Remarks for Special Issue on Smart Energy Solutions

On March 11, 2011, the Great East Japan Earthquake struck. On that day we were not only reminded of the destructive power of a natural disaster, but also came face-to-face with our worst fears when the nuclear power plant suffered an accident. While a shift to the electrical power generation using natural energy sources such as wind, water and solar power has been gaining momentum principally in Europe, the earthquake disaster and its consequences have caused a radical shift in attitudes toward natural energy in Japan.

The key component to realize the large-scale exploitation of natural energy is storage batteries. These energy devices will be indispensable for stabilizing the balance of supply and demand for electrical power generated using the sun and wind - sources of energy whose power generation volume is dependent on weather conditions. In July 2011, NEC led the industry with the commercialization of a home-use power storage system that can work in collaboration with conventional power-supply grids, and began taking advance orders for this advanced system. This achievement leveraged the know-how behind the high degree of safe and reliable performance of vehicle storage batteries jointly developed by Nissan Motor Co., Ltd. and NEC. Our aim is to pave the way for a "New Energy Society" founded on smart grid and smart city technologies that will enable the enjoyment of services by anyone, anytime and anywhere, and we believe that ICT, C&C Cloud, sensing and other technologies that are the strengths of NEC will be the foundation of a safer, more secure and comfortable life.

In response to growing market needs for answers to environmental and energy issues, this special issue introduces the reader to solutions that employ energy devices developed by NEC.

As mentioned above, storage batteries will be a vital component in the energy business of tomorrow, and we would like to introduce the reader to highly safe and reliable lithium-ion batteries and large-scale energy storage systems that adopt the hallmark battery technology of NEC: manganese-type laminated cells. These papers will also provide you a look at a variety of energy devices such as energy management systems (EMS) that make the use of energy "visible" and apply the data for optimized control of your energy, and infrared sensor systems that con-

tribute to energy savings. We would also like to touch on NEC's work in the field of electric-powered vehicles (EV), which are expected to play an important role in the low-carbon society of the future and are sure to become an increasingly common sight in coming years. Here NEC is tackling the development of a quick charging system which will be essential to widespread EV adoption as well as charging systems that work in concert with our ICT and C&C Cloud vision.

Also Professor Rikiya Abe of the University of Tokyo has kindly consented to contribute a piece on the "Digital Grid" for this special issue. Simply speaking, the digital grid envisions a power supply system with a level of freedom of access and interactivity with power that is analogous to the Internet. In September 2011, he called on industry to join him in making this vision a reality through the formation of the Digital Grid™ Consortium. NEC takes pride in being one of the first to answer this call and become one of its founding members. Leveraging its leading routing and network technologies, NEC is contributing to the early establishment of this new electric power system.

In the future, NEC will continue to grapple with the development of various environmental and energy-related technologies in our ongoing search for effective solutions to the environmental and energy issues that confront the world.

On behalf of everyone at NEC, I would like to express our heartfelt gratitude for your invaluable encouragement and reliance on our products and services and our hopes for your continued support in the future.

KUNIO Takemitsu
Senior Vice President

Information about the NEC Technical Journal

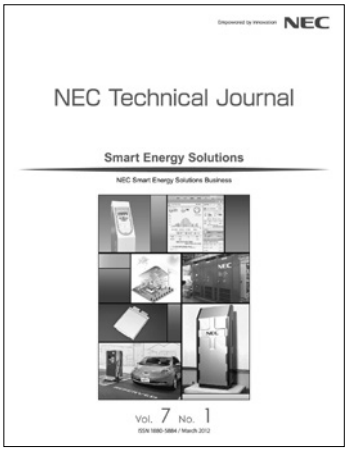
Thank you for reading the paper.
If you are interested in the NEC Technical Journal, you can also read other papers on our website.

Link to NEC Technical Journal website

Japanese

English

Vol.7 No.1 Smart Energy Solutions



Vol.7 No.1
March, 2012

Special Issue TOP