

SIEWWORLD

SECURING OUR ENERGY FUTURE

WEDNESDAY 2 NOVEMBER

IN THIS ISSUE

SOLAR

Asian Photovoltaic Industry Body Names First Chief | 3

APVIA has named Dr Zhengrong Shi, chief executive of Suntech Power Holdings, the world's largest producer of solar panels, as its first chairman.

SECURING OUR ENERGY FUTURE

Asia to Gain from Brazil Crude Export Boost | 4

Asian refiners look set to be big winners as Brazil boosts sweet crude production from its bountiful deepwater pre-salt region in the second half of the decade.

SECURING OUR ENERGY FUTURE

Supply Security Top Priority for Tenaga | 6

Malaysian energy utility Tenaga Nasional Bhd will have to deal with gas shortages for another two to three months, the country's energy minister said.



Vivian Balakrishnan, Singapore's Minister for the Environment and Water Resources at SIEW 2011. Credits: Energy Market Authority of Singapore (EMA)

Singapore Minister Balakrishnan Expects Progress at Durban

By KEVIN LIM and DAVID FOGARTY

MAJOR floods such as those affecting Thailand are unlikely to occur in Singapore, but the city-state is taking additional precautions because of the dangers posed by climate change, Singapore's top environment official said.

The wealthy island nation of 5.1 million people, the Asian base for many banks and multinational firms, is vulnerable to rising sea levels and

a further increase in the intensity of tropical downpours.

"There are still people who do not believe in climate change. But I think the increasing weight of evidence suggests that something is going on and the only rational thing is to review all assumptions and norms," Environment and Water Resources Minister Vivian Balakrishnan told Reuters in an interview.

Singapore, he said, has embarked

on several initiatives to better protect itself against floods, including raising the height of reclaimed land by an additional 1 metre above sea level, widening and deepening drains and canals and getting building owners to improve their flood defences.

"It will be more expensive, more upfront cost, but you are buying insurance for the future," he said.

Singapore is among a number of cities that face a high risk from rising

(continued on next page)



A worker sits at an oil refinery near the ChaoPhraya river in Bangkok in October 2011. REUTERS/Sukree Sukplang

sea levels, risk analysis firm Maplecroft said in a report last week.

While Singapore last experienced flooding that required authorities to evacuate people from their homes back in the 1970s, the city-state has become prone to flash floods that have damaged basement shops and carparks over the past two years.

On the morning of his interview with Reuters, roads in parts of the city-state's financial district were partially submerged and people had to walk in ankle-deep water for a period of 10-15 minutes because the drains could not cope with the heavy downpour.

Balakrishnan said Singapore had embarked on large projects in the past 20 years to divert water from low-lying areas to reduce the risk of a major flood.

For example, the new Marina Barrage at the mouth of the Singapore River allows authorities to control water levels at Marina Bay, which is surrounded by offices, hotels and a multi-billion-dollar casino-resort.

FLASH FLOODS

"You are not going to get areas, like in Thailand, that are seriously inundated for weeks or months. That is extremely unlikely in Singapore," he said.

He conceded, however, that authorities needed to improve the city-state's defences against flash floods and said technological advances in wireless communications and the use of sensors would help shorten response time.

Looking ahead, Balakrishnan said the next round of climate talks in Durban, South Africa, starting later this month would not yield a broader, legally binding climate pact because of deep differences between rich and poor nations on how to share the burden of cuts in greenhouse gas pollution.

But he said it was essential the existing U.N. pact, the Kyoto Protocol, be extended into a second period. Failure to do so risked catastrophic collapse of the marathon talks aimed at ramping up efforts to fight climate change.

He expected the talks in Durban to yield agreement on boosting

transparency of individual country pledges to curb emissions that scientists say are heating up the planet.

More broadly, he said incremental progress could be made so long as there is continued improvement in the global ambition to reduce emissions, that there is a proper system to audit those pledges and if rich nations continued to share cash and clean-energy technology with poorer states.

"One difference between the world in 1992 and the world of today is that young people all over the world are far more environmentally conscious," he said, referring to the Earth Summit held in Rio de Janeiro in 1992, where nations adopted the United Nations Framework Convention on Climate Change. The 1997 Kyoto Protocol is part of the convention.

"I am actually hopeful that added pressure at the people sector level ... will give the final impetus to the political negotiations and end up hopefully in an agreement but this is not going to happen in December," he said.

(Editing by Himani Sarkar)

SOLAR

Asian Photovoltaic Industry Body Names First Chief

THE Asian Photovoltaic Industry Association (APVIA) has named Dr Zhengrong Shi, chief executive of Suntech Power Holdings, the world's largest producer of solar panels as its first chairman in inaugural committee elections held after 32 months of preparations on the sidelines of the Singapore International Energy Week (SIEW), an annual platform for energy professionals, policymakers and commentators.

Members of APVIA (pronounced A-P-V-I-A), include 670 photovoltaic (PV) enterprises, 23 industry associations and 15 research institutions, chose Dr Shi for a two-year term.

"With the Asian PV industry projected to account for approximately one-third of global demand by 2015, Asia is uniquely positioned to lead the charge in driving the growth of the PV industry worldwide," Dr Shi said. "Asia is home to a number of leading PV companies with excellence in manufacturing, technology and R&D, and boasts amazing solar resources. Through APVIA, the PV ecosystem will collaborate to develop the best technologies, achieve economies of scale, and identify market opportunities to achieve grid parity both in Asia and the world."

He now intends to drive the strategic growth of APVIA to promote the advancement of the Asian PV industry, enhance public-private sector communication on industry policies, create a favourable investment environment to help market expansion, and establish a

platform to nurture innovation and technology in the region.

The establishment of the APVIA will provide a coordinated voice to advance the region's solar industry, said Lee Yi Shyan, Singapore's Minister of State for National Development and Trade and Industry. "The establishment of the Asian PV Industry Association in Singapore, the first of its kind in the region, will bring together Asian industry leaders, research scientists and national solar associations to forge links with policy makers, conduct training and market studies and formulate strategies for growth," Lee said.

Tom Wu, secretary-general of the Taiwan Photovoltaic Industry Association, said, "APVIA has a strong leader in Dr Shi, who can lead the Asian photovoltaic industry to achieve grid parity. We are excited to work together to help drive job growth and solar installations anywhere the sun shines." Wu was appointed APVIA secretary-general.

Two other prominent committee appointees were Edwin Khew, chairman of the Sustainable Energy Association of Singapore (SEAS), who was elected to chair the steering committee and Professor Martin Green, executive research director, of the ARC Photovoltaics Centre of Excellence at the University of New South Wales in Australia, elected as chairman of the academic committee.

The meeting also discussed APVIA's five-year plan and said the association would strengthen ties with other industry groups, such as the European Photovoltaic Industry Association (EPIA) and the Solar Energy Industry Association (SEIA), helping to build the Asia PV industry network, publish industry reports, release industry standards and organise a summit of global solar leaders.

With the mission of "Push Asian PV development to create a beautiful energy future", APVIA is committed to be a leading PV industry association, exclusively belonging to Asia.



Minister of State (Trade & Industry) Lee Yi Shyan and top solar leaders converge at the inaugural PV ASIA PACIFIC EXPO. Credits: Energy Market Authority of Singapore (EMA)

Asia to Reap Rewards of Brazil's Crude Export Boost

By FLORENCE TAN and SIMON WEBB

ASIAN refiners look set to be big winners as Brazil boosts sweet crude production from its bountiful deepwater pre-salt region in the second half of the decade.

Exports from Brazil, home to four of the world's largest oil finds in the past 10 years, will have to look for buyers in fast-growing Asia as the United States will use more of its own shale oil output towards the end of the decade, pushing West African imports back to Europe.

Besides changing trade flows, higher sweet crude production from non-OPEC countries combined with tighter supply of cheaper sour grades from the Middle East could narrow the price gap between the two.

"The market looks like it will get more competitive than it is now as there will be more significant non-OPEC suppliers than we see today," PFC Energy Senior Director Paul Tossetti said, pointing to more oil sands production from Canada, shale oil from the United States and Russian ESPO crude.

"This will be very welcome for Asian consuming countries."

RISING OUTPUT

Brazil, the second largest source of non-OPEC crude oil growth after Canada, will boost its production of liquids – including crude, biofuels and non-gas liquids – to 3.0 million barrels per day (bpd) in 2016 from 2.2 million bpd in 2011, according to the International Energy Agency.

More than 75 percent of the growth will come from crude with the pre-salt region adding about 800,000-



Workers at the Cidade Angra dos Reis offshore platform at the Lula field about 300 km from the coast of Rio de Janeiro, Brazil. REUTERS/Sergio Moraes

900,000 bpd, IEA analyst Michael Cohen said, more than offsetting a decline in output from existing fields.

The deepwater region, an area the size of New York state, is believed to hold more than 50 billion barrels of oil.

Petrobras expects to triple crude exports to between 1.5 million and 1.6 million barrels per day (bpd) by 2020, CEO Jose Sergio Gabrielli said in Singapore on Tuesday.

The Brazilian state oil firm expects to boost crude output to 3.9 million bpd by 2015 and 4.9 million bpd by 2020 from around 2 million bpd now, which would make Brazil one of the world's three largest oil producers.

Four new refineries will add 1.3 million bpd of oil products output, the CEO said, lifting refinery capacity to around 3.2 million bpd by 2020.

"In the new scenario we're going to be price-makers," Petrobras General Manager for Sales and Marketing Jose Pereira added.

GOOD FOR ASIA

Brazil's medium-heavy crude from pre-salt fields will easily fit into the diet of complex refineries in China and India, which account for the bulk of demand in Asia, analysts said.

The 12th largest crude supplier to China has come a long way since it first exported a Marlim crude cargo to the emerging giant in 2000.

As part of a loan-for-oil deal, it is committed to supplying 200,000 bpd of crude to China for 10 years, although exports are at 136,436 bpd in the first nine months this year as each cargo is sold through price negotiation, Petrobras' Pereira said.

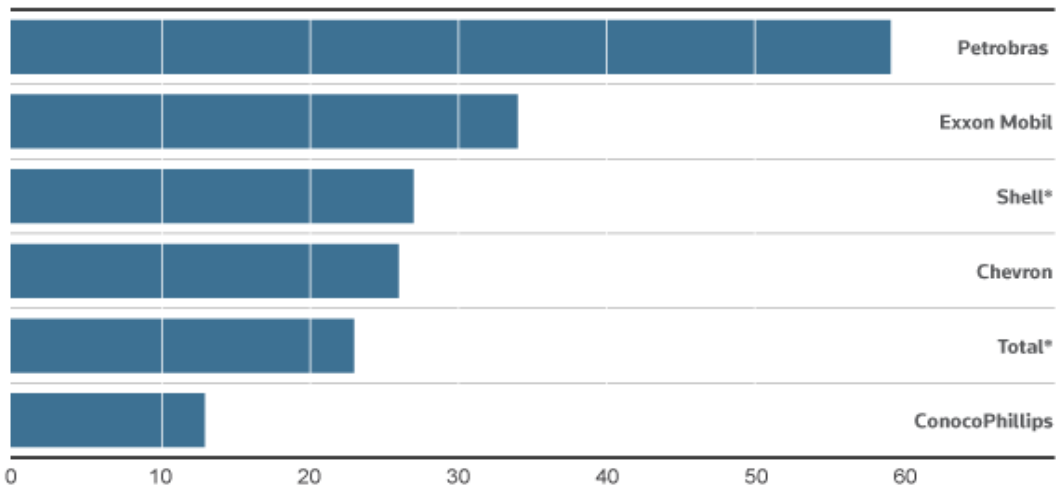
"We are going to look to the Asian markets for sure, we cannot ignore China, which is one of our biggest partners," said Pereira. "If we had more oil available today, the Chinese would certainly be buying it."

Other markets for the new Brazilian crude would include the United States,

Petrobras has world's biggest oil investment program

Petrobras is launching massive deep-water exploration campaign.

2011 capital expenditures – \$ billions



* High end of range provided by company
Source: Company reports, Thomson Reuters

REUTERS

Reuters graphic/Stephen Culp

which is already buying 40 percent of Brazil's exports, and India, he said. Indian private refiners Reliance and Essar bought 43,400 bpd of Brazilian crude in 2010.

Petrobras' CEO Gabrielli also said he expected exports to China and the United States to double to between 400,000 to 450,000 bpd to each nation by 2020.

To gear up for more exports to Asia, Petrobras has beefed up its operations with a three-man crude trading team in Singapore and leased oil tanks in Okinawa, Japan, where it operates a 100,000-bpd refinery.

Petrobras has already reached out to refiners all over the world, sending samples to prepare them for Brazilian crude, Pereira said, adding that new trading offices would be created.

"If Brazilian crude prices plus freight rates are cheaper than those from West Africa and the quality of the crudes are of little difference, why not buy Brazilian oil?" a Chinese trader said.

CHANGING TRADE FLOWS

There are some speed bumps on the way to ramping up Brazilian supply.

Export volume could fluctuate from year to year as the timing of new crude production and the commissioning of new refining capacity will not be synchronized, FACTS Global Energy analyst Roy Jordan said.

Cost pressures and a government mandate that most of the oil production equipment have to be built in Brazil may delay start-up targets, HSBC analyst Anisan Redman said.

A dispute in the Brazilian government over the distribution of oil wealth to non-producing states could also stall new investments in deepwater offshore areas.

The government hopes to resume auctions for deepwater fields by the second half of 2012, but this will depend on the approval of a royalties agreement in Congress.

Despite the pitfalls, the IEA sees Brazilian crude contributing to non-OPEC supply growing by around 1 million bpd during 2010-2016.

In the United States, Eagle Ford formation in southern Texas could produce 500,000 bpd in the next 5-6 years while new technology at the Premian basin in west Texas, home of West Texas Intermediate, could add

another 400,000 bpd, according to PFC. Bakken shale in North Dakota will also increase supply.

"You could make the case that all of the sweet crude being imported into the Gulf Coast area will not be needed," PFC's Tossetti said.

"That's 1.3 million bpd of Nigerian and Algerian and other West African, and so that becomes available to Asia and backstops potential declines in the North Sea."

Russia's export to Asia via the ESPO pipeline will increase to 1 million bpd in 2012, or a tenth of the country's total output.

"When you look at the Gulf, the only country that is going to increase production over the next few years is Iraq," Tossetti said.

"If all is else equal, the sweet sour spread could narrow and the sweet become less expensive," he said.

(Additional reporting by Francis Kan and Simon Webb in SINGAPORE, Nidhi Verma in NEW DELHI, Judy Hua in BEIJING, Brian Ellsworth and Rodrigo Viga Gaier in BRAZIL; Editing by Michael Urquhart and Miral Fahmy)

Supply Security Top Priority for Malaysia's Tenaga

MALAYSIAN energy utility Tenaga Nasional Bhd will have to deal with gas shortages for another two to three months, the country's energy minister said on Tuesday.

He said for now Tenaga will have to deal with losses caused by having to substitute costly fuel oil for power generation, as electricity prices will remain unchanged.

"At the moment, the electricity price stays, that is a government decision," Malaysia's Minister of Energy, Green Technology and Water Peter Chin said on the sidelines of the Singapore International Energy Week conference.

"Tenaga as an operating company and Petronas as a gas supplier will have to work within this pricing system at the moment."

Tenaga has been buying fuel oil



File picture of Malaysia's Minister of Energy, Green Technology and Water Peter Chin. REUTERS/Bazuki Muhammad

to replace natural gas for electricity generation, which its chief executive has said cost the company an additional 2.1 billion ringgit (\$684 million) for the second half of 2011.

Chin said the government has

received several requests from Tenaga for help to cope with higher fuel costs.

"We will look at that and see what we can do to help. Certainly we will not leave Tenaga in the woods," he said.

Chin said the cause of the gas shortage was a lack of maintenance on production platforms operated by state oil and gas group Petronas.

"We have to grapple with this issue for the next two to three months. It is a maintenance issue rather than a complete lack of gas," he said.

(\$1=3.068 Malaysian Ringgit)

(Reporting by Seng Li Peng;
Writing by Michael Urquhart;
Editing by Miral Fahmy)



The logo of Malaysia's national power utility Tenaga is seen at the entrance of its branch in Kuala Lumpur. REUTERS/Bazuki Muhammad

IEA Not Looking at Another Oil Stocks Release

By MANASH GOSWAMI

THE International Energy Agency is not looking at another release of emergency oil stocks as the global supply situation has changed from that prevailing when inventories were released earlier this year, Richard Jones, deputy director of the agency, said.

The release decision was taken with the supply situation in mind, and not oil prices, Jones said. The supply outlook is set to change with Libyan fields coming back on line and Iraq raising production.

"We are not looking at that right now," Jones told Reuters in an interview at the Singapore International Energy Week (SIEW). "It depends on a lot of factors – Libyan production, Iraqi production and OPEC."

The IEA does not want OPEC to cut output at a meeting in December as demand for the producer group's oil will be half a million barrels per day (bpd) more in 2012 than the level pumped in September, Jones had said on Monday.

Jones' comments echoed the views expressed by the agency's new executive director Maria van der Hoeven, who said on Sept. 8 the body would release emergency oil reserves only in case of a supply disruption and not to aid the economy or lower prices.

The IEA's 28 members are required to hold stocks equal to 90 days of their consumption. The agency's June release of 60 million barrels, in the wake of the loss of Libya's oil exports due to civil war, was the third in its 37-year history.

The IEA cut its global oil demand growth projection on Oct. 12. The agency, an adviser to 28 industrialized countries, cut its global fuel demand growth forecast for 2011 by 50,000 barrels per day to 990,000 bpd. Next year, the IEA said, world oil consumption will expand by 1.25 million bpd, 160,000 bpd less than previously expected.

OIL PRICES

But Jones warned that oil prices above \$100 per barrel are a threat to the global economy and current prices are already having an impact.

High fuel costs are threatening the global economy as nations grapple with rising subsidy bills and inflation. The fuel burden, with oil imports costing around 5 percent of gross domestic product, starts to weigh on economic growth.

"It is already having an impact," Jones said. "An oil burden of more than 5 percent of the gross domestic production is worrying. The last time we saw that was in 2008, and we all know what happened."

Brent crude has stayed above \$100 a barrel since February, when civil war cut output from OPEC producer Libya. The price has averaged over \$111 this year. The benchmark traded above



Richard Jones, Deputy Executive Director of the International Energy Agency. REUTERS/Denis Balibouse

\$109 on Tuesday.

Jones declined to give an outlook for prices for 2012, but said that it should be at a level conducive for further investments and which ensures consumers are not hurt.

Regarding the natural gas market, Jones said he expected Asian gas prices to remain high till more production comes online from countries such as Australia.

Spot liquefied natural gas (LNG) prices in Asia have surged this year following a boost in demand from Japan for power generation as a deadly earthquake in March crippled its nuclear power plants.

"The tightness will continue," Jones said. "There is a lot of demand from countries such as China. Where will the gas come from? Will it be LNG? Will it be pipelines?"

Spot LNG prices in Asia will remain high because of Japan's sudden demand, Nobuo Tanaka, former head of the IEA, told Reuters in an interview.

(Editing by Clarence Fernandez)

Polysilicon Prices May Tumble Nearly 40% On Downturn- OCI

By LEONORA WALET and RANDY FABI

SOUTH Korean polysilicon maker OCI Co said on Tuesday polysilicon prices could fall nearly 40 percent within the next six months due to high global inventories and a severe downturn in the industry.

Prices for polysilicon, a raw material for solar cells, could tumble to as low as \$25 a kilogram by the end of the first half of 2012 from around \$40 currently, OCI chief operating officer Woohyun Lee told Reuters on the sidelines of Singapore International Energy Week.

"In order for us to support our customers we have to adjust our supply price even though we have secured long-term supply contracts," Lee said.

"At \$25, large-scale companies will survive but the 40-50 small-scale companies are not going to survive."

Despite weak markets, the company expects to post a full-year revenue of close to \$2 billion in 2011, up from \$1.2 billion last year, on increased production.

The outlook for 2012, however, was unclear due to the difficult economic environment for its clients.

"Many of our downstream customers, especially in wafer and solar cell sectors, suffered quite seriously during the second and third quarters because prices dropped so suddenly," Lee said.

OCI will decide by the end of the second quarter next year whether to

begin a \$1.5 billion spending plan to build a fifth polysilicon plant by the end of 2013, which would add 24,000 tonnes of capacity to its current 42,000.

The firm expects its fourth plant, with the capacity of 24,000 tonnes, to come online by the end of 2012.

Massive over-expansion, cheap Chinese prices and subsidy cuts in Italy and Germany have caused a 40 percent collapse in solar panel prices this year, driving Evergreen Solar and two other U.S. companies to bankruptcy.

OCI was one of the main creditors of Evergreen Solar and its bankruptcy in August forced the South Korean firm to write off around \$35 million, Lee said.

ANNOUNCEMENTS — NOVEMBER 2

- The launch of Carbon Forum Asia, where **Ambassador Burhan Gafoor, Singapore's Chief Negotiator for Climate Change** will be giving a welcome address.
- The launch of the "IETA Greenhouse Gas Market Report" at Carbon Forum Asia.
- The Panasonic Eco Ideas Forum where **Mr Chee Hong Tat, Chief Executive, Energy Market Authority of Singapore (EMA)** will be giving a keynote address.
- EDB's Solar Pioneer Awards announcement at PV Asia Pacific Expo.
- The PV Asia Pacific Conference, where the top solar scientists such as **Professor Martin Green from the University of New South Wales** and **Professor Hans-Werner Schock from HZB, Germany** will share their perspectives on the latest technological trends on PVs.
- The 6th Platts Top 250 Awards Dinner announcing Platts Top 250 Global Energy Company Rankings, where **Mr Teo Ser Luck, Minister of State, Ministry of Trade and Industry** will be giving a welcome address.

