



Smart power grid for S'pore

Pilot project launched to optimise use of electricity

■ BY JESSICA CHEAM

SINGAPORE will soon have its first smart grid – a high-tech network of intelligent meters that speak to one another and allow consumers to optimise their power use.

A multimillion-dollar pilot project to build what the industry calls an Intelligent Energy System was announced by the Energy Market Authority (EMA) yesterday.

It will employ a range of technologies to make the electricity grid smarter, and help reduce Singapore's carbon footprint by making energy consumption more efficient, said EMA chief executive Lawrence Wong.

The project, to be implemented mainly at Nanyang Technological University (NTU), will also include multiple sites such as the neighbouring Clean-Tech Park at Jalan Bahar and selected residential, commercial and industrial buildings.

It will test smart grid technologies like advanced electricity meters that tell energy providers and consumers how much electricity is being used and fed into the grid (see side story below).

The pilot project will also test ways to integrate other sources of power, such as solar energy, into the main grid.

Mr Wong said yesterday: "With this pilot, we will lay the foundations for an even more intelligent energy system in Singapore.

"We will bring the capabilities of our power grid to the next level and ensure that our electricity infrastructure is ready for the future."

The EMA has already tested smart meters in a small-scale pilot project at two local housing estates.

The test yielded good results, with households reducing electricity consumption by 2 per cent and shifting 10 per cent of their usual usage from peak to off-peak periods.

"If demand can be shifted away from peak periods, power companies would not need to build extra power plants to cope with such high demand requirements, which will ultimately reduce carbon emissions," said Mr Wong, who was speaking at the Smart Grids 2009 Summit, held as part of the Singapore International Energy Week.

While the households tested about 400 meters, the new pilot project will involve "several thousand smart meters", taking the project to the next scale, he added.

The EMA will call for a tender towards the middle of next year, and the project will be implemented in the next two to three years.

Mr David Rouls, Accenture's global managing director of transmission and distribution, said yesterday that Singapore, with its stable grid and condensed population, makes an ideal city to adopt smart grids.

"The challenge will come from finding the right technologies among many, and integrating them to cater to Singapore's needs," he said.

Accenture may bid to be involved in the project, he added.

No country has adopted smart grids on a nationwide level, said Mr Wong, but investments are pouring into this fast-growing sector.

The United States, for instance, is investing more than US\$4 billion (S\$5.6 billion) in projects to upgrade its electricity grid, as part of its economic stimulus package. Japan has also announced a 6 billion yen (S\$93 million) investment for smart grid pilot projects on 10 islands, noted Mr Wong.

Singapore will not be a laggard in this, and will "keep on top" of the technologies, he added.

"If we make the right moves, the smart grid presents an enormous growth opportunity.

"It will provide the platform for new products and services, spur energy innovations, and completely transform the shape of the energy industry in future."

jcheam@sph.com.sg