Fiscal 2013 in Review

During fiscal 2013, MHI received orders for chemical plants in Russia and the United States, and orders for large-scale gas turbines totaled 18, up from eight in the previous fiscal year. Benefiting from the rise in large overseas projects, centering on thermal power and chemical plants, orders received amounted to ¥1,339.2 billion, significantly higher than in the previous fiscal year.

In addition to the integration of the thermal power generation businesses of MHI and Hitachi, Ltd., higher sales of thermal power and chemical plants helped push up consolidated net sales in this domain to ¥1,253.9 billion. Operating income was also up year on year, to ¥112.3 billion, due primarily to higher sales of gas turbine combined-cycle (GTCC) and chemical plants and the effects of yen depreciation.

Operating Environment

Energy demand continues to grow on a global scale; by 2035, demand is forecast to be 1.3 times the current level.* In thermal generation, given that the shale gas revolution is driving down

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By pursuing the MHI Group’s diverse product and operational strengths and synergies, we will strive to win out in global competition by responding to customer and market needs.

Atsushi Maekawa
Domain CEO, Energy & Environment

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Energy & Environment provides optimal solutions in social infrastructure in the areas of energy—including thermal, nuclear, and renewable energies—and the environment, such as water and flue gas treatment, and chemical plants. MHI also combines its engineering, procurement, and construction (EPC) capabilities relating to the domain’s various businesses and products to provide optimal solutions.

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natural gas prices, GTCC demand is expected to stay strong going forward. We expect coal-fired thermal power demand to remain robust, owing to demand to upgrade aging facilities and build new generating plants in emerging countries. At the same time, as CO₂ emissions from power generation account for 41.7% of the global total,* pressure for global warming countermeasures is growing. Under these circumstances, we are seeing growing demand and expectations for nuclear power generation and renewable energy, as well as for thermal power generation that is highly efficient and curtails CO₂ emissions.

The new construction of chemical plants is growing in North America, where shale gas development is pushing ahead, and in such gas-resource-rich areas as Russia and Africa.


Initiatives for Growth over the Medium to Long Term

Maintaining a core quality orientation, by investing aggressively in growth fields and bolstering cost competitiveness we aim to boost orders by around 1.5 times and approximately double operating income. In the field of thermal power generation, at Mitsubishi Hitachi Power Systems, Ltd. (MHPS), which was established through the integration of businesses from Hitachi and MHI, we expect to accelerate the combination of technological capabilities. On the development front, we will hone our competitive edge by pursuing additional generation efficiencies, while taking advantage of our larger combined network to reinforce EPC and after-sales services. Through the new joint venture we have established with Vestas Wind Systems A/S, we will strive to develop the offshore wind turbine business on a global scale. As part of this business, MHI is promoting developments designed to reduce environmental impact by entering the water, distributed power source, and power generation businesses. As we continue to view nuclear power as a key source of generation, we will work to improve nuclear power safety and develop advanced technologies. Furthermore, we will maintain an ongoing focus on the chemical plant business, for which the market is expanding.

Key Projects

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<td>June 2014</td>
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<td>MHI Receives Order for Large-Scale Polyethylene Plant Project in the United States</td>
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<td>June 2014</td>
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<td>MHPS Signs Agreement with Daewoo Engineering &amp; Construction Co., Ltd., of South Korea to Supply Core Components for GTCC Power Generation Plant</td>
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<td>May 2014</td>
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<td>MHPS Receives Order for GTCC Power Generation Plant from Kyushu Electric Power Co., Inc.</td>
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<td>October 2013</td>
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<td>Launch of Mitsubishi Heavy Industries Marine Machinery &amp; Engine Co., Ltd.</td>
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In emerging countries experiencing rapid economic expansion, particularly those in Asia, rising energy consumption is leading to growing demand for the new construction of power generation systems and the replacement of aging equipment. This trend is expected to remain consistent over the medium to long term. The market for thermal power generation is expanding due to the shale gas revolution, which is boosting supplies of natural gas, as well as to abundant reserves of coal used for fuel. Meanwhile, increasing concerns about global warming are sharpening the focus on power generation systems that feature reduced environmental impact.

Technological expertise and cost competitiveness are keys to the market for thermal power generation systems. Due to the extremely high burden of investment in such systems, companies that operate on a large scale and can harness the benefits of mass production are at a clear advantage. For this reason, the major European and U.S. companies in this field—the so-called megaplayers—enjoy an overwhelming presence. For MHI, which is now turning its strategic focus to the global market, winning out against this formidable competition will be a challenge.

As a far-reaching measure to face increasingly severe global competition, we resolved to undergo a business integration with Hitachi, our former rival in Japan. Over the years, our companies had pursued partnerships in a variety of fields, including iron and steel manufacturing machinery. This combination in thermal power generation systems was ideal in many ways, as Hitachi and MHI complement each other in terms of geographical location of operations and product categories. Regionally, MHI has strengths mainly in Southeast Asia and the Middle East, with sales routes in China and the United States, while Hitachi has harnessed its strengths in markets such as Europe and Africa. In gas turbines, central components for thermal power generation, MHI’s forte is in large-scale equipment, whereas Hitachi excels at small and medium-sized equipment.

MHI’s gas turbine combined-cycle (GTCC) generation systems, which have J-Series gas turbines at their core, achieve the world’s highest level of environmental performance within the field of thermal power generation. Accordingly, we are well placed to meet demand for reduced environmental impact.

In use at Japan’s first integrated coal gasification combined-cycle (IGCC) plant, the Nakoso power plant of Joban Joint Power Co., Ltd., in Fukushima Prefecture.
It has been more than 45 years since MHI and EGAT began their relationship through the construction, operation, and maintenance of hydro, conventional, and GTCC power plants, and such long-term relationship has made MHI and EGAT “strategic business partners” rather than just a “supplier” and “owner.” This partnership has resulted in successful collaborative businesses, such as the completion of the Joint Gas Turbine Relocation Project, the establishment and operation of the Joint Gas Turbine Repair Factory, among other ventures, and the business areas of the collaborations between MHI and EGAT have been expanded to overseas locations beyond Thailand.

In addition, EGAT has further expectations for Mitsubishi Hitachi Power Systems (MHPS), with a wide variety in its service lineup, reliable technologies, and warm support, based on the synergetic effect after the integration of the thermal power generation systems business of MHI and Hitachi during the year. Actually, MHPS and EGAT have already started strategic discussions in order to create a new collaborative business drawing on Hitachi’s technologies as well as MHI’s technologies. EGAT believes that it will further contribute to the enhancement of the relationship between MHPS and EGAT and to provide reliable and affordable energy and services for the happiness of people, societies, and environments in ASEAN countries, which is one of EGAT’s missions.

We hope that MHPS keeps providing its Japanese style of warm, timely, and careful support based on “CS-First!” (Customer Satisfaction First)—the mission of the MHPS Service Division—and to continuously be EGAT’s “Best Friend Partner.”