

Reaching Agreement in the Creation of Smart Community

Mitsubishi Heavy Industries, Ltd. (MHI) has agreed with the Gujarat State government of India and the Delhi-Mumbai Industrial Corridor Development Corporation Limited (DMICDC) to collaborate in the development of an environmentally conscious Smart Community and signed a memorandum of understanding (MOU) on Jan. 12th, in India. In order to promote the development of the Smart Community, which creates energy-conserving, low-carbon, next-generation urban infrastructure through the introduction of the most advanced energy-saving technologies and urban transportation systems, MHI will form a consortium with four other Japanese companies - Mitsubishi Electric Corporation, Mitsubishi Corporation, Mitsubishi Research Institute, Inc. and the Electric Power Development Co., Ltd.

Current plans call for the Smart Community to be established in Sanand and Changodar in Gujarat State, a key industrial area in northwestern India. The Smart Community plan is a part of DMICDC's grand plan to develop the regions in the corridor between Delhi and Mumbai, which include industrial parks, power plants, airports, ports, railways, roads and commercial facilities. The MHI-led five-company consortium targets business development opportunities in high-efficiency power generation systems leveraging natural

gas and power generation systems using renewable energies, such as solar thermal, as well as promoting electrification in the transportation sector.

MHI will vigorously engage in the project, together with the four other consortium member companies, and aims to create a new business model that leverages Japan's advanced energy-saving, low-carbon technologies.



Grand Design of Entire City in view of Energy Management

MHI and Dominion Reach Agreement To Continue Engineering and Planning Work

MHI through Mitsubishi Nuclear Energy Systems Inc. (MNES), and the U.S. utility, Virginia Electric and Power Company ("Dominion"), which is a subsidiary of Dominion Resources, Inc., have reached an agreement to continue pre-construction, engineering, and planning work in preparation for a third unit at Dominion's North Anna Nuclear Power Plant in central Virginia.

Dominion has selected MHI's US-Advanced Pressurized Water Reactor (US-APWR) as the reactor design for its potential third nuclear power generation unit. Based on the agreement, MHI will continue to advance engineering and planning work for the project, while awaiting Dominion's decision on a construction commencement date.

Dominion amended its application for a combined construction and operating license (COL) to build and operate the North Anna Unit 3, applying the US-APWR design, to the U.S. Nuclear Regulatory Commission (NRC) in last June. The US-APWR Design Certification together with COL is under NRC review process in time for the construction schedule.

The US-APWR for Dominion represents the third reactor utilizing the US-APWR design selected by a U.S. utility. In July 2006, MHI established MNES, a wholly-owned

subsidiary, in Washington, D.C., and launched local marketing activities for the US-APWR. In March 2007, Luminant selected the US-APWR design for its Comanche Peak Units 3 and 4.



Existing North Anna unit 1&2

Heat Pump Water Heater Developed For Commercial Use in Ambient Down to -25°C

MHI has developed a heat pump water heater which features the NEW CO₂ Scrotary two stage compressor for commercial use — the ESA30. Dubbed the "Q-ton," this new system can maintain rated heating output in outdoor temperatures down to -7°C(19°F). This new model can also operate in outdoor conditions down to -25°C(-13°F), while maintaining a moderate seasonal (spring/autumn) COP (coefficient of performance) of 4.3, the industry's highest efficiency rating in the 30 kilowatt (kW) class.

In conventional heat pump water heaters, the heating output and COP value reduces dramatically under low outdoor temperature conditions. As a result, the introduction of heat pumps in cold weather regions has been limited. The ESA30 is the world's first heat pump to overcome these obstacles with its capability not only to maintain rated heating output at outdoor conditions of -7°C(19°F) but also to heat water up to 90°C(194°F) in an extremely cold outdoor condition of -25°C(-13°F). The ESA30 has now made it possible to introduce heat pump water heaters throughout most regions of the world.

In terms of hot water supply capacity, the ESA30 supports connection of multiple installations and the control up to 16 units. ESA30 is also capable of supplying up to 120 tons of hot water at 60°C(140°F), which dramatically reduces the power input required for the hot-water supply of large facilities. The ESA30 can also operate with high-temperature entering water at 63°C(145°F) and can be used in facilities which circulate very hot water.

As part of their Low Carbon initiative, MHI has been

pursuing the expansion of heat pump business by developing more energy efficient heating solutions. Going forward, the company intend to develop the "Q-ton" as a core product in their Heat Pump portfolio.

To promote the ESA30 commercial-use heat pump water heater, MHI will conduct aggressive marketing activities, primarily targeting restaurants, supermarkets, nursing care facilities and hotels.



The "Q-ton" commercial-use heat pump water heater (ESA30)

Mitsubishi Regional Jet Manufacturing Commenced

MHI and Mitsubishi Aircraft Corporation have jointly announced the commencement by MHI of the manufacture of the next-generation Mitsubishi Regional Jet (MRJ) on Sept. 30, 2010. Based on an order placed by Mitsubishi Aircraft, which is developing the MRJ, MHI began cutting aluminum material for the horizontal stabilizer's frame component of the aircraft. With this event, the MRJ project to develop Japan's first passenger jet has now entered the manufacturing phase.

The start of the MRJ's production indicates that development of the aircraft's production drawings is progressing after detailed design review last summer. Following MHI's lead, project partners will now launch manufacturing of the various components they are responsible for, based on the production drawings. MHI, in addition to producing the MRJ's major components such as the fuselage, wing, empennage and core system, will also be responsible for final assembly and equipment installation.

Going forward, MHI and Mitsubishi Aircraft continue to devote their utmost efforts to make the MRJ project a success, aiming to play a significant role in the ongoing development of the global aviation industry.



MRJ (Mitsubishi Regional Jet)