

## Mitsubishi Electric Develops SVC-Diamond™ Static Synchronous Compensator 8/25/2014

Optimized power solution maintains high-quality power and ensures more stable, robust electrical grids Mitsubishi Electric Corporation (TOKYO: 6503) announced today its development of the SVC-Diamond™ static synchronous compensator (STATCOM), a voltage source converter (VSC) shunt reactive power compensator with a modular multilevel converter (MMC). The commercial launch is targeted sometime in or after 2016.

The new SVC-Diamond™ helps strengthen the power network when renewable energy resources such as solar and wind are introduced. Since renewable energy is derived from natural sources, any solution is required to solve power-quality issues, such as voltage variation and voltage transmission stability. SVC-Diamond™, as a reactive power compensator, deploys the most effective method for responding to such issues. Furthermore, Mitsubishi Electric will perform the precise system studies matched to user needs to provide optimum solutions and maximum quality based on real-time simulations.

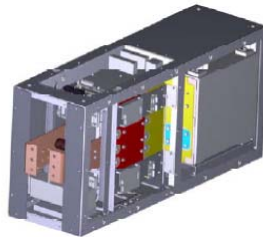


Image of SVC-Diamond™ MMC sub-module

Renewable energy businesses, including wind and photovoltaic power generation, are rapidly growing worldwide. In the USA, renewable energy installed capacity is expected to quadruple from 81 gigawatts in 2011 to 321 gigawatts in 2030\*. In Europe, offshore wind power market is rapidly growing, and is expected to increase from 5 gigawatts in 2012 to 40 gigawatts in 2020\*\*. One of the key issues for utilities, however, is renewable energy output is unstable due to generation based on natural phenomenon, and thus necessary to improve power quality such as controlling harmonics and fluctuating voltages. Mitsubishi Electric's dynamic reactive power compensation capability is expected to realize optimum solutions that respond to the need for improved power quality. The market scale is expected to reach US\$ 2 billion level in 2018 with annual 5% growth rate.

\* IEA World Energy Outlook 2013

\*\* Global Wind Energy

### Council Features

#### 1) The best quality and the highest reliability

- Assures the best quality of system and the highest reliability during operation by integrated interface technology from the key component to the system by adopting own insulated gate bipolar transistor (IGBT)

#### 2) VSC based shunt reactive power compensation capability with MMC

- Reduces harmonic contents
- Reduces installation space by around 60% due to elimination of harmonic filter and installation time compared to conventional facilities due to compact size and light weight
- Creates a rapid response against sudden voltage variation

## **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 4,054.3 billion yen (US\$ 39.3 billion\*) in the fiscal year ended March 31, 2014. For more information visit <http://www.MitsubishiElectric.com>

\*At an exchange rate of 103 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2014