

## Mitsubishi Electric to Build DC Development and Demonstration Facility at Power Distribution System Center in Marugame, Japan

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Promoting middle-voltage direct current distribution systems that respond to environmental needs

Mitsubishi Electric Corporation (TOKYO: 6503) announced today that it plans to build a development and demonstration facility for middle-voltage direct current (MVDC\*) distribution at its Power Distribution System Center in Marugame, Japan, with operations scheduled to start in April 2016. MVDC distribution reduces electricity loss at delivery, making related technologies increasingly attractive for businesses looking to mitigate environmental impact.

Environmentally conscious distribution systems that combine renewable energy such as solar and wind with an electrical accumulator are growing in popularity. These systems generate DC electricity and then convert it to AC for general use. However, communication devices and digital devices in general have to convert it back to DC. Energy loss will occur when electricity is being converted between AC and DC. MVDC distribution eliminates the DC conversion issue and reduces energy loss, enabling facilities to cut costs by using thinner power cables or transmitting electric power longer distances. This has prompted a reevaluation of DC technology, and Mitsubishi Electric aims to meet the needs of this new DC ecosystem by leveraging their existing DC technologies such as their distribution board for data center energy conservation and their high speed circuit for railway lines. At the same time, the company will use this new facility to develop next-generation MVDC technologies and communicate their value to consumers.



Development and Demonstration Facility

### Facility Outline

Location	8 Horai-cho, Marugame, Kagawa Prefecture, Japan
Building area	About 180 square meters (gross floor area: about 500 square meters)
Structure	Three-story steel construction
Groundbreaking	September 2015
Completion	March 2016
Operations	From April 2016
Investment	About 500 million yen
Main focus	Commutating devices, solar power generation, wind power generation, electrical accumulators, EMS and DC load systems

\* Voltage ranges below 1,500V DC as specified by the International Electrotechnical Commission's international standard IEC60364.

#### **About Power Distribution System Center**

Mitsubishi Electric's Power Distribution System Center in Marugame, Kagawa Prefecture, was established in 1979 to manufacture circuit breakers and switchgear. It produced its one millionth circuit breaker in March 2014.

#### **About Mitsubishi Electric Corporation**

With over 90 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 4,323.0 billion yen (US\$ 36.0 billion\*) in the fiscal year ended March 31, 2015. For more information visit: <http://www.MitsubishiElectric.com>

\*At an exchange rate of 120 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2015