

Asia Clean Energy Forum

Policy and Finance Solutions for Energy Security and Climate Change



USAID
FROM THE AMERICAN PEOPLE



26–28 June 2007 Manila, Philippines

FORUM SUMMARY

As co-sponsors of the Clean Energy Financing Forum, we would like to share with you a summary of some of the key points and results from the discussions during the last week of June.

Overview of Asia Clean Energy Forum

1. More than 400 officials and experts gathered at the Asia Clean Energy Forum in Manila June 26-28, 2007 to discuss policy and finance solutions for energy security and climate change by scaling up the deployment of clean energy across the world's fastest-growing region. Participants came from 37 countries and represented a wide range of stakeholders, including government officials and policymakers, private sector manufacturers and service providers, national and multinational financial institutions, development organizations, and NGOs focused on energy sustainability.
2. The forum was co-sponsored and organized by the Asian Development Bank (ADB) and the U.S. Agency for International Development's Regional Development Mission for Asia (USAID/RDMA). The U.S. Department of State/OES and the Asia Pacific Economic Cooperation (APEC) Energy Working Group also supported the event. The Forum was structured to encourage interaction and discussion, with a total of 80 speakers participating in 7 plenary sessions, and 15 panels covering the policy and finance issues of energy efficiency, renewable energy, and cleaner coal, as well as the role of civil society and knowledge management in implementing successful clean energy programs.
3. A number of speakers addressed the important connections between clean energy and global climate change, economic and energy security, and environmental health, and many, including ADB President Haruhiko Kuroda, called for action. Mr. Kuroda said "Asia faces a particularly daunting challenge securing the energy it needs to support growth and poverty reduction in a responsible, sustainable way."
4. USAID presented key findings of its recent report, "From Ideas to Action: Clean Energy Solutions for Asia to Address Climate Change," which had been recently released in Bangkok on May 29. The report reviews current energy trends in Asia's six largest developing nations – China, India, Indonesia, Philippines, Thailand, and Vietnam – which account for 96% of the GDP in developing Asia. It is estimated the region will invest as much as \$6 trillion in new energy infrastructure between now and 2030. Without introducing cleaner, more efficient technologies, emissions of carbon dioxide (CO₂) in these countries will more than triple, jumping from 6 billion to 20 billion metric tons per year between 2005 and 2030. USAID/RDM/A also emphasized the advantages of a regional approach in addressing transnational clean energy

challenges and leveraging opportunities for increased cooperation and investment at a regional level.

5. However, the USAID report offers cause for optimism, as it identifies a range of viable and currently available clean energy options could help these countries cut 3.5 billion tons from their annual emissions by 2030, or 25 percent from the total projected increase above 2005 levels. USAID also introduced its new regional program, the Environmental Cooperation-Asia Clean Development and Climate Change Program (ECO-Asia CDCP). The program is working to strengthen the enabling conditions necessary for scaling up investments in clean energy, including policy and market incentives, mobilizing access to finance, and knowledge management to accelerate deployment.

6. ADB also introduced participants to its family of clean energy programs, including the Energy Efficiency Initiative, Carbon Market Initiative, Sustainable Transport Initiative, its Knowledge Hubs, its work on climate change adaptation, and its Energy for All Program which seeks to increase access to modern forms of energy for the poor.

7. Through its Energy Efficiency Initiative, ADB is targeting annual lending for energy efficiency projects to US\$ 1 billion. The total pipeline of energy efficiency loans for the past five years was approximately US\$1.2 billion, and the prospective pipeline for the next two years is about US\$2 billion.

8. ADB also announced the Clean Energy Financing Partnership Facility (CEFPF) for clean energy grants and loans, and will launch the facility in mid-2007.

9. Other clean energy promotion programs presented at the Forum included the Asia-Pacific Partnership for Clean Development and Climate (APP), the initiatives of the Association of Southeast Asian Nations (ASEAN), and the development assistance programs funded by the Japanese and French governments. The APP is a public-private partnership involving Australia, China, India, Japan, Republic of Korea, and U.S. dedicated to the development, diffusion, deployment and transfer of longer-term transformational energy technologies. Approximately 100 APP projects have been approved to date.

Energy Efficiency and Renewable Energy (EE and RE)

10. In the area of energy efficiency and renewable energy, the discussions focused on how to overcome many of the same barriers that have been plaguing the industry for years. There was a feeling, however, that the growing public and political support for aggressive action to mitigate climate change offers a unique window of opportunity to massively scale up investments in clean energy technologies and programs.

Delegates were briefed on a new initiative to implement "massive energy efficiency" through a \$100 million project in Cambridge, Massachusetts, an initiative that New York City is hoping to emulate and which could have wide applications for Asian cities. Led by the Kendall Foundation, the Cambridge Energy Alliance has developed a high-profile campaign targeting all sectors, with a goal of reducing peak demand by 50 megawatts (MW) and reducing fossil fuel use by 5% over the next five years, along with associated major reductions in greenhouse gas

emissions. The project provides a successful example of large-scale energy-efficiency projects involving multiple end-use sectors. More information can be found at <http://www.cambridgeenergyalliance.org>

11. A number of model energy efficiency and renewable energy projects were discussed at the Forum. To obtain more information about these projects, contact forum@cleanenergyasia.net. These included:

- Korea's world-class program on energy standards and labeling;
- China's aggressive policy to reduce its energy intensity per GDP by 20%;
- Thailand's policy to increase its share of renewable energy in primary energy from 0.5% in 2004 to 8% by 2011;
- the Philippines' successful development of nearly 2,000 MW of geothermal energy, to become the world's second largest producer of geothermal energy, and its policy requiring 5 percent of fuel to come from ethanol by 2008
- in India, a feeder-based DSM initiative to address power shortfalls in the state of Maharashtra;
- California's combination of energy standards, codes, and promotion, which have resulted in that state having a 35% lower per capita electricity use than the U.S. as a whole;
- the Efficient Lighting Initiative, which has established an international scheme for certifying the quality and energy efficiency of the top-rated lighting products;
- Honolulu's experience in sustainable urban development; and
- an APEC program to improve the quality of, and to accredit, training programs for renewable energy installers in the region.

Finance

12. Global investments in clean energy have more than doubled in the past three years – from US\$27 billion to more than US\$70 billion in 2006. While most of the clean energy investments and companies are in Europe and North America, the growth in Asia has been substantial with a tripling in the number of clean energy companies to more than 2,700 companies, and with more than 118 venture capital and equity funds in the region targeting clean energy.

13. The basic challenges in scaling up clean energy investment are in the areas of project development and aggregation, standardization and measurement of performance, and in the application of financial tools and instruments that assist project developers and financial institutions in managing project risk.

14. Some of the innovative financing approaches discussed at the Forum included:

- Thailand's Energy Efficiency Revolving Fund;
- the P2E2 Initiative in Hong Kong and China;
- the China Utility-based Energy-Efficiency Finance Program;
- the International Energy Efficiency Financing Protocol, which is being pilot tested in Mexico and Thailand;

- the Performance Risk Guarantee Program, which is being pilot tested in Brazil and proposed for Asia;
- the Private Financing Advisory Network, which is being implemented under the umbrella of the Climate Technology Initiative;
- the Clean Energy Investment Framework, which is implemented by the World Bank and the regional development organizations, including ADB, to provide a pool of funds to support energy access, climate change mitigation, and adaptation;
- as well as a range of efforts to package and implement more energy efficiency projects, more quickly on a streamlined basis;
- a proposal for development agencies to allow governments to use payments due on outstanding debt to finance renewable projects.

Carbon Markets

15. The Forum had two sessions focusing on the role of the carbon markets in mobilizing investments in clean energy. Developing Asia is emerging as a leader in attracting investments for carbon offsets as part of the growing global carbon market. With the launch of the EU Emissions Trading Scheme (ETS) and the continuing developments in carbon offsets and CDM, the market can be expected to grow considerably in the near term. Both the private sector and the ADB are pioneering approaches to further stimulate the markets such as pre-purchase of credits, grants and technical assistance, and better integration of carbon credits into traditional financing models. Expert speakers at the Forum noted that while China and India are very active in the carbon markets, there is a need to ensure that other developing countries are included in the carbon market development as well.

Cleaner Coal

16. Participants learned about large-scale plans for coal power expansion from top-level officials from China, India, Indonesia, Philippines, Thailand, Vietnam, as well as from the International Energy Agency Clean Coal Center. Panelists discussed issues related to the technology, policy and finance of coal power expansion. While participants agreed that coal is not a clean fuel, the planned expansion of coal plants in Asia requires an intense focus on cleaner coal technologies and practices. Business-as-usual power expansion is not acceptable, since the carbon footprint of such a strategy will negate reductions in greenhouse gases achieved in other areas of clean energy. Asian governments are planning major investments in coal power plants to meet future demand, largely out of energy security and cost concerns, with a four-fold increase expected over the next 25 years. While increased plant efficiency could directly translate to approximately a one-third reduction in carbon dioxide emissions from coal power plants, some NGOs “Disneyland” fantasy and suggested that next year’s Forum should omit discussion of coal..

17. Given the broad range of technical expertise within the countries, there is ample opportunity for regional cooperation. Some observers noted the lack of regional cooperation among utilities in the region. It was suggested that it may be helpful to promote an Asia-wide utility network to promote information exchange, research and development, and other technical cooperation.

18. Panelists identified a number of issues related to policy and financing, including requirements for minimum efficiency standards, tariff-setting to stimulate efficiency improvements, and aggressive benchmarking of coal plant performance. Panelists also identified the need for innovative financing models to help overcome the cost differential between conventional and cleaner, advanced coal power plants. A range of financial instruments was discussed, including the use of carbon and green power market revenues, soft loans, “clean coal bonds,” and performance risk guarantees.

Knowledge Management

19. A special panel addressed the issues of knowledge transfer and management. Forum participants heard about clean energy knowledge portals being supported by ADB, APEC, USAID, and the Asia Pacific Network on Climate Change.

20. In order to support the massive scale-up of clean energy in Asia that is needed, is essential for every power plant engineer, every employee on the assembly line, and every architect to think creatively of ways to improve energy efficiency and reduce resource use. To do so, it will be necessary to develop effective methods of packaging and sharing useful knowledge. Such knowledge portals must be useful to senior officials at ministries, utilities, and the private sector, but they must also have a broader reach by targeting thousands of mid-level professionals, allowing them to interact with each other and quickly assimilate best practices.

21. In addition to clearinghouses and databases, participants heard proposals to develop communities of practice focused on specific clean energy topics and to recruit volunteer experts to host discussion forums and information help-lines. Panelists spoke to the various challenges within the area of knowledge sharing, including delivering high-quality data in a targeted manner, making the entire effort demand-driven and user-generated, and the challenge of sustaining these efforts over the long-term without donor assistance. The area of knowledge management clearly lends itself well to public-private partnerships and regional cooperation.

Results

22. While the Forum served as an excellent opportunity for networking and learning about best practices in the region, it also produced some tangible results.

23. ADB announced its plans to work with Indonesia’s utility, PLN, to deliver more than 1,200 MW of demand savings through an innovative program that will give away more than 60 million CFLs. Because the program focuses on PLN’s subsidized customers, each CFL that replaces a standard incandescent lamp will save the utility US\$15, and the aggregate savings from the program will be more than US\$1.7 billion in deferred power generation and reduced fuel costs.

24. The Forum also produced a new initiative to deal with the problem of substandard lighting products that do not last long and provide poor quality light. In order to address this problem of product quality, USAID joined with Philips Lighting and OSRAM to roll-out a regional quality assurance initiative to certify that compact fluorescent lamps (CFLs) sold in the Asia region achieve minimum quality levels. The initiative will initially assist ASEAN countries in establishing region-wide quality standards, collecting data on product performance, and making

the results publicly available. The partners have agreed to work with the Efficient Lighting Initiative (ELI) to certify the quality of CFL products. Under this agreement, CFL manufacturers will meet the voluntary technical and performance specifications established by ELI, through its ELI Quality Certification Institute. At the same time, USAID will work with governments in the region to encourage them to endorse ELI-certified products.

Closing

25. We are excited about the very positive response to this event, and the growing interest from a broad range of stakeholders to discuss ways of accelerating action on clean energy and climate change. The ADB and USAID look forward to continuing this clean energy partnership with other development partners in the region, and to begin planning for an even more successful Forum next year. We also look forward to engaging all of you, through the ECO-Asia's clean energy portal (www.CleanEnergyAsia.net), as well as our ongoing regional workshops and events.

Thank you.

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