



Asia Clean Energy Forum Bulletin

A Daily Report of the Sixth Asia Clean Energy Forum 2011

Published by the International Institute for Sustainable Development in collaboration with the Asian Development Bank

ONLINE AT [HTTP://WWW.IISD.CA/YIMB/ENERGY/ACEF/2011/](http://www.iisd.ca/yimb/energy/acef/2011/)
ISSUE #2, VOLUME 93, NUMBER 9, FRIDAY, 24 JUNE 2011



SIXTH ASIA CLEAN ENERGY FORUM 2011 HIGHLIGHTS: THURSDAY, 23 JUNE 2011

On Thursday, participants of the sixth Asia Clean Energy Forum 2011 bustled around the Asian Development Bank on a second day packed with a morning plenary, and 12 breakout sessions organized around the broad themes of policy and regulation; financing and investment; innovative business models; and energy for all. In addition, a parallel side event on grid-connected solar power in the Pacific was held in the afternoon.



Morning Plenary panel from left to right: Peter du Pont, USAID, Henrik Breum, Vestas Wind Systems, Brad Sterley, Standard Chartered Bank, Pankaj Sehgal, Sun Group India, John Morton, Overseas Private Investment Corporation, Woochong Um, ADB

MORNING PLENARY

FINANCING AND BUSINESS MODELS FOR CLEAN ENERGY DEVELOPMENT: Peter du Pont, USAID, chaired the session.

Henrik Breum, Vestas Wind Systems, emphasized recent changes in the area of wind energy including expansion of the investor base, technological improvements and a focus on creating stable returns, comparing the current development in wind energy to advances in automobile development in the early 20th century. He added that the wind industry is now able to make yield guarantees adding, desperately needed predictability of returns for investors.

Pankaj Sehgal, SUN Group India, explained his company's focus on investing in proven technologies rather than providing higher risk venture capital. He referred to subordinated debt as an important financing component for small renewables operations, and identified energy efficiency as low hanging fruit that remains untouched because of high upfront costs, which in India, the government has attempted to overcome via innovative financial mechanisms. Sehgal identified Husk Power Systems as a replicable, decentralized electricity producer providing inspiration for off-grid rural electrification and energy poverty reduction.

John Morton, Overseas Private Investment Corporation, opened by saying we are in the midst of "the most predictable economic transition in history." He said his job is both to catalyze the private sector and to de-risk investments, both of which require new financial products to overcome challenges of "cracking the energy efficiency nut." He offered the creation of insurance against governmental interference in carbon credit creation, to be used for REDD+ (reducing emissions from deforestation and forest degradation, and conservation) projects, as an example.

Woochong Um, ADB, highlighted that ADB is investing in clean energy venture capital funds but also indicated why funds are not flowing more swiftly into the area of clean energy, describing several challenges including the need for regulatory frameworks that provide certainty to investors.

Brad Sterley, Standard Chartered Bank, continued the discussion on challenges by lamenting that although subordinated debt could be used to replace equity for renewables projects, because they are often too small to be considered by investment banks and profits are low and or subsidized, they still face challenges in acquiring funding.

In response to questions and comments from the audience stressing that although capital is available, viable renewable energy businesses are not being financed because they are either too small scale, do not offer high enough annual returns or repay loans quickly enough, panelists reiterated the need to develop new financial products to overcome these challenges, with Sehgal saying more "radical thinking" is needed in banking.



John Morton, Overseas Private Investment Corporation

BREAKOUT SESSIONS

In the afternoon, participants met in 12 breakout sessions on the Forum's four overarching themes of: policy and regulation; financing and investment; innovative business models; and energy for all. IISD Reporting Services was there to cover ten of these, on topics including: domestic and international carbon trading; the role of large companies in enabling energy for all; energy efficiency investment; developing large-scale renewables projects; earning profit through powering the poor – learning from social entrepreneurs; and green solutions for public transport.

CARBON AND ENERGY FINANCE: DOMESTIC CARBON TRADING: Xuedu Lu, ADB, chaired the session.

Huan Chen, Ministry of Finance, China, presented on the progress of the Chinese domestic carbon market, outlining feasibility studies, national registries, trading platforms, MRV standards and other steps being undertaken to establish China's recently announced mandatory cap-and-trade market.

Pongvipa Lohsomboon, Thailand Greenhouse Gas Management Organization, indicated that Thailand is strengthening market incentives to reduce domestic emissions. She cited the Thailand Carbon Fund and other measures to facilitate links between domestic projects and international compliance markets, as well as efforts to encourage companies and municipalities to undertake voluntary reductions.

Chu Thi Thanh Huong, Ministry of Natural Resources and Environment, Vietnam, described measures being designed to reduce domestic emissions, including a bilateral offset mechanism between Vietnam and Japan, and the Vietnam National Climate Change Strategy.

Dicky Edwin Hindarto, National Council on Climate Change, Indonesia, emphasized the need to simultaneously pursue market and non-market GHG reduction instruments to address the full range of potential projects and spur development of carbon markets and other supply side measures.

Jennifer Morgan, WRI, underlined the need for countries to work through pros and cons of various distribution options for domestic cap and trade. She highlighted the fundamental tension between distribution based on allocations versus those using auctions, and identified key considerations needed to ensure integrity of domestic markets, namely the: inclusion of non-regulated entities; avoidance of double-counting between markets; and integration of standards across local, regional and national levels.

BUSINESS INNOVATIONS TO ENABLE ENERGY FOR ALL – THE ROLE OF LARGE COMPANIES:

Matthew Lynch, World Business Council for Sustainable Development (WBCSD), chaired this session and introduced WBCSD's Access to Energy Initiative.

Peeush Kumar Bishnoi, Siemens AG India, declared that a market driven, rather than policy-driven environment, will be key to overcoming energy access and energy poverty challenges. Bishnoi said Siemens' work on these issues has forced a reevaluation of: who is the customer and what is their purchasing power; what is the appropriate revenue model; and which are the technology options? In doing this, he said



Philippe Reveilhac, Schneider Electric Philippines

that: innovative financing connects revenue models and the customer; innovative technology connects customer and technology options; and policy currently connects revenue models and technology options, but that the market should do so. Scaling up, he said, is not an issue with good business models.

Philippe Reveilhac, Schneider Electric Philippines, introduced Schneider's non-profit BipBop programme, which provides low-cost off-grid energy to bottom-of-pyramid customers, the payments for which recoup Schneider's investment costs. Reveilhac mentioned that wealth creation for local communities is key to opening new markets. He also said innovation needs to be based on listening and anticipating customer wants and needs, and that victory at the bottom of the pyramid will be collective.

Harry Verhaar, Philips Lighting, urged changing current linear models of production, consumption and disposal to circular models based on resource efficiency and focus on quality of life. Accordingly, he said, energy efficiency and renewables must be about prosperity development, not only problem solving. He urged large companies to be more aware of their role as communicators for innovative uses of new technologies, such as off-grid lighting. On scaling up, he said a shift in narrative is needed that will engage fast acting customers and voters, rather than slow moving politics.

ENERGY EFFICIENCY INVESTMENT: The session was chaired by John Morton, Overseas Private Investment Corporation.

Catriona McLeod, ReEx Capital Asia, discussed investing through Energy Service Companies (ESCOs) and energy efficiency funds. She identified returns of up to 35 percent for efficiency investments, compared to 7-15 percent for other asset classes such as commodities and real estate. She said Singapore and the Philippines are currently the most profitable markets due to high electricity rates. She identified investment barriers including performance and credit risks, and uncertainties over electricity prices, energy usage, and time horizons.

Ivan Gerginov, Econoler, described experiences with designing and implementing energy efficiency funds in Bulgaria, China, Chile and Egypt in cooperation with ESCOs and banks. Emphasizing the need for flexibility and project monitoring, he described tailor-made approaches ranging from raising venture capital in Chile to working with the Chinese government to create an ESCO to guarantee returns for investments.

Madeleine Verkay, ADB, estimated the energy efficiency investment potential in Indonesia to be US\$ 4 billion, suggesting that the rubber, paper and garment industries could see energy savings of US\$ 70-150 million a year. She also announced that a US\$ 200 million ADB project for technical assistance in this area is in the pipeline.

Sanjoy Sanyal, New Ventures India, described a financing product targeting SMEs. The product, offered in partnership with the Industrial Development Bank of India, enables SMEs to take out a loan for energy efficiency, while the ESCO guarantees the energy savings.



Matthew Lynch, World Business Council for Sustainable Development (WBCSD)



Xuedu Lu, ADB, Steven Gray, Climate Change Capital, Huan Chen, China CDM Fund, Ingo Puhl, Carbon CME Ltd, Jasper Inventor, Greenpeace

RENEWABLE ENERGY - DEVELOPING LARGE-SCALE PROJECTS: This session was chaired by Yue-Lang Feng, ADB.

Matthew Wood, White & Case LLP, shared a case study from a concentrated solar power project in Abu Dhabi, explaining how large-scale renewable energy projects benefit from well-structured contractual frameworks, strong government support and engagement with experienced and reputable sponsors.

Philip Napier-Moore, Mott MacDonald, suggested methods to improve project success, including: providing contract templates to facilitate clarity on roles and responsibilities; calibrating software and technology to regional contexts to improve forecasting and delivery of energy outputs; clarifying local permitting including environmental impact assessment requirements, aviation radar interference, and grid code compliance.

Emmanuel Guyot, Conergy Renewable Energy Singapore, relayed experiences from developing a solar park in Thailand, recalling that solar technology retains the same energy yield over 20 years, making it necessary to optimize efficiencies and invest in high-quality equipment. He reflected that the central role of the engineering, procurement and construction contractor also impacts the return on investment.

Bernhard Raninger, German International Cooperation (GIZ), presented lessons learned from large-scale biogas production in China, including that capacity building and training to improve technical and operational standards during implementation, as well as throughout the lifespan of the project, was integral to success of these projects.

EARNING PROFIT THROUGH POWERING THE POOR – LEARNING FROM SOCIAL ENTREPRENEURS: The panel was chaired by Dirk Münch, E+Co.

Bart Édes, ADB, introduced ideas on how social enterprise can expand access to energy for poor and vulnerable populations by filling gaps left by donors and charities. He shared examples of innovative and successful efforts as well as ADB microfinancing projects. Édes referenced statistics that point to large amounts of available funding for social enterprises.

Cécile Pompei, Barefoot Power, outlined the three roles her company plays in providing affordable solutions to the poor: manufacturing a range of products to support consumers climbing the “energy ladder;” facilitating business development partnerships and subsidiaries; and seeking investors for funding and support.

Jeroen Verschelling, Kamworks, recounted how his company, driven by the demand of 75 percent of Cambodians being off-grid, set out to provide affordable solar solutions to the poor, including a vision to bring product assembly to Cambodia.

Julius Alip, Center for Agriculture and Rural Development (CARD), presented the role his organization plays in providing microfinance and business development services, focusing on capacity building as insurance for success.

The ensuing discussion centered on challenges in: scaling up; maintaining products/systems and providing training; linking investors with social entrepreneurs to overcome existing gaps; marketing products as ‘aspirational’ and competing with trendier items such as cell phones; and improving productivity through product offerings.

CARBON AND ENERGY FINANCE - LEARNING FROM THE CDM: The session was chaired by Xuedu Lu, ADB.

Steven Gray, Climate Change Capital, summarized recent efforts to streamline procedures within the Clean Development Mechanism (CDM) and reflected on its future prospects given uncertainty about the Kyoto Protocol’s second commitment period. He emphasized that CDM, as a financial mechanism with a stringent monitoring, reporting and verification backbone, has been successful in attracting upfront risk capital.

Chen Huan, China CDM Fund, presented the China CDM Fund, established by the government of China to direct revenue from CDM transactions to enhance market-driven mechanisms for addressing climate change. He asserted that the international CDM has triggered domestic action on climate change, noting that China’s budget allocations for energy saving and emission reductions have risen steeply, with US\$ 25 billion going to such efforts in 2009 and 2010.

Ingo Puhl, Carbon CME Ltd, discussed how institutions and mechanisms created through CDM could support Thailand’s efforts towards meeting renewable energy targets and suggested a share of emission reductions needed to meet domestic targets, transferred to a national compliance account, be recognized as Nationally Appropriate Mitigation Actions (NAMAs).

Jasper Inventor, Greenpeace, reminded participants that carbon markets are tools for achieving emissions reductions and not ends in themselves, warning that Annex 1 parties should not forget the importance of maintaining ambitious emissions reduction goals.

THE ROLE OF THE PRIVATE SECTOR IN DELIVERING INNOVATION FOR CLEAN ENERGY: Kala Mulqueeney, ADB, chaired the session.

Neric Acosta, Council for Asian Liberals, pointed towards the need to spur innovation not only in technology but in policy as well. He advocated a policy paradigm that, while not abandoning regulation, did more to enable private sector solutions.

John Haffner, Bridge Renewable Technologies, shared his company’s experience of working with partners in tropical countries to commercialize gasification technologies. He said although ample opportunities exist for bottom-up approaches to succeed on their own, they must be combined with top-down regulation to deliver global scale transformations.

Tim Jarvis, Arup and the Australia Climate Civics Institute, argued that regulation does not create solutions directly but must rather establish market signals needed for innovation to take hold in the private sector.

Unmesh Brahme, SustainabilityCXO Partners Worldwide and India Climate Civics Institute, called for the democratization of electrical power to the rural poor, who lack



Maaïke Göbel, Renewable Energy & Energy Efficiency Partnership (REEEP)

economic and political power. Rather than bringing top-down systems to the poor, he advocated approaches centered on ensuring that electrification benefits local livelihoods.

Vince Pérez, WWF International and former Energy Minister, Philippines, presented numerous clean energy projects sponsored by WWF in partnership with private sector and government actors in Southeast Asia to demonstrate civil society's underappreciated capacity to foster innovation.

KEY POLICY AND IMPLEMENTATION ISSUES IN RENEWABLE ENERGY: John Byrne, University of Delaware, chaired the session.

Michael Wilshire, Bloomberg, presented an analysis of clean energy finance and investment. Wilshire predicted continued acceleration in investment, despite policy volatility and price uncertainty, will lead to higher consumer and financial costs, and lower developer returns. He said strong policy shifts towards reducing system costs are expected, and cautioned against the risks posed by aggressive bidding to viable project finance and deployment.

Kyung-Jin Boo, Korean Institute of Energy Economics, provided an overview of clean energy policy in Korea. He said Korea is taking an increasingly market-based path towards low-carbon green growth, and underscored its smart application of feed-in tariffs, renewable portfolio standards, and renewable portfolio agreement.

Bundit Fungtamasan, King Mongkut University of Technology, Thailand, recounted the scaling up of renewable energy in Thailand. He identified challenges, such as grid access and stability, but remained optimistic that financial incentives, microgrids, and other strategies would be able to cope with the task.

Shantanu Dixit, Prayas Energy Group, India, urged investors and policy-makers to take a broader perspective beyond the usual discussion of financial incentives and regulatory frameworks. He said these mechanisms have led to rapid growth of renewable energy in India and elsewhere, but a truly sustainable energy system must consider who will bear incremental cost burdens, how to prioritize access for rural households, and how to deal with energy projects' demands for land and water resources within rural communities.

INSTITUTIONAL MODELS FOR TRANSFORMING RURAL ENERGY ACCESS MARKETS: The session opened with chair Frank van der Vleuten, ETC Energy, urging participants to work together to make an institutional transformation.

Win van Nes, Netherlands Development Organisation (SNV), described how household biogas units operate, illustrating their multiple associated benefits, and stressed the importance of quality control by trained local actors.

Islam Sharif, Infrastructure Development Company Limited (IDCO), shared how his company is providing lighting to five million people in Bangladesh, thereby reducing dependency on kerosene, creating jobs, and reducing carbon emissions. Sharif said having efficient and able partners, a firm commercial

basis, constant review of technologies, and microfinance experience are key to moving from pilot projects to sustainable businesses.

Maaïke Göbel, Renewable Energy & Energy Efficiency Partnership (REEEP), explained her organization's efforts to help achieve the MDGs by supporting partnerships through the Sustainable Energy Industry Association of the Pacific Islands (SEIAPI) to find innovative approaches, support pilot projects and provide support for scaling up. She said success often depends on basing strategies on local knowledge and working with in-country champions.

Pradygdhi Jati, People Centered Economic and Business Institute (IBEKA), recounted experiences with rural micro hydro. He indicated challenges associated with the arrival of national grids, including: blackouts; expensive installation; installation delays; and poor customer service, have led many villagers to return to the more expensive, but higher quality service, of local micro hydro.

Elizabeth Muguti, African Development Bank (AfDB), highlighted extremely low electrification rates and constraints on generation, transmission and distribution in Africa. She said the AfDB wants to bundle large-scale projects with small-scale, socially oriented endeavors but that communication with borrowing governments must be improved to increase this bundling.

GREEN SOLUTIONS FOR PUBLIC TRANSPORT: The session was chaired by Prajna Rao, WRI's EMBARQ India, who introduced a framework for action on sustainable transport based on avoiding motorized trips, shifting to more efficient modes of transport, and improving vehicle technologies and transport systems.

Sophie Punte, CAI-Asia Center, illustrated that public transport, walking and cycling represent declining shares of total transport in Asia. She highlighted poor pedestrian access to public transport terminals as a barrier to greater public transport use, and added that corruption among public officials has also led to a bias towards expensive, high-status transport projects while neglecting more affordable solutions.

Jitendra Shah, ADB, called for sustainable urban transport to integrate the needs of pedestrians and street vendors, and questioned the bias of policymakers towards car-centric development while the poor at the periphery of expanding cities encounter greater travel times and costs of accessing livelihoods and schools.

Ernesto Camarillo, City of Makati, described the Makati City Transport Development Strategy of 2011-2020 that will create a pedestrian walkway network, bicycle lanes, bus rapid transit (BRT), and electric "jeepneys" powered by organic waste.

Cresencio Montalbo, University of the Philippines, promoted the BRT approach that includes right-of-way lanes, excellent customer service and image branding, noting that it can be done for a fraction of the costs of rail.

David Margonsztern, ADB, presented the Kathmandu Sustainable Urban Transport Project as a case study in reforming urban transport systems.



Participants at the Energy for All booth