

# S I E W 2 0 1 1

SECURING OUR ENERGY FUTURE

FRIDAY 4 NOVEMBER



Chee Hong Tat, Chief Executive of the Energy Market Authority of Singapore, at SIEW 2011. Credits: Energy Market Authority of Singapore (EMA)

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Businesses will adopt energy efficiency measures if convinced of their potential cost savings, rather than their contribution to carbon reduction, Dr Martin Blake, an academic and executive director of the GreenAsia Group, told the inaugural Asia-Pacific Eco-Ideas Forum, at the Singapore International Energy Week.

# Singapore Considers Electricity Futures Market

**SINGAPORE is looking at an electricity futures market that will allow industry players to hedge their pricing risk while providing new business opportunities for financial firms and energy traders, the head of the city-state's energy regulator said on Thursday.**

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Such a market will help to raise transparency and reduce risk for new power generators and retailers entering the market, said Chee Hong Tat, the chief executive of the Energy Market Authority.

“An electricity futures market presents an opportunity for third parties such as financial intermediaries and energy traders to participate in investments and risk,” he told delegates at the Singapore International Energy Week.

The authority has started speaking with industry participants and will seek wider feedback at a later stage, Chee told Reuters on the sidelines of the conference, without giving a time frame.

“We have some initial views from the industry which have been supportive, but we plan to launch a more structured consultation,” he said.

The government will study the power markets in Australia, the United Kingdom and New Zealand, which feature trading of electricity derivatives.

“For a long-term hedge market to develop, participants need to have confidence that the government is not going to step in,” Carl Hansen, the chief executive of New Zealand’s Electricity Authority, told Reuters.

Contracts offered in a power derivatives market in Singapore could also allow players to hedge their fuel costs, said a senior executive at derivatives exchange Nasdaq OMX.

“The next step for Singapore could be to combine the gas and power markets, because the country is so dependent on the fuel. Then you could offer contracts that allow generators to buy gas and sell power at fixed prices,” said Kjell Asserlind, Head of Global Sales, Commodities Solutions,



Chee Hong Tat, Chief Executive of the Energy Market Authority of Singapore, at SIEW 2011. Credits: Energy Market Authority of Singapore (EMA)

at Nasdaq OMX.

This will encourage generators to enter into long-term contracts, he added.

Singapore depends on natural gas for 80 percent of its power generation needs. A liquefied natural gas (LNG) import terminal is due to start operations in 2013 that will allow utilities to diversify their sources of gas.

The city-state’s electricity market has been partly liberalised, with

around 75 percent of total electricity sales open to competition. It is currently studying the prospect of full retail competition for the market.

(Reporting by Francis Kan,  
Editing by Manash Goswami)

## SMART GRIDS

# Smart Grids Can Deliver Energy Safely, Reliably and Efficiently



Workers check solar panels at a solar power field in Kawasaki, near Tokyo. REUTERS/Toru Hanai

**S**MART grids, which boost energy efficiency, security and reliability, offer the potential to shave off up to a quarter of the increase in peak energy demand expected by 2050, participants learnt at the Asia Smart Grid 2011 conference.

Besides small and medium enterprises from Singapore, international players such as Accenture, eMeter, Panasonic, NEC, Sanyo and ST Electronics joined in the two-day event that was part of the

Singapore International Energy Week.

"The sharing of case studies and best practices provided the participants with real issues and solutions, whilst the exhibition offered a face-to-face interaction and networking opportunity," Louise Chua, the project director of Asia Smart Grid said.

The Singapore Pavilion saw home-grown companies showcase systems to track energy efficiency, smart meters, testing equipment, fuel cell power generator, system integration and energy management software.

In his opening address, Willem Van Putten, managing director of KEMA's Asia Pacific Operations, outlined the challenges facing the energy sector – reduction of energy use; efficient use of fossil fuels and the integration and increased use of renewable energy sources.

KEMA, established more than 83 years ago, is a global and leading authority in energy consulting and testing and certification and is active in the entire energy value chain, from fuels and power generation; policy

and regulation; system operations to distribution and customer management processes.

In Europe the transition to a sustainable energy system has just started, Van Putten said. Renewable energy sources (RES) will account for 37 per cent of the world's electricity generation by 2030, the OECD grouping of developed countries and energy agency IEA projected in a report in 2009, suggesting that market penetration of RES still has some way to go before it becomes established as an alternative energy source.

Markets need to develop new mechanisms to manage the uncertainty and changes this energy transition will usher in, since it will cause major alterations in the familiar power systems of today. But the transformation of the grid will also create new opportunities

for businesses and spur growth in the development and deployment of new technologies and related products.

In another keynote address, Kiyoshi Sawaki, of the Japanese Ministry of Economy, Trade and Industry (METI), highlighted several key smart grid related projects in Japan, which aims to increase the share of new renewable energy sources in its total primary energy supply to 10 percent by 2020 from 6.1 percent now.

Sawaki, who is director of the ministry's information economy division, also shared insights on the smart community initiatives that form part of Japan's energy policy moving forward, particularly the lessons learnt from the Fukushima earthquake of March 11 and the related nuclear power plant incident.

Industry speakers shared views and insights on subjects such as policy and regulation, case studies of successful

implementation of smart metering systems, automated demand response systems and integration of renewables into a smart grid system.

The conference, organized around the theme "Insights on Growth Opportunities and Best Practices for the Asian Smart Grid", discussed implementation challenges and expectations, financing and investment outlook and shared best practices from Japan, Korea and Singapore.

Participants also visited Singapore's Experimental Power Grid Centre at Jurong Island. The centre, under ICES / A\*STAR, is tasked with research and development activities in core areas for intelligent and decentralised power distribution, interconnection and use, and promotion of rapid adoption and implementation of innovative technologies.



People stroll near wind turbines at a wind farm in Koriyama, north of Tokyo. REUTERS/Toru Hanai

## CLEAN ENERGY

# Energy Efficient Southeast Asia Could Save \$15 bln by 2020



A boat passes in front of an oil refinery located on Singapore's Jurong Island. REUTERS/Vivek Prakash

**S**OUTH East Asia holds enormous potential for energy efficiency technologies, but governments and businesses need to tackle them systematically, a joint study by the European Chamber of Commerce in Singapore and Roland Berger Strategy Consultants shows.

By 2020, South East Asia could achieve efficiency gains between 12 per cent and 30 per cent and reduce costs by US\$15 billion to US\$ 43 billion, says the study, which examines how energy efficient technology can be deployed to address the expected exponential

increase in energy demand, energy related investments and spending in South East Asia.

“With the rapidly growing need for energy and shrinking resources of fossil fuels, energy efficiency technology is a paramount component in progress towards a sustainable supply of energy in the future,” says Willi Hess, chairman of the EuroCham Sustainability Committee, the EuroCham body that did the study. “At the same time, it has a potential to benefit businesses by reducing costs to consumers, improve competitiveness and enhance overall productivity.”

The study draws on prominent private sector specialists for their opinions on how to capture the energy saving potential most effectively. Despite progress in both government policy and private sector initiatives in South East Asian countries, barriers remain to be addressed at several points in the value chain, in order to spread the techniques, the study says.

“Awareness of energy efficiency is still low for both businesses and consumers in this region,” said Jihong He, a principal from Roland Berger Strategy Consultants.

She added that the issues faced by several companies in South East Asia trying to develop the energy efficiency market ranged from insufficient energy efficiency standards and government policy, mismatch of expectations and asymmetries of information among different players along the value chain to a shortage of funding options to finance energy efficiency projects.

Companies that participated in the study urged governments to take decisive action to promote energy efficiency technologies, providing an overarching policy framework combining mandatory and voluntary policies, and playing an essential role as the integrator of different players in the value chain.

“At the same time, private sectors need to be more proactive in developing the energy efficiency

market. We recommend that suppliers add service components to their energy efficiency products,” Joost Geginat, managing partner of Roland Berger Strategy Consultants South East Asia.

“Multinationals can act as catalysts by applying the same guidelines for energy utilization and ensuring that best practices are adopted across their international operations. These companies can set the standard in

## *“Awareness of energy efficiency is still low for both businesses and consumers in this region”*

**JIHONG HE**

Principal, Roland Berger Strategy Consultants

energy efficiency for their industries and act as role models in South East Asia.”

The European Chamber of Commerce in Singapore, known as EuroCham, has the mission to represent the common interests of the European business community in promoting bilateral trade, services and investments between Europe and Singapore and Asia-Pacific.



Workers repair an electric transformer in Son La province, Vietnam. REUTERS/Kham

# Solar Pioneer Awards Ceremony

**G**LIMPSES of the third Solar Pioneer Awards ceremony on Wednesday, organised by the Energy Innovation Programme Office (EIPO), led by the Singapore Economic Development Board (EDB) and the Energy Market Authority (EMA). A third wave of five private sector projects received the Solar Pioneer Award, in recognition of pioneering solar installations in the city state that are innovative in terms of system design, size and installation techniques, and help to build solar system integration capabilities. At the event, the EIPO also announced Singapore's first floating photovoltaic test-bed project at Tengeh Reservoir. The S\$11 million test-bed is the first of its kind in the region, and exemplifies Singapore's continuing sustainability efforts.



## CLEAN ENERGY

# Businesses Want Energy Efficient Ways to Cut Costs



Chief Executive of Energy Market Authority, Chee Hong Tat and Yori-hisa Shiokawa, Managing Director of Panasonic Asia Pacific at SIEW 2011. Credits: Energy Market Authority of Singapore (EMA)

**B**USINESSES will adopt energy efficiency measures if convinced of their potential cost savings, rather than their contribution to carbon reduction, Dr Martin Blake, an academic and executive director of the GreenAsia Group, told the inaugural Asia-Pacific Eco-Ideas Forum, at the Singapore International Energy Week.

Many energy efficiency projects are actually very lucrative for businesses, Blake, a professor of sustainable business development at Australia's Griffith University and the University of Southern Queensland, told

the forum, organised by Japanese appliances firm Panasonic.

Physicist Amory Lovins' Integrative Design Process (IDP) is more effective than green building rating systems, which could lead to a transactional target to "get the badge", but not ensure such systems were built to run efficiently over their lifetime, Blake believes.

He pointed to the United World College of Southeast Asia (UWCSEA) in Singapore as an excellent case study of how IDP helps cut capital and operational costs, since its designers used an IDP approach to save the

5.2-hectare UWCSEA campus \$40 million in building costs.

Dr Blake debunked the myth that retrofitting buildings was not cost-effective, saying there were significant paybacks, but there was a need to gather the data necessary to make the business case for it.

In a keynote address earlier, Chee Hong Tat, chief executive of the Energy Market Authority (EMA), also paid tribute to Lovins, who popularised the notion of "negawatts" – the idea of meeting energy needs by increasing efficiency instead of increasing energy production.

## ANNOUNCEMENTS – NOVEMBER 4

- The keynote at EMART Asia, which will focus on the "Energy Market Outlook – demand and supply review and have pricing fundamentals changed?"
- The PVAP Conference, which will feature a talk by **Joachim Luther, Scientific Information Manager, Solar Energy Research Institute of Singapore** on "The Asia Pacific super grid".

