

## Special Feature: Realizing a Sustainable Society

# 5 Developing Products to Meet the Needs of Emerging Markets

Demand for electricity in fast-growing emerging markets is soaring as many new plants, office buildings, and other structures are put up. As new power stations are constructed to stabilize electricity supplies, a key challenge is to reduce energy consumption and CO<sub>2</sub> emissions.

Fuji Electric endeavors to manufacture products that satisfy customers around the world by localizing engineering, manufacturing, and consumption. We are striving to resolve energy issues by offering products that contribute to energy savings.



### Case Example

### Air Conditioning System Design Company in Singapore

## Major Contribution to Energy Saving in Asia, Where Demand for Electric Power is Rising

### Development of Special Inverter for Air Conditioners — FRENIC-HVAC

The various applications of inverters include air-conditioning systems, pumps, elevators, cranes, conveyors, and machine tools. Fuji Electric draws on its world-leading technologies to create a diverse lineup of products that it sells throughout the world.

Air-conditioning systems are living essentials in office buildings, hotels, hospitals, schools, and shopping centers. Markets for these systems are expanding, particularly in emerging market

countries. Inverter control of the motors that drive the pumps and fans of the systems can greatly conserve power consumption. Air conditioning systems applications are the greatest segment of the global market for inverters. Specialty inverters that Fuji Electric developed for the Asian air-conditioning market have started to be adopted broadly, particularly in Asia, since commercialization in March 2012.



Fuji Electric inverter  
FRENIC-HVAC

### Voice

### Comment from the Customer



**Mr. Don Yeo**  
Project Manager  
Air System Technology (s) Pte. Ltd.

We had known about Fuji Electric but this was the first time for us to use its products. Air conditioning systems of new buildings generally incorporate inverters to control energy savings. But inverters for such systems need water- and dust-proof structures, special protocols for communicating with building monitoring systems, and noise filters, reactors, and other special functions and circuits. We thought very highly of Fuji Electric's FRENIC-HVAC inverters for incorporating all these functions. We therefore decided to employ them for one of our key projects where our reputation is at stake.

### Exhaustive Survey of Market Needs

We developed FRENIC-HVAC for air conditioning systems in Asia after extensively researching local needs. For example, it is the first wall-mountable slim inverter from a Japanese manufacturer. The inverter is easy to install anywhere, unlike conventional Japanese models that must be stored in protective cases. We enabled outside installation by making the structure waterproof and dustproof, incorporating the noise filter and all other key air conditioner functions in one unit. The operation panel can handle 19 languages, including Asian ones. We have made the system very affordable by manufacturing it overseas and procuring around 80% of components outside Japan.



Fuji Electric Asia Pacific employees discussed all aspects of the specifications based on local market needs

FRENIC-HVAC simplifies air conditioning systems while retaining its inherent quality and performance. It has been very well received by customers constructing air conditioning systems, particularly in Asia.

FRENIC-HVAC is a global model developed with collaboration between various business units at Fuji Electric. We aim to extend our lineup in the years ahead.



External unit of the air conditioner system installed on an office building roof

### Voice

## Comment from an Employee



**Samson Lim** (Photograph, right)  
Sales  
Fuji Electric Asia Pacific Pte. Ltd.

We decided to create a new air conditioner inverter for the Asian market, so we needed to assess the specifications and pricing that Asian customers sought. FRENIC-HVAC fully reflects Asian needs, and we can proudly recommend it to our customers. This offering has enabled us to approach completely new customers. We will continue to enhance Fuji Electric's presence in the enormous Asian market.