) The IIT microgrid can be operated as a stand-alone power system in the case of grid contingencies. The Galvin Center leadership is working with entities across the world to replicate and scale the microgrid model for communities, military bases, corporate parks, sports facilities, and other universities.



IIT Wind Consortium – In 2009, the Galvin Center leadership was awarded a \$9 million grant from the U.S. Department of Energy to establish a University-Industry Consortium for wind energy research and education. The Galvin Center leadership was also awarded \$750,000 from DOE to study wind integration into the U.S. grid. The Consortium has engaged 50 companies and 8 universities in the U.S. and around the world in technological advances related to the next-generation wind energy manufacturing.



Smart Grid Workforce Education & Training Initiative – In 2010, the Galvin Center leadership initiated a \$12.6 million project, supported by the U.S. Department of Energy, the State of Illinois, and private industry, to establish a Smart Grid Workforce Education & Training Center at IIT to educate and train the nation's workforce to meet the global challenges and opportunities of the smart grid. The Galvin Center is leading a revolutionary initiative to engage over 49,000 people (including returning veterans from Iraq and Afghanistan) in smart grid-related education and training.



Global Smart Grid Technology Partnership – In 2011, the Galvin Center has led the Illinois-Korea Smart Grid R&D Collaboration, a joint international collaboration to accelerate the technological development of smart grid in Chicago. The Korean industries have awarded the Galvin Center a \$2.5 million project for the installation of phasor measurement units (PMUs) at the IIT's microgrid. This partnership is intended to stimulate new interactions among stakeholders in Chicago and Korea and bring additional manufacturing jobs to Illinois.

