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## **SCHNEIDER ELECTRIC CENTER FOR INNOVATION AND TECHNOLOGY SHORTENS THE ROAD TO THE FUTURE OF HOME ENERGY MANAGEMENT**

*New System to Work with Multiple Energy Sources,  
Offers Remote Control Access of Home Appliances*

PALATINE, IL – (Sept. 9, 2004) – The Schneider Electric North American Operating Division revealed today, at a press gathering in Chicago, its progress on a new home energy management system coming to the residential market. The system manages electricity usage within the home, and can convert power from off-the-grid energy sources while also automating and integrating systems such as lighting and security.

“We’re essentially reinventing the load center,” said Gary Pollard, director of the company’s Center for Innovation and Technology (CIT), whose team of researchers and scientists is based in Raleigh, N.C and Cedar Rapids, IA. “The beauty of this new platform is that people will be able to do as much, or as little, as they want or need. While all of this is available today in bits and pieces, this will be the first fully integrated approach to home energy management.”

Traditional load centers, or circuit breaker panels, distribute electricity to each of the household circuits and provide a circuit breaker for each to protect against overload, ground fault, and other hazards. The new home energy management system adds to these traditional functions the ability to integrate power from off-grid

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sources to automate the control of lighting and security systems, and interact with the utility.

The new system builds upon the strength of the company's Square D brand "QO" circuit breaker, the heart of the residential load center, which controls a home's electrical power. The QO has set the industry standard for nearly 50 years. Now, Schneider Electric is planning a new version of the QO circuit breaker that will be ideally suited for home energy management. It's scalable to any size home and can be easily integrated into an existing QO load center installation. Once installed, it can automate and manage energy usage both locally and remotely via the Internet.

The system will be optimized for ease of use. User interaction ranges from simple, browser-based, displays of energy usage and control to totally automatic operation with no user input. Progress on the system has accelerated since January of this year when a prototype was showcased in a luxury home at the International Builders Show in Las Vegas. Created by the CIT, the system featured comprehensive energy management and seamless integration of alternative energy and backup power systems.

The new system, which will be on display at the 2005 International Builders Show in January, 2005, in Orlando, is designed for averaged-sized homes. This system offers the flexibility of working with the broad range of emerging distributed generation or "off-the-grid" energy sources, including solar and wind power, micro turbines and co-generation, all of which are expected to become increasingly common fixtures on the residential landscape in coming years, according to Pollard. He said the system also makes it possible for a homeowner to run his entire house on a nominally-sized back-up generator and manage loads appropriately, a desirable feature in states prone to hurricanes and other severe weather.

"The new home energy management system will convert and manage power generated by any of the off-the-grid energy sources that are making their way into the residential market to control costs, improve reliability and conserve energy," said Pollard.

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### **Smart System Works With all Energy Sources**

“A typical load center takes power from the electrical grid, but the distribution paths are static,” explained Pollard. “What we’re introducing is a smart, dynamic electrical load center that can take power from any source, perform DC power conversion, and connect the power to the home and electrical grid. In addition, the system can adapt to prevalent conditions such as utility curtailment, backup generator capacity, or peak load demand. Making these connections will be easy.”

Several trends are creating a climate conducive for the sale of the new system, which is expected to be available in 18 to 24 months. As energy costs continue to climb, legislative proposals on the drawing board in California and other states will mandate adoption of alternative energy sources in the residential market. Meantime, virtually every utility is introducing some type of energy conservation program that would benefit from the ability to have the precise, real-time energy data that this smart electrical panel will provide. The same technology that will enable a homeowner to program the system and automatically control the functionality of appliances will also allow a utility company to monitor energy usage. Moreover, when the grid is compromised, a utility could remotely instruct a homeowner’s energy management system to begin shedding loads to avert a power outage.

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### **Schneider Electric North American Operating Division**

Headquartered in Palatine, Ill., the North American Operating Division of Schneider Electric had sales of \$2.5 billion (U.S.) in 2003. The North American Operating Division is one of four operating divisions of Schneider Electric, headquartered in Paris, France, and markets the Square D, Telemecanique and Merlin Gerin brand products to customers in the United States, Canada and Mexico. In the United States, Schneider Electric is best known by its flagship Square D brand, with Telemecanique becoming increasingly known in the industrial control and automation markets and supported by many Square D distributors. For 100 years, Square D has been a market-leading brand of electrical distribution and industrial control products, systems and services. Schneider Electric is a global electrical industry leader with 2003 sales of approximately \$9.9 billion (U.S.). Visit Schneider Electric on the Internet at:

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