

# APEC

## Advanced Biohydrogen and Green Growth Newsletter

### Main Story

#### § 2011 APEC Forum on Green Growth and Short-Term Training Course § November 2-5, 2011 Chinese Taipei

The 2011 APEC Forum on Green Growth was held on Nov 2<sup>nd</sup>-5<sup>th</sup>, 2011 at Feng Chia University, Taichung, Chinese Taipei. A total of **349 participants from 13 APEC members and 8 other countries attended** the forum. We were privileged to have **9** distinguished keynote speakers from Chinese Taipei, China, Indonesia, Korea, Japan, Singapore, Thailand, and USA. Each keynote speaker delivered a 40 minutes presentation on the green growth in his/ her country. In the plenary discussion, there were a lot of significant and interesting discussions among participants and keynote speakers.



2011 APEC Forum on Green Growth

The 2011 APEC Short-term Training Course on Green Energy Technology was held at Feng Chia University, Taichung, Chinese Taipei. A total of 37 students from Chinese Taipei, China, Indonesia, Korea, Malaysia, Philippines, Singapore, and Vietnam participated in the course.



2011 APEC Short-term Training Course on Green Energy Technology

*The food security, climate change, energy security, interlinked challenges, and green growth for the APEC region.*

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## Research Report

### § Green World Investors: Google and Mitsubishi States § Gopalakrishnan K<sup>1</sup>, Chyi-How Lay<sup>1,2</sup>, Chen-Yeon Chu<sup>2</sup>, Chiu-Yue Lin<sup>1,2,\*</sup>

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*Google has been making green investments in all sorts of Green Sectors* in its quest to help renewable energy become cheaper than the price of coal. Its earlier investment in a wind farm was quite perplexing as it did not contribute much to the green cause. Now it is looking to take a **35% equity stake in a \$5 Billion Offshore Underground Electricity Transmission Line** on the Atlantic Coast which would link 4 US States. This Transmission line would also get equity contribution from European Green Fund Good Energies. Note Good Energies is one of the biggest and earliest investors in Green Technology. It was the founder member of the first pure play large Solar Companies **Q-Cells and Renewable Energy Corporation (REC)**. Like Google, Good Energies is a somewhat in between a non-profit and profit company. Good Energies recently sold off its stake in Chinese Solar Company to South Korean Chaebol Hanwha so it is flush with cash.



The company said that it's investing in a \$5 billion underwater network that can channel electricity from

wind turbines scattered off the Atlantic coast, enough to light up 1.9 million homes from New York to Virginia.

The first phase of the project, which the developers aim to complete by early 2016, would run about 150 miles and cost \$1.7 billion to \$1.8 billion. The second phase to complete the 350-mile (563 kilometers) line could be finished by 2020.

*Mitsubishi Heavy Industries Ltd, the massive Japanese Conglomerate* is looking to overseas market for growing its Wind Energy Division. Mitsubishi like other Japanese companies is looking towards Green Industry for growth. Japan already possesses solid strengths in this area with its traditional focus on resource efficiency. While companies like Panasonic and Toyota looks towards electric vehicles and batteries, Sharp and Kyocera towards wind energy, *Mitsubishi is focusing its energy on the Wind Sector.*

*Mitsubishi Heavy Industries Ltd* said it will tie up with Scottish and Southern Energy Plc to develop turbines for an offshore wind power project in the United Kingdom. The UK government project will add 32 gigawatts, roughly the output of 30 nuclear power plants, to the country's power generation capacity by 2020.

**Source:**

<http://www.greenworldinvestor.com/topics/green-stocks/usa-green-stocks-greeninvest/>

### § Green Energy Promotions in APEC Region: China's Five Year Plan Delivers Promised Flurry of Green Goals §

Gopalakrishnan K<sup>1</sup>, Chyi-How Lay<sup>1,2</sup>, Chen-Yeon Chu<sup>2</sup>, Chiu-Yue Lin<sup>1,2,3\*</sup>

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China's latest five year plan was formally released, setting out a raft of green targets and initiatives designed to put the world's second largest economy on a more environmentally sustainable development path. The draft plan was launched by Premier Wen Jiabao at the opening of the National People's Congress in Beijing, during which he set out the case for making increased investment in low carbon industries and the government's top priority alongside efforts to tackle the growing gap between rich and poor.

As widely anticipated, the plan, which is expected to be rubberstamped by the Fourth Session of the 11<sup>th</sup> National People's Congress, featured a host of new green targets and policy proposals. Most notably, the plan will set a target to build 235 million kilowatts of new power generation from clean energy sources over the next five years with a view to generating 20% of the country's energy from non-fossil fuel sources. State-backed news agency Xinhua reported the new target will be met through investment in 40GW of new nuclear capacity, new hydropower projects on the Jinsha, Yalong and Dadu Rivers totaling 120GW of capacity, over 70GW of wind power capacity and 5GW of new solar power capacity.

The five year plan is likely to be broadly welcomed by green groups and in a major new report released The Climate Group think tank said the new plan will deliver real carbon savings, bolster China's standing in international climate change negotiations, and trigger a surge in clean tech investment. The report, entitled Delivering Low Carbon Growth - A Guide to the 12th Five Year Plan, concludes that the five year plan compares favorably with International Energy Agency targets for stabilizing atmospheric concentrations of CO<sub>2</sub> at 450 ppm and suggests China is 'pulling its weight' relative to international expectations.

"Green growth is now at the very heart of China's national development strategy," said Changhwa Wu, Greater China Director at The Climate Group. "These ambitious new policies will create the necessary certainty for the business community to ride a new wave of green investment."

**Source:**

<http://www.businessgreen.com/bg/news/2031756>

**§ ADB to Help GMS Boost Biomass Use for Clean Energy, Food Needs §**

**Gopalakrishnan K<sup>1</sup>, Chyi-How Lay<sup>1,2</sup>, Chen-Yeon Chu<sup>2</sup>, Chiu-Yue Lin<sup>1,2,\*</sup>**

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The Asian Development Bank (ADB) is to help the Greater Mekong Sub-region (GMS) scale up the use of biomass wastes in the agriculture sector to meet its growing need for clean energy and food security for poor rural households. The ADB Board of Directors has approved a regional technical assistance project that will be funded by a US\$4 million grant from the Nordic Development Fund along with counterpart financing of \$600,000 from the governments of Cambodia, Lao

People's Democratic Republic and Viet Nam. ADB will administer the grant and carry out the project in the three countries. Biomass wastes, such as rice husks and animal manure— is abundant in GMS countries but is not efficiently used as a source of clean energy or as fertilizer. At the same time, the growing practice of large-scale crop production for biofuel poses a threat to food security by reducing food production and forest land.

“Promoting more efficient use of biomass can

simultaneously address the goals of fighting climate change and improving the well-being of the rural poor, which are often seen as competing priorities,” said Mr. Sununtar Setboonsarng, Principal Natural Resources and Agriculture Economist, in ADB’s Southeast Asia Department.

The project will fund pilot investment projects to scale up biomass technologies such as household biogas systems, biochar kilns, and improved cooking stoves. The project will also conduct studies, build human and institutional capacity on biomass investment, and promote regional exchange among the GMS countries.

“This project will also help strengthen regional cooperation as it will harmonize bioenergy and biomass standards and regulations in the GMS to bring them into line with global standards,” said Ms. Setboonsarng.

The project is due to begin in July 2011 and will be completed by December 2014. The Nordic Development

Fund is the joint multilateral development institution of Denmark, Finland, Iceland, Norway, and Sweden, providing grant finance for climate change interventions in developing countries. The project is part of ADB’s Energy for All Initiative, which increases access to clean, modern energy for inclusive growth and sustainable human development.



Source:

<http://beta.adb.org/news/adb-help-gms-boost-biomass-use-clean-energy-food-needs>

## Special Column

### The Multi-Stage Green Energy Demonstration (MSGED) System of Biological Technology for APEC Member: Indonesia

On November 4<sup>th</sup>, 2011, the multi-stage green energy demonstration (MSGED) was given to Dr. Dwi Susilaningsih, LEMBAGA ILMU PENGETAHUAN INDONESIA-LIPI (Indonesian Institute of Sciences) by the project overseer: Prof. Chiu-Yue Lin. This system is designed and built by Green Energy Development Center, Feng Chia University. It could be used as a source of research and promote the information exchange.

The assistants Delicia Yunita Rahman and Khairul Anam had learned to install and operate the system. They had also joined the APEC short-term training course.



(Left to right) Delicia Yunita Rahman, Dr. Dwi Susilaningsih, project overseer: Prof. Chiu-Yue Lin, and Khairul Anam