



FORUM SUMMARY

Overview of the Asia Clean Energy Forum 2008

1. More than 500 energy experts, entrepreneurs, and government officials from 41 countries met at the Asian Development Bank (ADB) Headquarters in Manila, Philippines on June 3-5, 2008 to exchange experiences and forge new partnerships to act on clean energy opportunities in Asia. Distinguished speakers from the public and private sectors, academia, civil society, and development organizations shared lessons learned and identified opportunities for scaling-up investment solutions that enhance energy security and address climate change.
2. ADB and the United States Agency for International Development (USAID), through its ECO-Asia Clean Development and Climate Program, organized the Forum. Co-sponsors included the Asia Pacific Partnership on Clean Development and Climate (APP), Asia-Pacific Economic Cooperation (APEC), Cities Development Initiative for Asia, and the Governments of Australia, Japan, Norway, and Spain.
3. Participants met amidst urgent calls to scale up investments in clean energy technologies through new policy incentives and innovative financing. Experts estimate that Asia needs up to \$6.4 trillion in new energy infrastructure by 2030. Unless countries invest in technologies to lessen their dependence on oil and coal, they will continue to be vulnerable to price hikes in these commodities and will further contribute to climate change.
4. Participants explored a wide range of topics during 25 sessions covering topics such as financing clean energy projects, removing regulatory barriers to investment, accessing clean energy funds, and regional best practices in energy efficiency and renewable energy. The event featured innovative initiatives promoting small- and large-scale clean energy projects and financing, and attracted extensive international and business media coverage.
5. Opening remarks by Ursula Schäfer-Preuss, ADB Vice President for Knowledge Management and Sustainable Development, highlighted ADB's aggressive actions to address climate change and energy security, including ADB's Energy Strategy 2020 and ADB's first Headquarters Greenhouse Gas (GHG) Emissions Report. ADB also announced that its first annual \$1 billion target for clean energy investment in 2008 was reached six months ahead of schedule.
6. Paul Jones, Deputy Chief of Mission, U.S. Embassy, Philippines, stressed continued U.S. commitment to cleaner technologies and renewable energy. He also noted the leading role that the private sector will play in scaling-up clean energy technologies, noting that global investments in clean energy reached more than \$170 billion in 2007.
7. Angelo T. Reyes, Secretary of Energy, Philippines, applauded the Forum as an example of the type of regional cooperation necessary to address Asia's energy challenges. He called on organizations and governments to continue cooperating across the region, supporting more

opportunities for dialogue and technology transfer.

8. Enrique Peñalosa, Former Mayor of Bogota, Colombia, challenged leaders to build cities in Asia in a manner that promotes economic opportunity, equality, safety, and quality of life for all urban residents. By designing sustainable public transport systems, cities can not only reduce GHG emissions but also promote affordable transportation.

9. Visions for a low-carbon energy future were put forward by industry and government leaders from Austria, the People's Republic of China, Sweden, and the United Kingdom (UK), with a range of perspectives on the future, covering energy, lighting, and management systems. Speakers underscored the need for awareness, good policy measures, rapid-deployment, and public-private partnerships to get energy efficient technology (products and systems) scaled up and into the mainstream.

10. Speakers highlighted the critical role international financing institutions can play by filling the sizable gaps that exist in financing for clean energy and climate solutions. The UK Department for International Development (DFID) discussed the portfolio of Climate Investment Funds (CIF) under development by the World Bank and regional development banks, with support from the governments of Japan, UK (through the £800 million Environmental Transformation Fund), and the US. The CIF aims to provide concessional finance for policy reforms, investments, and pilot programs that meet development goals and create low-carbon and climate-resilient economies—complementing existing instruments such as the Global Environmental Fund (GEF) as well as other initiatives of multilateral development banks. Consultations were held with key stakeholders including potential recipient countries and the fund may be launched at the G8 Summit in July.

Energy Efficiency and Renewable Energy

11. Speakers agreed that in order to scale up the deployment of renewable energy and energy efficiency, it will be necessary to have strong regulatory and financial support for research and development and to raise public awareness. Both mandatory measures (e.g., building codes) and market-based measures (e.g., energy pricing and taxation) can be used simultaneously to promote energy efficiency and renewable energy.

12. Participants heard about a variety of energy efficiency and renewable energy policies including:

- People's Republic of China: target to reduce energy intensity by 20% from 2006 to 2010; renewed Energy Conservation Law; Energy Saving Encouragement Fund; and use of energy efficiency indicators for assessing performance of provincial governors.
- Bangladesh: program to increase use of solar power for community street lighting, clinics, and resorts as a result of dynamic financial models and a strong commitment by private companies.
- Indonesia: use of disincentive tariffs to discourage increased energy consumption, green procurement initiatives, financial incentives, phase-out of inefficient products, and environmental performance targets to reduce residential peak load demand; Indonesia also has a landmark program to distribute 51 million energy-saving compact fluorescent lamps (CFLs) to its subsidized rural customers.
- Korea: exemplary national Energy Conservation Fund to fund energy-saving

technologies, businesses, and projects in all sectors.

- Thailand: national Energy Conservation Promotion Fund, target to deploy an additional 1,200 MW of renewable energy each year; and large-scale potential for community scale power production from biomass.

13. Presentations of a variety of energy efficiency and renewable energy technologies included:

- Marine currents as a viable energy technology, especially in isolated coastal areas, which may also be used with related applications such as water desalinization;
- Biomass gasification as a viable renewable energy alternative, especially where there is opportunity to locally grow energy sources; and
- Efficient lighting as a cost-effective way to reduce GHGs—CFLs are the most affordable option at present, while LEDs provide even greater efficiency but are still too costly for most consumers, and presenters stressed the need for regional harmonization efforts to ensure efficient lighting quality.

Biofuels

14. Recent events have cast doubt on the adoption of biofuels as a core strategy for reducing energy dependence, in terms of food availability and prices, as well as the net energy and GHG mitigation benefits. Panelists encouraged targeted biofuels strategies for Asia that focus on the realities of matching appropriate technology and feedstock with country-specific energy needs.

15. Speakers from Japan, the Philippines, Thailand, the UK and U.S. discussed requirements for the sustainable development of biofuels in Asia. In the Greater Mekong Sub-region, opportunities include land availability, potential for efficient water capture and favorable climate for the production of biofuels. Speakers noted that it is critical to develop appropriate biofuels strategies for each country that guarantees a secure and sustainable biomass supply. Thailand is developing an aggressive biofuels strategy that will scale up cultivation of cassava and sugarcane for transport fuels by 2022.

Cleaner Fuels

16. More than 50 percent of Asia's electricity comes from coal. Responding to this reality, the Forum included several discussions on increasing the efficiency of fossil fuels. As a first step, it is essential to increase coal plant efficiency to the highest level possible technically and economically. While progress is being made in the People's Republic of China and in India, there are many low-efficiency subcritical plants in operation in the region that could be rehabilitated to significantly decrease carbon emissions per unit of energy produced.

17. Speakers from the People's Republic of China, India, and the US presented on the current state of technology for integrated gasification combined cycle (IGCC) and carbon capture and storage (CCS), delivering the following key points:

- Gasification is a commercial option for chemical applications and many IGCC plants are already in operation.
- IGCC with CSS may have a competitive advantage over pulverized coal, but uncertainties require significant development and demonstration.
- Further research, development, and demonstration is needed for different coal types, especially in India, and the public sector has an important role to play in financing this

- investment.
- While CCS is a promising clean energy investment for the future, it is still costly and geologic conditions limit applicability.

Energy Solutions for Cities

18. This year's Forum included a special focus on energy solutions for cities, given rapid population growth and rising energy demand in Asian urban centers. Speakers from the Clean Air Initiative, Cities Development Initiative for Asia, and ADB suggested that professionals working in urban sectors such as transportation and housing coordinate to develop integrated plans for urban rehabilitation. In order to facilitate cross-cutting work and establish the right institutional and incentive structures for clean investments, capacity, and funding at the local level must be enhanced.

19. Representatives from the Clinton Climate Initiative, the International Council for Local Environmental Initiatives – Australia, and the Alliance to Save Energy also emphasized the role of local governments in driving energy efficiency to develop climate change plans, policies, and targets, forge partnerships, and lead by example. Participants also learned about successful energy efficiency projects in cities in PRC, India, and Mongolia where strong government policies including performance-based contracts to finance energy efficiency and integrated transport policies are beginning to facilitate shifts toward lower-carbon technologies.

20. Speakers stressed the need to understand and appreciate local contexts in order to successfully plan energy efficiency and renewable energy policies and programs. Understanding different government structures is essential in order to leverage finance and to implement successful programs.

Finance

21. The Forum featured lessons from both small and large-scale approaches to financing clean energy solutions for Asia. Implementers of a range of projects under the Asia-Pacific Partnership on Clean Development and Climate discussed opportunities for both private and public sector actors to scale-up clean energy and climate programs through micro-finance. Speakers stressed the need to train and build capacity among small and medium enterprises before funding is disbursed.

22. As funding for greenhouse gas mitigation and climate change adaptation continues to rise, carbon revenue is catalyzing an increasing number of clean energy investments in Asia. Representatives from the People's Republic of China, Japan, Korea, and the UK discussed the importance of carbon markets in financing clean energy investments, citing continuing upward trends in certified emissions reduction pricing. Speakers agreed that measures like ADB's new Future Carbon Fund (FCF) are necessary to ensure continuity in clean energy investments by guaranteeing revenue streams in the post-Kyoto implementation period.

From Ideas to Action: Encouraging Innovation and Advancing Alliances For Clean Energy

23. This year's Forum included two new events intended to advance clean energy innovation and create opportunities for partnerships: a *Marketplace of Ideas* and an Open Space Session.

24. The *Marketplace of Ideas* invited experts in clean energy policy, technology, and finance to present posters featuring new solutions and initiatives during an informal networking session open to the more than 500 Forum participants. Judges awarded top innovation awards in five categories:

- *Access to Energy Innovation: PRO-SEED: Enhancing Energy Services in the Rural Areas of Cambodia*, Brahmanand Mohanty, ADEME (French Environment and Energy Management Agency), Cambodia.
- *Clean Energy Finance Innovation: Social Merchant Bank Model for Financing Explicitly Pro-poor Small-Scale Clean Energy Projects*, Russell deLucia, The Small Scale Sustainable Infrastructure Development Fund Inc., USA
- *Cleaner Fuel Innovation: KDV100: Decentralized Energy For Remote Regions in DCs*, Hans-Henning Judek, Energy Visions Japan Co., Ltd., Japan
- *Energy Efficiency Innovation: Eco-Housing Policy to Encourage Energy Efficiency in Residential Construction in India*, Nitin Pandit, International Institute for Energy Conservation, India
- *Renewable Energy Innovation: PICOHYDRO Solution*, Olegario S. Serafica, Renewable Energy Association of the Philippines, Philippines

25. Each *Marketplace of Ideas* winner was awarded a certificate guaranteeing an all expense-paid trip to the Forum in 2009 and indicating that their project will be featured on the ADB and USAID clean energy websites.

26. Additionally this year, an Open Space Session gave participants the opportunity to organize informal sessions on topics not included in the Main Forum. The Session featured one formal panel “Financing Access to Energy for Women and the Poor,” organized by the ENERGIA network, a discussion on decreasing emissions in Asian cities, and a roundtable on improving the quality of renewable energy and energy efficiency practitioners in Asia. The latter yielded a commitment by more than 20 organizations to form a working group that will continue to meet virtually to exchange experiences and improve training initiatives in the region.

27. During a post-event forum, USAID facilitated the signing of an agreement (the “Manila Compact”) by the world’s top three lighting companies—Philips, OSRAM, and GE—the ECO-Asia program of USAID, and a number of national lighting industry associations, with the aim to develop a quality identification system for energy-saving CFLs sold in Asia.

Conclusions

28. Increased participation in this year’s Forum is a testament to the growing reputation of the Forum as the premier regional platform for exchanging practical knowledge and experience related to clean energy in Asia. The organizers and participants were enthusiastic about the results of this year’s event, and are seeking to build on the growing interest from a broad range of stakeholders to collaborate in order to scale-up regional solutions for energy security and climate change mitigation. The ADB and USAID look forward to a deepening their partnership in clean energy and to further engaging this year’s sponsors from the governments of Austria, Japan Norway, and Spain, APEC, APP, and the Cities Development Initiative in Asia, as they begin planning for an even more successful Forum next year.