

Technical Review Special Edition: New Power Domain Projects

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Welcome to this special edition of our technical review featuring new power domain projects.

Energy supply and consumption are the basis of all social and economic activities, and what society needs is a system, which would be the foundation of such activities, that is economical and environmentally friendly. In response to such needs, Mitsubishi Hitachi Power Systems, Ltd. (MHPS) has been supporting sound global economic growth by offering advanced energy facilities which help realize an economical and low-emission energy supply, as represented by our natural gas-fired high-efficiency gas turbine combined cycle power generation facilities.

However, due to recent growing concerns about climate change and the global environment, the business environment for energy supply and consumption is changing.

For example, there are cost reductions in renewable energy generation devices in the power industry as well as an increased ratio of renewable energy in the power supply based on various incentive schemes introduced in individual countries such as tax incentive and the so-called FIT*. Further, the application of batteries in the power industry has begun as well thanks to cost reductions achieved by mass production of automobile batteries, which is definitely creating changes in the power supply and consumption conditions. There are also some active movements at the consumers' end, which are no longer limited to simply receiving power supply services, in response to the market principles at the system operators' end.

In order to adapt to such changes, MHPS, taking advantage of our experience, positioned ourselves as a large-scale energy consumer, acquired data on energy consumers' trends and prepared for contents-orientated service businesses while continuing the validation of AI-performed analyses. Further, we have started advanced projects overseas such as utilization of hydrogen energy in which we undertake a fundamental review of the energy supply chain itself.

While there is no doubt that the supply of power by renewable energy in society will continue to increase, there are still some issues in terms of harmony with consumers' needs due to unevenly distributed resources in terms of location and time. So the question is how we are going to integrate it into society while securing a stable energy supply. We will, of course, continue to create values from both technological and business-model aspects.

This volume of our technical review features our efforts to satisfy new needs caused by the changes in society, and I expect to be able to introduce a new dimension to our conventional corporate image, namely energy/environment-related businesses.

*Feed In Tariff: Economic policy where fixed electricity prices are paid to renewable energy producers for each unit of energy produced