

Permanent magnet wind turbine generator

We challenged the wind industry by making permanent magnet generators (PMGs) and full-power converters the preferred technology for wind turbines. Now, nearly all new large-power wind turbine designs have permanent magnet and full-power converter drive trains.

Permanent magnet generators are widely adopted by the wind power industry. Because there are no wearing parts, PMGs ensure low failure rates and require less maintenance. The use of permanent magnets requires no external power source to initiate a magnetic field. This reduces costs, simplifies the structure and improves system efficiency.

As a pioneer, we challenged the wind industry first by making PMGs the preferred technology for offshore wind turbines and then making them commercially available to onshore turbines.

The Switch has provided Dongfang with a second-generation drive train package that combines a 1.5 MW direct-drive, outer rotor permanent magnet generator with a full-power converter.

Our first high-speed 5 MW drive train packages were installed in 2013 and are successfully operating for Chongqing Haizhuang Windpower Equipment's offshore wind power project in China.

China-based Taiyuan Heavy Industry Co., Ltd. (TYHI) selected The Switch PMG and FPC package for its 5 MW onshore wind turbine, which was successfully commissioned in March 2014.

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