

Irvine Smart Grid Demonstration Project

Southern California Edison (SCE) is working to build the electric grid of the future. This "smarter" grid will leverage digital technologies by applying them to the nation's electricity network. Our goal is to provide more efficient, more reliable, and safer electricity to our customers.

Earlier this year, the U.S. Department of Energy (DOE) selected SCE to conduct a smart grid demonstration project. SCE will be working with the University of California, Irvine (UCI) as a key participant. The project will focus in and around the University Hills community on the UCI campus and will evaluate energy reliability and efficiency technologies.

While similar projects are proceeding across the United States, SCE's demonstration will be the most comprehensive, testing smart grid elements and their ability to communicate and work together. This multi-year project, called the Irvine Smart Grid Demonstration (ISGD), will study a variety of existing and new smart grid technologies in the same location.

In addition, SCE will be constructing a demonstration center that will be open to the public. The center will provide a comprehensive overview of the ISGD project and its components and will allow visitors to learn about the evolution of the electric grid. Visitors will learn about the impact a smarter grid will have on the environment, how consumers can reduce their energy costs, and much more.

We hope you will join us as we embark on this important project that is critical to helping shape the future of the energy industry.

Project Background

The ISGD project is a joint project between the DOE and SCE, and is funded by the American Recovery and Reinvestment Act of 2009.

One of the ISGD project goals is to design Zero Net Energy (ZNE) homes. A ZNE home uses a combination of energy efficiency design features, appliances, clean distributed generation, and advanced energy management systems that result in no net purchase of energy from a local electric utility company over a one year period of time.

The project will include these energy-based technologies:

- Energy Efficiency Home Upgrades
- Advanced Home Energy Management Systems
- Smart Meters
- Smart Appliances
- Solar Panels
- Energy Storage Systems
- Electric Vehicles
- Smart Electric Distribution Circuits

Future home designs will be neutral with respect to energy usage over a fixed period of time. To accomplish these goals two key things need to occur:

- Reduce home energy consumption with the help of energy-efficient measures
- Obtain distributed renewable energy generation

Based on the project's findings, SCE and other participants hope to influence the future designs for United States electric grids, specific technical elements, as well as provide insight into energy efficiency efforts.



ISGD Project Objectives

SCE's vision for this demonstration is to deploy various smart grid technologies in an integrated framework that is expected to be more reliable, secure, economic, efficient, safe, and environmentally-friendly than those in general use today. With SCE's smart grid vision in mind, the ISGD project is designed to satisfy the following objectives:

- To demonstrate a variety of existing and new smart grid technologies within a concentrated geographic region by:
 - Determining how smart grid technologies connect, communicate, and operate with each other
 - Reducing energy costs to customers by shifting usage loads to off-peak hours
 - Optimizing the performance of the electric grid, renewable generation, and advanced energy storage that yields cost savings and reduces emissions

- To identify future workforce needs, and recommend job training for nationwide implementation of smart grid technologies
- To allow DOE to validate the scalability of demonstrated ISGD project elements into other regions of the country

Additional Project Information

If you have questions, please contact:

Tel: 877-287-2126
Please mention "Irvine Smart Grid Demonstration" or "ISGD" when you call.

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Irvine Smart Grid Demonstration Project Concept

