SPONSORS

ASIA CLEAN ENERGY FORUM 2013

UNLOCKING ASIA'S CLEAN ENERGY FUTURE

ACEF 2013 Illustra

	25 June Tuesday			26 June Wednesday			
	Pre-Forum Events						
9:00–10:30	Energy for All: Promoting Private Sector Engagement in Energy Access	EE Global Asia: Regional Workshop on Energy Efficiency	5th Asia Solar Energy Forum	**Plenary 1:** **Asia Clean Energy Forum Opening Plenary** Welcome speeches, keynote addresses			
10:30–11:00	Break			Break			
11:00–12:30	Energy for All: Promoting Private Sector Engagement in Energy Access	EE Global Asia: Regional Workshop on Energy Efficiency	5th Asia Solar Energy Forum	ACEF Phase 1 Parallel Sessions			
				Session 1: Enhancing Energy Security through Regional Cooperation, Trade and Effective Implementation of Renewable Energy	**Session 2:** Energy Efficiency Technologies for Sustainable Cities	**Session 3:** Financing Mechanisms for Sustainable Energy Access	Media Roundtable (for media only)
12:30–2:00	Lunch			Lunch			
2:00–3:30	Energy-for-All Investor Forum	EE Global Asia: Regional Workshop on Energy Efficiency	5th Asia Solar Energy Forum	**Session 4:** Innovation in National Policies and Regulation	**Session 5:** New Models for Utility Delivery of DSM and Energy Efficiency	**Session 6:** Business Models for Mini-grids and Energy Storage	Pacific Department Side Event
3:30–4:00	Break			Break			
4:00–5:30	Energy-for-All Investor Forum	EE Global Asia: Regional Workshop on Energy Efficiency	5th Asia Solar Energy Forum	**Session 7:** Buildings, Appliances, and Equipment: Driving Efficiency	**Session 8:** Mining for Energy Efficiency through Data Collection and Analysis	**Session 9:** Scaling up Clean Cooking Solutions	Pacific Department Side Event
6:00-8:00	Reception hosted by ADB			Reception hosted by ADB and USAID			

* PFAN is the Private Financing Advisory Network.

Visit the official website: www.asiacleanenergyforum.org

ORGANIZED BY

PARTNERS

MEDIA PARTNER

DONORS

ntive Schedule

27 June Thursday			28 June Friday			
Session 10: Getting to a Low-Carbon Economy: Pieces of the Puzzle	**Session 11:** Scaling up Energy Efficiency for the SME Market: Tricks of the Trade	**Session 12:** Catalyzing Energy Access: Removing Policy and Regulatory Barriers to Social Enterprise	**Session 16:** Panel discussion - Public and Private Sector Roles in Financing Clean Energy	**Session 17:** Experience and Case Studies of Biogas and Biomass Energy	**Session 18:** Innovations in Ocean Power, Solar and Large-scale Storage	Ergo Exergy Underground Coal Gasification
Break			Break			
Open Space Sessions 1. IRENA Session - Auditorium A 2. GIZ Session - Auditorium B 3. Global PFAN Session (USAID) - Auditorium C 4. WWF-WRI Session - Auditorium D 5. World Intellectual Property Organization Technology Transfer Session - Briefing Theater 2 6. Presentation on Career Opportunities in ADB, Knowledge Hub, ADB Library			**Session 19:** Strategies for Scaling up Energy Efficiency Finance	**Session 20:** Strategies and Ingredients Needed to Scale up Renewable Energy	**Session 21:** New Platforms for Technology Innovation	Ergo Exergy Underground Coal Gasification
Lunch			Lunch			
Plenary 2: **High Level Panel on Climate Change Financing**			**Plenary 3:** **Reports from the Chairs of the Thematic Tracks** Policy and Regulator Dialogue, Accelerating Energy Efficiency, Maximizing Energy Access, Catalyzing Clean Energy Finance, Promoting Renewable Energy, Emerging Clean Energy Technologies			
Break			Break			
ACEF Phase 2 Parallel Sessions			**Plenary 4:** **Asia Clean Energy Forum Closing Plenary** Panel discussion on Asian Clean Energy Priorities for 2014 and Beyond. Special raffle for iPads Closing Remarks			
Session 13: Enhancing Readiness for Climate Financing	**Session 14:** Global and Regional Perspectives on Renewable Energy	**Session 15:** Developments in Biomass, Carbon Sequestration and Fuel Cells				

- Policy and Regulatory Dialogue
- Accelerating Energy Efficiency
- Maximizing Energy Access
- Catalyzing Clean Energy Finance
- Promoting Renewable Energy
- Emerging Clean Energy Technologies

25 June 2013

Promoting Private Sector Engagement In Energy Access (Auditorium A)

Tuesday, 9:00 am – 12:30 pm

In Asia and the Pacific region, energy access is a pressing issue with 628 million people having no access to electricity and almost 2 billion people relying on traditional biomass for cooking. The UN Sustainable Energy for All Initiative (SE4ALL) was initiated to promote achievement of three targets: provide universal energy access; double the rate of global energy efficiency improvement; and, double the share of renewable energy in the global mix. To achieve these targets, the International Energy Agency estimates that $48 billion per year will be needed. Private sector investment will be crucial in meeting these financing needs to achieve the SE4ALL goals. Although the value proposition of this sector in bringing scalable business solutions for energy access in underserved areas is undeniable, many companies still face significant regulatory, institutional and financial barriers. This pre-forum event will discuss the role of businesses in providing sustainable energy for all and what needs to be in place to attract and leverage private sector investment in the future.

AGENDA

Opening and introduction	
9:00 am – 9:10 am	Introduction and opening remarks by Gil-Hong Kim, Director, Sustainable Infrastructure Division, Asian Development Bank
9:10 am – 9:20 am	Introduction by Filippo Veglio, World Business Council for Sustainable Development
Session 1: Small and medium sized companies and energy access	
Several SMEs will present their paths from non-bankable to bankable entities as well as the support and financial needs they required to transform. Together with government representatives and ADB, it will be discussed how external support can assist SMEs by creating the right enabling environment.	
9:30 am – 10:30 am	PANEL **Arief Heru Kuncoro,** Deputy Director, Techno Economy Energy, New and Renewable Energy, Ministry of Energy and Mineral Resources **Jim Ayala,** CEO & Founder, Hybrid Social Solutions, Inc **Benoit Lacroix,** Manager Solar Systems & Energy Audits Kamworks **Illac Diaz,** Executive Director, My Shelter Foundation MODERATOR **Bart Édes,** Director, Poverty Reduction, Gender and Social Development Division, Asian Development Bank
10:30 am – 11:00 am	**Break**

Session 2: The role for large companies	
Business is the primary solution provider in delivering access to energy, bringing innovative products, services and essential technologies, management and technical capabilities, and financial resources. In this session, companies will present business model innovations and share their perspective on the business role toward expanding access to clean, reliable and affordable energy services.	
11:00 am – 11:45 am	PANEL **J.V. Emmanuel de Dios,** CEO, GE Philippines **Sandra Retzer,** Managing Director, People's Republic of China, Younicos **Franzisca Zimmermann,** Director, Government Affairs and Strategic Relations, Philips MODERATOR **Filippo Veglio,** Director, Development Focus Area, World Business Council for Sustainable Development
Session 3: Financing private sector initiatives	
Investors and financial institutions will share their experiences in investing in energy access projects around Asia and present the challenges in identifying the right projects, the criteria for project selection and the support development partners can provide to assist in these investments.	
11:45 am – 12:30 pm	PANEL **Yanis Boudjouher,** CEO, Reex Capital Asia **Anu Valli,** Investment Associate, Bamboo Finance **Ajaita Shah,** CEO & Founder, Frontier Markets MODERATOR **Sam Tumiwa,** Deputy Regional Director, North America Representative Office, ADB
12:30 pm – 12:40 pm	Workshop summary by **Daniel Riley,** Lead Specialist, Renewable Energy Policy, WWF
12:40 pm – 2:00 pm	**Lunch Break**
Energy for All Investor Forum continues after lunch	

25 June 2013

Energy for All Investor Forum 2013 (Auditorium A)

Programmatic approach to facilitating investment in the energy access sector

Tuesday, 2:00 pm – 6:00 pm

AGENDA

Opening	
2:00 pm – 2:10 pm	**Welcome remarks**
2:10 pm – 2:20 pm	**Building an Ecosystem to Facilitate Energy Access Investment** Jiwan Acharya, Asian Development Bank
Session 1: Facilitating energy access through the private sector	
The participation of the private sector is essential to achieve universal energy access by 2030. There are various organizations and programs currently in place that have resources to help companies with financial, environmental and social returns improve their bankability and access to financing. Energy for All, through its Project Development Facility, has brought these organizations together to create a platform that offers a systematic way for energy access enterprises to access the mentoring support they need and reach out to financiers that meet their investment requirements.	
2:20 pm – 2:50 pm	**Case Study: Investment Closure** **Simpa Networks** **Paul Needham,** President **Sun-ee Pvt. Ltd** **Sovarong Leang,** CEO
2:40 pm – 3:00 pm	**Project Sourcing** **Sanjoy Sanyal,** Country Coordinator, New Ventures India
3:00 pm – 3:10 pm	**Business Development** **Peter Storey,** Global Coordinator, CTI-PFAN
3:10 pm – 3:20 pm	**Investment Facilitation** **Robert Kraybill,** Managing Director, Impact Investment Exchange (Asia), Pte. Ltd.
3:20 pm – 3:30 pm	**Open Forum**
3:30 pm – 3:45 pm	**COFFEE BREAK**
Session 2: Improving Energy for All's support to Financiers	
Apart from the support Energy for All provides to private sector companies, its resources can also be utilized by Financial Institutions that are interested to invest in energy access. This session will explore how Energy for All can increase its value to the investors it has collaborated with in the past.	
3:45 pm – 3:55 pm	**ADB** **Aniruddha Patil,** Private Sector Operations Department
3:55 pm – 4:00 pm	**LGT Venture Philanthropy** **Phat Nguyen,** Investment Manager for Southeast Asia
4:00 pm – 4:05 pm	**ERM Low Carbon Enterprise Fund** **Ms. Purvi Sapre,** Director

4:05 pm – 4:10 pm	**Insitor Fund** **Valerian Fauvel,** Investment Manager
4:10 pm – 4:15 pm	**Bamboo Finance** **Anu Valli,** Investment Associate
4:15 pm – 4:40 pm	**Open Forum**
Session 3: Sustainable Business Models on Energy Access	
The key to long-term impact against energy poverty is creating an enduring entity which can generate these outcomes in a financially sustainable manner. Energy access enterprises have developed business models that can thrive in the difficult market conditions at the base of the pyramid. This session celebrates these companies and seeks to promote their business models and outcomes to the ADB.	
4:40 pm – 4:50 pm	**(India) Frontier Markets** Ms. Ajaita Shah
4:50 pm – 5:00 pm	**(Nepal) Gham Power** Sandeep Giri
5:00 pm – 5:10 pm	**(India) E-Hands Energy Pvt. Ltd.** Chandrasekaran Rahuraman
5:10 pm – 5:20 pm	**(Philippines) One Renewable Energy Enterprises** Erel Narida
5:20 pm – 5:30 pm	**(India) Boond** Rustam Sengupta
5:30 pm – 5:40 pm	**(India) Claro Energy** Karti Wahi
5:40 pm – 5:50 pm	**Open Forum**
5:50 pm – 6:00 pm	**Concluding Remarks** Gil-Hong kim
6:00 pm – 8:00 pm	Cocktail Reception hosted by ADB

25 June 2013

EE Global Asia Regional Workshop on Energy Efficiency (Auditorium B)

Tuesday, 8:30 am – 5:00 pm

Overview:

The EE Global Asia Regional Workshop on Energy Efficiency will focus on integrating effective policies and business practices to create actionable plans for the next generation of energy efficiency. Speakers from all regions of the world will share replicable best practices and policies on driving energy efficiency to scale.

The Alliance to Save Energy is proud to bring its successful EE Global series to Asia through this ACEF pre-conference workshop. EE Global is an exclusive forum that convenes hundreds of international decision makers from government, business, academia, and NGOs to develop worldwide partnerships and share energy efficiency best practices.

AGENDA

8:30 am – 9:00 am	**Registration**
9:00 am – 9:20 am	OPENING REMARKS **Tom Dreessen,** Chairman and CEO, EEPIC; Chairman of the Alliance to Save Energy's International Committee and member of its Board of Directors WELCOME REMARKS **Woochong Um,** Deputy Director General, Regional and Sustainable Development Department, Asian Development Bank
9:20 am – 10:30 am	**Small Steps to a Smaller Footprint: Creating Sustainable Cities** ***How are local officials overcoming financial, political and technological barriers to improve the efficiency of their cities?*** This first session will establish the framework "think global, act local." Speakers will talk about applying sustainability through urban planning case studies. Discussion will center on building awareness, improving transparency and educating the public to overcome these barriers. MODERATOR **Laura Van Wie McGrory,** Vice President, International Program, Alliance to Save Energy PANEL SPEAKERS **Barbara Finamore,** Director of China Program, Natural Resources Defense Council
10:30 am – 11:00 am	**Break**

11:00 am – 12:30 pm	**Race to the Top: Becoming the Most Energy–Efficient Economy in the World** ***What policies and partnerships are successfully driving energy efficiency implementation at the national level?*** The next session moves the discussion from the local to the national level and focuses on energy policies that influence the economy. How can governments inspire innovation, reform regulations, and strengthen standards? MODERATOR **Amit Bando,** President, IPEEC
	PANEL SPEAKERS **Rehan Kausar,** Project Administration Unit Head, Energy Division, Southeast Asia Department, Asian Development Bank **Koshy Cherail,** President, Alliance for an Energy Efficient Economy **Akihiro Kuroki,** Managing Director, Institute of Energy Economics, Japan
12:30 pm – 2:00 pm	**Lunch Break**
2:00 pm – 3:30 pm	**Public–Private Partnerships: Bringing Government & Industry Together** ***How have public–private partnerships successfully unlocked energy efficiency investment and engagement around the world?*** The final session will discuss how government and industry are working together to implement energy efficiency and create sustainable communities. MODERATOR **Ann Quon,** Principal Director, Department of External Relations, Asian Development Bank PANEL SPEAKERS **Glen Plumbridge,** Partner, Sustainable Development Capital, LLP **Normand Michaud,** Director of International Division, Econoler **Jim Steele,** Director of Electricity and Energy Efficiency, U.S. Department of State
3:30 pm – 4:00 pm	**Break**
4:00 pm – 4:45 pm	EE Regional Workshop Roundup–Moderators give summaries, discuss intersections
4:45 pm – 5:00 pm	CLOSING REMARKS **Tom Dreessen,** Chairman and CEO, EEPIC; Chairman of the Alliance to Save Energy's International Committee and member of its Board of Directors
6:00 pm – 8:00 pm	Cocktail Reception hosted by ADB

25 June 2013

Fifth Meeting of the Asia Solar Energy Forum (ASEF) (Auditorium C)

Tuesday, 8:00 am – 5:30 pm

Overview:

The *Asia Solar Energy Forum (*ASEF) is an independent, non-partisan, and non-political knowledge society facilitating solar energy technology transfer across Asia and the Pacific. ASEF helps bridge the information gap between suppliers and developers in the public and private sectors. Its efforts support the growth of local solar energy competence in developing countries of the region, while tackling the barriers to trade in solar and smart grid applications. Members are invited from a range of backgrounds, spanning numerous countries and key stakeholders, and represent utility, finance, manufacturing, and other sectors with an interest in solar energy globally.

The Fifth Meeting of ASEF is dedicated to exploring topics related to solar markets and emerging opportunities in Asia and the Pacific. These topics include state-of-the-art advances in solar energy technology, solar financing approaches, renewable energy policy, and project development experience. The meeting also will facilitate a discussion among ASEF Members on the latest developments and future activities of ASEF (by invitation only).

The program will be organized with opening remarks, to be followed by three panel discussions. Panelists will include representatives from the project development sector, solar product manufacturing, finance institutes, and solar advocacy, among others.

AGENDA

8:00 am – 8:30 am	**Registration**
8:30 am – 8:45 am	WELCOME REMARKS **S. Chander,** Director General, Regional and Sustainable Development Department (RSDD) concurrently Chief Compliance Officer, ADB
8:45 am – 10:30 am	**Panel 1: Solar Markets in the Asia-Pacific Region** ***Key Questions:** What is the current and future landscape of the solar market? What is the experience of your organization in doing solar business? Are energy markets changing to become more friendly to solar deployment? Which solar technology is better, PV or Concentrated Solar Power?* FACILITATOR **Anthony Jude,** Chair, Energy Committee, and Senior Advisor and Practice Leader (Energy), RSDD, ADB PANELISTS **Tim Ryan,** Senior VP Sales, REC Modules Pte. Ltd. **Milo Sjardin,** Head, Asia-Pacific, Bloomberg New Energy Finance **Zhiheng Lu,** Deputy General Manager (Peoples's Republic of China), Abengoa Solar **Frank Haugwitz,** Director, Asia Europe Clean Energy (Solar) Advisory **Amy Wu, Sr.** Business Development Manager, Jinko Solar Co. Ltd. **Shigeki Nakatani,** Director, Business Development, Tokyo Electron Limited

10:30 am – 11:00 am	**Coffee Break**
11:00 am – 12:30 pm	**Panel 2: How Can We Move More Money into Solar Projects: Project Financing** ***Key Questions:*** *What is the business case for your company working on solar? Which financing solutions and innovations do you think are most promising? What policy and regulatory solutions appear fundamental to support a radical shift to solar investment? How might you work with ADB, or other development finance institutions, to address the challenges of financing solar plants?* FACILITATOR **Don Purka,** Principal Investment Specialist, RSDD, ADB PANELISTS **Anand Jain,** Kiran Energy **Jorge Servert,** CEO, Solar Technology Advisors **Thomas Pang,** CEO, Keppel K-Greentrust **Jigar Shah,** CEO, Jigar Shah Consulting **Inderpreet Wadhwa,** CEO, Azure Power **Mike McMullen,** Managing Principal, PowerGuard Specialty Insurance
12:30 pm – 2:00 pm	**Lunch Break**
2:00 pm – 3:30 pm	**Panel 3: Solar Project Profitability and Lessons Learned** ***Key Questions:*** *What are the barriers—policy, technology, financial, etc.—to your solar project development efforts? How do you overcome these barriers? Please share your experience in evaluating the investment and securing the needed capital to bring projects to the finish line.* FACILITATORS **Yongping Zhai,** Director, Energy Division, South Asia Department, ADB PANELISTS **Tarun Kapoor,** Joint Secretary, Ministry of New & Renewable Energy, India **Philip Napier-Moore,** Lead Energy Advisor, Mott MacDonald **Mukul Modi,** Sr. Vice President, SBI Capital Markets **Julius Caesar Rosete,** Chief Technical Officer, ZTE Philippines **Haiyan Sun,** President, APMEA, Trina Solar
3:30 pm – 3:45 pm	WRAP-UP **Anthony Jude,** Senior Advisor, concurrently Practice Leader (Energy), ADB
3:45 pm – 4:00 pm	**Coffee Break**
4:00 pm – 5:30 pm	ASEF General Assembly (by invitation only)
6:00 pm – 8:00 pm	Cocktail Reception hosted by ADB

DAY 1

ASIA CLEAN ENERGY FORUM 2013

UNLOCKING ASIA'S CLEAN ENERGY FUTURE Manila, 25_28 June 2013

26 June 2013

- Policy and Regulatory Dialogue
- Accelerating Energy Efficiency
- Maximizing Energy Access
- Catalyzing Clean Energy Finance
- Promoting Renewable Energy
- Emerging Clean Energy Technologies

Plenary 1: Opening Plenary

9:00 am – 10:30 am

The opening plenary session, led by development and industry experts, will set the scene for the three-day forum. The plenary speakers will share their knowledge and experience working to accelerate the shift to clean energy technologies and options that improve livelihoods, reduce resource consumption and pollution, and move society toward a low-carbon development pathway.

WELCOMING REMARKS

Bindu Lohani, Vice President, Knowledge Management and Sustainable Development, Asian Development Bank

Bindu N. Lohani is Vice President of the Asian Development Bank (ADB) for Knowledge Management and Sustainable Development and a member of the ADB's Management Team. Prior to assuming his current post, Lohani was Vice President (Finance and Administration) of ADB. During his 25 years in the Bank, Lohani held several positions, including Director General of the Regional and Sustainable Development Department (RSDD) (responsible for sectoral and thematic areas like energy, water, transport, urban development, education, environment, gender and social development, and governance) concurrently Chief Compliance Officer, Special Advisor to the President on Clean Energy, Climate Change and Environment, The Secretary of the Bank, and Deputy Director General of Infrastructure Department and Office of Environment and Social Department. Before joining ADB, he worked for the Government of Nepal and was Division Chairman of the Environmental Engineering Program at the Asian Institute of Technology (AIT), Bangkok. Dr. Lohani holds a doctorate degree in Environmental Engineering. Dr. Lohani is a member of the National Academy of Engineering of United States, and is a diplomate of the American Academy of Environmental Engineers and Fellow of the American Association for the Advancement of Science Council. Dr. Lohani served on the 18-member Blue Ribbon Committee for "Grand Challenges for Engineering for the 21st Century", an American National Science Foundation Project, to identify the world's greatest challenges and opportunities in the next century.

Ambassador Robert M. Orr, Executive Director, United States, Asian Development Bank

Robert Orr was confirmed by the Senate as United States Executive Director with rank of Ambassador to the Asian Development Bank (ADB) in September 2010. From 2007–2010, he was Chairman of the Board of the Panasonic Foundation and concurrently Vice Chair of the National Association of Japan-America Societies, a member of the Board of Trustees of J.F. Obirin University, and a member of the Board of the East-West Center Foundation. Prior to this, Ambassador Orr was President of Boeing Japan and held positions as Vice President and Director of European Affairs for Motorola in Brussels, and Vice President of Government Relations for Motorola in Japan. Ambassador Orr has also spent many years in academia, and was a professor of Political Science at Temple University in Japan. His book, The Emergence of Japan's Foreign Aid Power, won the 1991 Ohira Prize for best book on the Asia Pacific. Ambassador Orr holds a B.A. in History, cum laude, from Florida Atlantic University, an M.A. in Government from Georgetown University, and a Ph.D. in Political Science from Tokyo University.

KEYNOTE ADDRESS

Piyasvasti Amranand, President, Energy for Environment Foundation and Former Energy Minister, Thailand

Piyasvasti Amranand was Secretary General of the National Energy Policy Council for many years, and was Thailand's Energy Minister between October 2006 and February 2008. He was also Chairman of Kasikorn Asset Management and President of Thai Airways, and is currently Chairman of the Energy for Environment Foundation. He played a key role in reforms of the energy sector, creation of regulatory framework for natural gas and power, and implementation of aggressive energy efficiency and renewable energy policies. Piyasvasti, born in 1953, obtained B.A. in Mathematics from Oxford, and PhD. in Economics from the London School of Economics.

Harjit Gill, Chief Executive Officer, Philips ASEAN & Pacific

Harjit Gill is Chief Executive Officer of Philips ASEAN & Pacific. In this role, Ms. Gill oversees a team of 10,000 people in 10 countries and is responsible for accelerating growth in the three businesse sectors of Healthcare, Lighting and Consumer Lifestyle. A 23-year veteran in Philips, Ms. Gill has held a variety of international roles in general management with a focus in the last decade on developing business in emerging markets. She has worked in England, Holland, Singapore, Dubai, and Hong Kong. Ms. Gill is passionate about people development and is committed to the company's diversity and inclusion program. She is also a strong advocate of Philips' goal to make the world healthier and more sustainable through innovation. Ms. Gill has shared the company's agenda on sustainable and energy efficient lighting and improving access to healthcare at various regional and global leadership platforms, including Word Economic Forum East Asia. Ms. Gill is a member of the Young Presidents' Organization (YPO) Singapore chapter and the regional chair of YPO's Women's International Network. She is also a board member of the Singapore International Chamber of Commerce (SIIC), the oldest chamber of commerce in Asia.

Chris Flavin, President Emeritus, Worldwatch Institute

Christopher Flavin is President Emeritus of the Worldwatch Institute, a Washington, DC-based international research organization focused on energy, resource, and environmental issues. Flavin is a leading voice on the potential for new energy technologies and strategies to replace fossil fuels—increasing energy security and avoiding dangerous climate change. He is co-author of three books on energy, including Power Surge: Guide to the Coming Energy Revolution, which anticipated many of the changes now underway in world energy markets. Flavin is a founding member of the Board of Directors of the Business Council for Sustainable Energy and serves as a board member of the Climate Institute. He is on the Advisory Boards of the American Council on Renewable Energy and the Environmental and Energy Study Institute. He has participated in several historic international conferences, including the Earth Summit in Rio de Janeiro in 1992 and the Climate Change Conference in Kyoto, Japan in 1997. He regularly provides strategy advice to government officials and business and NGO leaders around the globe. Flavin is a regular co-author of the annual State of the World Report and speaks frequently to business, university, and policy audiences, testifies before national and state legislatures, and meets frequently with government and international leaders. Flavin has written for a range of popular and scholarly periodicals, including The New York Times, Technology Review, The Harvard International Review, and TIME Magazine. Flavin is a native of Monterey, California and a cum laude graduate of Williams College, where he studied economics, biology, and environmental studies.

PUBLICATION LAUNCH

Launch of ADB's report "Same Energy, More Power: Accelerating Energy Efficiency in Asia"

S. Chander, Director General, Regional and Sustainable Development Department and concurrently Chief Compliance Officer, Asian Development Bank

DAY 1

Session 1: Enhancing Energy Security through Regional Cooperation, Trade and Effective Implementation of Renewable Energy

11:30 am – 12:30 pm

Enhancing Energy Security through Regional Cooperation, Trade and Effective Implementation of Renewable Energy Presentations will cover recent developments in regional energy cooperation and security agreements in Asia and the Pacific, an analysis of how trade agreements can reduce barriers to diffusion of clean technologies, and a global review of progress in meeting renewable energy targets.

SESSION CHAIR
Kala Mulqueeny, Principal Counsel, Office of the General Counsel, Asian Development Bank

PRESENTER
Sergey Tulinov, Economic Affairs Officer, Energy Security and Water Resources Section, United Nations Economic and Social Commission for Asia and the Pacific

Presentation title: **Regional Cooperation for Enhanced Energy Security in Asia and the Pacific—Outcomes from the Asian and Pacific Energy Forum 2013**

Energy ministers from member states in Asia and the Pacific converged in Vladivostok, Russian Federation between 27-30 May 2013 to discuss the progress achieved in the region in addressing the energy security challenges at the regional, national and household levels, and to facilitate continuous dialogue with a view to enhancing energy security and working towards sustainable development. The presentation provides an overview of the outcomes from the Ministerial event.

Kohji Iwakami, Economic Affairs Officer, Energy Security and Water Resources Section, United Nations Economic and Social Commission for Asia and the Pacific

Presentation title: **Asian Energy Highway**

ESCAP's 68th Commission session adopted a milestone resolution on promoting regional energy connectivity. The concept of Asian Energy Highway aims to leverage existing initiatives for regional energy cooperation by advancing national energy planning, infrastructure development and power trading across the entirety of the Asia–Pacific region. In light of the growing dominance of the power generation sector in terms of consumption of resources, the development of an integrated regional grid is the focal point for promotion of diversification within the energy generation mix, optimizing efficiencies in energy resource consumption, and reducing exposure to power shortages in a cleaner and more low carbon way. The presentation shares key findings from a regional assessment.

Priyantha Wijayatunga, Unit Head, Portfolio Management, Nepal Resident Mission, Asian Development Bank

Presentation title: **Regional Cooperation for Clean Energy Development: South Asia**

South Asia is blessed with large quantities of renewable energy resources dominated by hydropower, wind and solar power. These resources are scattered in different parts of the region and beyond the national boundaries. At the same time, some countries in the region have years of experience in dealing with renewable energy resource development, particularly in the areas of policy and regulatory interventions and technology deployment. Regional energy cooperation, in this regard, will bring in many benefits to all the countries in the region. The proposed presentation will include (i) the renewable resource development potential in the South Asia region (ii) areas of regional cooperation in RE (iii) barriers for cooperation (iv) lessons from such cooperation in the past and (v) suggestions for the way forward.

Bronson Lee, Senior Leader, Global Market Development, General Electric

Presentation title: **Lowering APEC Trade Barriers to Cross-Border Cleaner Tech: Getting to 2012 and Moving Beyond**

APEC reached a 2012 agreement to cap import duties on 54 categories of environmental goods, including cleaner power products and related best practice technologies to monitor and manage quality of water, emissions, and fuels. This APEC milestone represented groundwork and consensus built over many years, with significant private sector engagement, and is the start of a process to reduce tariff and non-tariff barriers to environmental goods in the APEC region. This case study will examine some tactical elements of how this was achieved, the actual tariff barriers that have been changed, a look at non-tariff barriers and prospects for scaling similar outcomes in future areas within the APEC trade policy framework.

Sarah Martin, Research Analyst, Electricity Governance Initiative, World Resources Institute

Presentation title: **Meeting Renewable Energy Targets- Global Lessons from the Road to Implementation**

118 countries have introduced renewable energy targets. These targets could result in increasing the share of RE in the electricity mix at an annual rate of 0.2–1.5% if met. However, increases in renewable energy deployment have proven to be a challenge. As countries move towards ambitious RE targets, a suite of good policies and practices must exist in order to ensure that renewables can thrive in a competitive energy market. This panel will look at the development of renewable energy based on national targets that have been set in 7 countries (People's Republic of China, the Philippines, India, Germany, Spain, South Africa and Morocco) to understand: how policies were designed, institutional contexts, and capacity requirements. The objective is to identify factors within the process of RE policy development that have led to successes or failures. This will be a multi-stakeholder panel, including regulators, government officials and NGOs from India and the Philippines.

Session 2: Energy Efficiency Technologies for Sustainable Cities

11:30 am – 12:30 pm

This session will examine the building blocks needed to realize sustainable cities in Asia, including urban planning methods and energy efficiency technologies. A recent effort by the World Bank to develop planning tools for medium-sized city managers will be presented, along with presentations on specific energy efficiency technologies well-suited to the urban environment—high-efficiency streetlighting, high-efficiency distribution transformers, and modal shifts in transporting freight.

SESSION CHAIR
Gil-Hong Kim, Director, Sustainable Infrastructure Division, Asian Development Bank

PRESENTERS
Chris Pablo, Senior Urban Development Specialist, World Bank

Presentation title: **Sustainable Urban Energy and Emissions Planning—a Case Study of Cebu City**

Fast-growing cities in the East Asia and Pacific (EAP) region will define the region's energy future and its greenhouse gas (GHG) footprint. Rapid urbanization and growing standards of living offer a major opportunity to EAP cities to become the global engines of green growth by choosing modern energy efficient solutions to their infrastructure needs and by avoiding locking in the energy-intensive infrastructure of yesterday. The underlying studies in three EAP pilot cities (Cebu City [the Philippines], Da Nang [Vietnam], and Surabaya [Indonesia]) show a clear correlation between investments in energy efficient solutions in all major infrastructure sectors and economic growth—by improving energy efficiency and slowing GHG emissions, cities not only help the global environment, but also support local economic development through productivity gains, reduced pollution, and more efficient use of resources. This presentation will focus on Cebu City.

Fabia Tetteroo-Bueno, Country Manager, Philips Electronics

Presentation title: **The LED Future: Street and Outdoor Lighting for Green, Sustainable Cities**

Almost 19% of global electricity is used for lighting, street lighting accounts for the biggest line item on a city municipality's utility bill (on average, about 10-38% of a municipality's budget). Significant energy and cost savings are possible, on average 40%, simply by switching to EE lighting such as LED.

Street Lighting is a major service for many city corporations, and is a major part of the annual energy budget for any government. Adoption of LED street lighting system in new projects and streets will give long-term cost savings for project vehicle and city corporation.

LED lighting systems were piloted in 12 cities across the globe, including many carriageways and streets in Kolkata-India, Quezon City-Philippines, London-UK and New York-USA. These pilots showed significant energy savings and received positive public feedback, proving the performance of LED street lighting is now ready for large-scale adoption worldwide.

Mayur Karmarkar, Director, Asia Sustainable Energy, International Copper Association, Asia

Presentation title: **Holistic Approach to Promoting Higher Efficient Distribution Transformers: The Case of the People's Republic of China (PRC)**

The PRC has recently completed a comprehensive program to initiate a market transformation in favor of higher energy efficient distribution transformers (DT): development and adoption of higher energy performance standards, development of a labeling program, capacity building for DT manufacturers on Eco-Design, and capacity building of end-users (distribution utilities, energy-intensive facilities) on Total Ownership Cost (TOC) of DTs. The market transformation that will result from this program will help PRC save 887 million kWh per year and reduce its CO_2 emissions by 2.7 million tons. The approach adopted and the tools developed will be presented for large dissemination. Such approach has a strong replication potential in the ADB member countries.

Glynda Bathan-Baterina, Deputy Executive Director, Clean Air Asia

Presentation title: **Smarter Freight Movement Through Fuel Efficiency**

Freight movement consumes vast amounts of energy and is one of the least efficient sectors in Asian countries. There is growing market pressure on freight carriers to transport goods more efficiently. Technologies and strategies to improve fuel efficiency and reduce emission intensities are available but are not adopted widely across the supply chain due to market failures. This presentation covers opportunities for greener freight movement, explores the market pressures and failures, and the public-private partnerships needed to overcome these. Specific emphasis is placed on cleaner fuels and fuel efficient technologies applicable to Asia and the national programs worldwide, including US Smart Way and the China Green Freight Initiative.

Session 3: Financing Mechanisms for Sustainable Energy Access

11:00 am – 12:30 pm

The UN-led, global Sustainable Energy for All initiative (SE4ALL), brings together stakeholders in government, the private sector and civil society to mobilize action towards three objectives: to provide universal energy access; to double the rate of global energy efficiency improvement; and to double the share of renewable energy in the global energy mix. The International Energy Agency estimates that $48 billion per year are needed to meet SE4ALL targets by 2030. This amount cannot be financed by donors and public institutions alone but requires catalyzing private sector investment.The session will discuss how the development community can attract and catalyze private sector investment; the financing mechanisms that can be adapted to use existing resources more efficiently (e.g. through output based aid/ results based financing); and, the value propositions for the different organizations and development partners leveraging funding for sustainable energy for all.

MODERATOR
Edita Bueno, Administrator, National Electrification Administration

PRESENTER
Rajan Velumail, Regional Energy Advisor, United Nations Development Programme Asia-Pacific Regional Centre

PANELISTS
Binu Parthan, Principal, Sustainable Energy Associates
Reza Farhan, Assistant Director, Infrastructure Development Co., Ltd.
Pradeep Tharakan, Climate Change Specialist, Energy Division, South East Asia Department, Asian Development Bank

DAY 1

Session 4: Innovation in National Policies and Regulation

2:00 pm – 3:30 pm

This session will include presentations on national policy and regulatory experience in Indonesia, Vietnam, India, and Kazakhstan. It will also include a presentation on a practical approach for sustainable water and electricity supply in India.

SESSION CHAIR
Max Dupuy, Senior Associate, The Regulatory Assistance Project

PRESENTERS
Retno Setianingsih, Energy Program Specialist, Environment Office, United States Agency for International Development, Indonesia

Presentation title: **Promoting Renewable Energy in Indonesia**

The Government of Indonesia has set an ambitious target to increase the shares of renewable energy in the National Energy Mix from 5% in 2006 to 17% in 2025. At the same time, the GOI also aims to reduce GHG emission by 26% on its own efforts or 41% with international support in 2020. Substantial efforts are needed to achieve these ambitious targets. USAID/Indonesia has a 30+years history in supporting the GOI in the energy sector. The Mission's $16 million Indonesia Clean Energy Development (ICED) project was launched in March 2011 and will run until September 2014. The project aims to help Indonesia make significant progress toward low carbon development through an improved enabling environment for clean energy growth (renewable energy, energy efficiency and clean transport). Its activities focus on three key areas: (1) improvement on energy sector policy and coordination, (2) increase development of clean energy projects, and (3) increase institutional capacity and public outreach. The presentation will demonstrate how the project has been able to work with different key stakeholders at the national government, local governments, national utility company, private sector and financial institutions in facilitating development of small scale renewable energy under 10MW (hydro, biomass, biogas) in the targeted areas, from feasibility study stage to financial closure and commissioning. The presentation will also address key challenges in the sector from policy, technical and financing perspectives.

Ranping Song, Team Lead, PRC Climate and Energy, World Resources Institute

Presentation title: **Scaling Up Investment in Solar & Wind Industries: The Case of the Peoples's Republic of China**

Shifting to a low-carbon economy will require countries to rapidly scale up their investments in renewable energy. The People's Republic of China (PRC) is already the leading global investor in renewable energy infrastructure and is increasing its overseas investments in renewable energy. Experiences of scaling up solar and wind investments in the PRC can benefit other nations in need of such investments. This panel will draw lessons learnt from a recent WRI research on the trends and drivers of the PRC's overseas investment in the solar and wind industries and discuss effective policies, market conditions, and financing enablers to encourage solar and wind investments. Panelists representing relevant ministries, leading companies, financial institutions and trade associations from the PRC will share their views from different perspectives and map out the landscape of policies that draw Chinese investors to the renewable energy industries.

Tarun Kapoor, Joint Secretary, Ministry of New and Renewable Energy, India

Presentation title: **Jawaharlal Nehru National Solar Mission - Achievements, Learnings and Future Plans**

Jawaharlal Nehru National Solar Mission (JNNSM) with a target is 20,000 MW of grid connected power by 2022 was launched in India in the year 2010. The first phase of the Mission was completed on 31 March 2013. Besides physical achievements, the focus of first phase of the

Mission was to develop entrepreneurs, technical capabilities and gain experience in order to create the required environment for scaling up during the second phase. The biggest achievement has been massive cost reduction brought about through reverse bidding for procurement of solar power. As India is a large country involving all the stakeholders and motivating them to accept solar power was itself a big challenge. Around 1700 MW of solar power is grid connected and a lot of work is also happening in off-grid as well as solar thermal. Some good work has been done in technology improvement also. The experience so far has been very positive and a very detailed policy document has been prepared for Phase II from 2013–17.

Bijon Kumer Mitra, Water Resource Specialist, Institute for Global Environment Strategies and **Anindya Bhattacharya,** Senior Energy Economist, Institute for Global Environment Strategies

Joint presentation title **Long-Term Water-Energy Nexus: Towards Practical Approach for Sustainable Water and Electricity Supply in India**

India is heavily dependent on high water-intensive thermal power technologies, in spite the country's per capita water availability is defined as stress condition. More than 60% of installed thermal power plants were set up in regions, which are either water scarce or water stressed. This demonstrates an apparent dichotomy in the electricity planning in India which ignores the mid to long term water availability issue in general. As India must accelerate the development of the power sector to fuel the desired level of economic growth of 5% per annum, electricity generation is expected to reach around 4900 TWh by 2050. The projected electricity generation portfolio demonstrates the continued dominance of coal-based thermal power generation in the total electricity supply mix of the country until 2050. According to IGES estimates, if no policy is intervened to restrict further expansion of water intensive power plants, the projected electricity generation in 2050 will require approximately 227 BCM of freshwater and criticality ratio of country's renewable water resources will exceed by 2030. Unless there are appropriate measures taken to deal with the water scarcity issues from both technical and policy perspectives, it is quite likely that the planned electricity generation would be negatively affected; alternatively, other water use requirements for domestic, industry and agriculture would be compromised, consequently, economic development will suffer.

Ashley M. King, Environment and Natural Resources Management Officer, United States Agency for International Development, Central Asia

Presentation title: **Strengthening Implementation of Clean Energy Policies: Kazakhstan's GHG Emissions Trading System**

The Government of Kazakhstan has passed a suite of ambitious laws designed to mitigate greenhouse gas emissions, including an emissions trading system (ETS). The ETS began a year-long pilot period on January 1, 2013, but the ETS Administrator is struggling to put all of the necessary systems in place to effectively implement the ETS before the end of the year. In spring 2013, USAID/CAR supported a capabilities mapping process with the ETS administrator to identify: 1) specific capabilities needed by the Administrator and the business community to have a well-functioning ETS; 2) who currently has the capacity to do them; 3) when do they need to be in place. The project has resulted in a strategic plan for implementation for the Administrator and provided a blue print for donor support and program evaluation. This approach is widely applicable to countries around the world who are putting in place innovative policies for clean energy, energy efficiency, and greenhouse gas reduction.

DAY 1

Session 5: New Models for Utility Delivery of Demand Side Management and Energy Efficiency

2:00 pm – 3:30 pm

This session focuses on energy providers and the growing importance of demand-side management programmes in managing demand growth and improving end-use energy efficiency. Presentations will examine the new DSM Rule in People's Republic of China, demand response and smart grids in India, and a global review of energy provider-delivered energy efficiency conducted by the International Energy Agency with the assistance of Nexant.

SESSION CHAIR
Piyasvasti Amranand, President, Energy for Environment Foundation and Former Minister of Energy, Thailand

PRESENTERS
Barbara Finamore, Senior Attorney and Asia Director of Natural Resources Defence Council and President of the China-US Energy Efficiency Alliance

Presentation title: **Implementing the New DSM Rule in the People's Republic of China (PRC)**

On November 4, 2010, the PRC enacted a national Demand Side Management (DSM) Rule, which calls upon grid companies and local governments to play key roles in implementing DSM throughout the PRC. Grid companies must now use a portion of their electricity revenues to develop large-scale DSM programs for industries and homes to improve energy efficiency. Local authorities must design detailed implementation plans to incorporate energy efficiency savings into their power industry development plans.

In order to drive verifiable results from these two major parties, the Chinese government issued a draft DSM Rules Compliance Evaluation Scheme for the grid companies, and launched a DSM Comprehensive City Pilot Program in 2012. Grid companies and city pilots have been taking action to deliver actual savings, and the government plans to scale up DSM nation-wide with tangible results. This presentation will describe the PRC's plans, challenges and results to date of implementing the new DSM Rule in the PRC.

Sanjay Dube, Chief of Party, PACE-D Program, United States Agency for International Development

Presentation title: **Demand Response in Indian Context**

Electricity customers are not able to see the true production costs of electricity as they vary over time. Demand response is a tariff or program established to motivate changes in electric use by end-use customers in response to changes in the price of electricity over time, or to give incentive payments designed to induce lower electricity use at times of high market prices or when grid reliability is jeopardized.

Vivek Mishra, Director, Infrastructure Consulting Division, Meghraj Capital Advisors Private Limited

Presentation title: **Building Supportive Regulatory Framework to Promote Smart Grids**

The relevance of smart grid in power distribution for India is known. But the current regulatory framework limits its promotion by hindering regulatory approval. This presentation will focus on the need to revisit and reframe the existing regulatory framework to appropriately capture cost and benefits from these projects. For example, the current framework does not provide guidelines on estimation of benefits from (i) reduction in power purchase requirement (ii) benefits of DSM measures (iii) benefits of exceeding the normative levels of reliability and supply to consumers and (iv) other intangible benefits. The period of gains for the utility considered in the regulatory process is limited as the norms are reset at the end of the control period on the basis of actual performance. Further there is no clarity on consideration of gains, which are likely to accrue beyond the existing control period.

Peter du Pont, Vice-President, Government & Clean Energy Consulting, Nexant

Presentation title: **Global Stock-Taking of Energy Provider-Delivered Energy Efficiency**

The IEA recently completed a global review of energy provider-delivered energy savings programmes. The IEA reached out to energy providers to identify the energy savings activities they engaged in. Some 250 energy saving activities were considered, and 41 detailed case studies spanning 18 countries were developed. The case studies provide perspective into what drives energy providers to take on energy savings activities, what type of energy savings activities they perform, and how they achieve success. The patterns, principles and lessons drawn from the case studies are a useful starting point for governments to consider when designing energy efficiency policies for energy providers.

Session 6: Business Models for Mini-grids and Energy Storage

2:00 pm – 3:30 pm

In Asia and the Pacific, more than 600 million people—or around one fifth of the region's total population—lack access to electricity. Technologies such as solar home systems provide the basic energy need s for off-grid communities, but do not support any productive or income generating activities. A mini-grid system could provide a more complete energy solution, however there is limited knowledge and experience in setting up financially viable business models for these systems. Energy for All, in support of its role to pilot innovative business approaches, has been conducting extensive research about the availability and the potential for sustainable business models for mini-grids. The session will introduce to some of Asia's best practices of mini-grid models and discuss different institutional and technological set-ups as well as financing options for replicating existing mini-grids in other off-grid areas.

SESSION CHAIR
Yongping Zhai, Director, Energy Division, South Asia Department, Asian Development Bank

PRESENTER
Lyndon Frearson, General Manager, Cat-projects

PANELISTS
Amit Jain, Access to Energy Specialist, Energy for All Initiative, Regional and Sustainable Development Department, Asian Development Bank

Debajit Palit, Associate Director, The Energy Research Institute

Yong Chen, Regional Program Officer, IRENA

DAY 1

SIDE EVENT: Pacific Department (PARD) (Auditorium D)

2:00 pm – 5:30 pm

Countries of the Pacific region are challenged on a number of fronts in their efforts to provide affordable modern energy services to their populations and businesses. Global energy-market dynamics over the past decade have exacerbated many of these challenges, in particular for countries whose energy mix is dominated by imported refined oil product for power generation. At the same time, new opportunities have arisen as renewable energy technologies have become more mature and cost-competitive, supported by new sources of financing through UNFCCC initiatives and the like.

The ADB's Pacific Department has organized a half-day of discussion of the changing energy landscape in the Pacific region, with presentations of selected case studies from the region.

AGENDA

2:00 pm – 2:10 pm	**Introductory Remarks and Opening** **Ayumi Konishi,** Deputy Director General, Pacific Department, Asian Development Bank
2:10 pm – 2:40 pm	**Energy Road Maps: Addressing Challenges in the Pacific** **Roberto Aiello,** Senior Energy Specialist, World Bank Pacific Department
2:40 pm – 3:10 pm	**Coconut Oil in the Power Sector in the Pacific** Mike McRae-Williams, Director – Environmental Operations, Hatlar Group
3:10 pm – 3:30 pm	**Questions and Panel Discussion**
3:30 pm – 4:00 pm	**Coffee Break – Main Conference Lobby**
4:00 pm – 4:30 pm	**Intelligent Storage for Grid-Integrated Renewables** **Busso v. Bismarck,** General Manager, Autarsys GmbH **Steffen Heinrich,** Managing Director, Autarsys GmbH
4:40 pm – 5:00 pm	**Renewable Energy Readiness (Kiribati Case Study) and Grid Stability** **Yong Chen,** Regional Program Officer, IRENA
5:00 pm – 5:30 pm	**Questions and Panel Discussion; Conclusion**

Session 7: Buildings, Appliances, and Equipment: Driving Efficiency

4:00 pm – 5:30 pm

Presentations will include a modelling analysis to inform building green building policy in the Philippines; public and private sector perspectives on a global efficient lighting transformation program; and an initiative to harmonize standards for air conditioner quality and efficiency in ASEAN.

SESSION CHAIR

Chong Chi Nai, Director, Energy Division, Southeast Asia Department, Asian Development Bank

PRESENTERS

Hans Shrader, Senior Operations Officer, International Finance Corporation

Presentation title: **Determinants to Smart Green Building Policy**

The IFC conducted energy modeling on 60 typical Philippine buildings and analyzed past building trends to predict future growth patterns. This produced an analysis to inform policy makers what policies choices will provide the greatest impact, and which will not. Such an approach can be applied throughout Asia. This presentation will focus on IFC's findings in the Philippines and the potential impact on cost savings for businesses and greenhouse gas emissions mitigation.

Angelica Afanador, Coordinator, Asia Region, en.lighten initiative, United Nations Environment Programme

Presentation title: **Energy Efficient Lighting: A Way to Cost-Effective and Low Carbon Development**

When taking into consideration the national cost savings, the CO2 reduction and the improvement in quality of life, the transition to energy-efficient lighting technologies is one of the most attractive initiatives worldwide, and the most straight-forward of energy-efficiency programmes to initiate. Close to 50 countries spanning Africa, Asia, Europe, Latin America, the Caribbean and the Middle East, have joined the UNEP/GEF en.lighten initiative Global Partnership Programme and agreed to the phase-out of inefficient incandescent lamps by the end of 2016. An integrated policy approach was developed for designing policy measures so that the transition can be sustained by the domestic market without continued external support. Opportunities to scale up this programme across the world and sectors will be presented, as well as the upcoming en.lighten Global Efficient Lighting Forum that aims at developing a global action plan for energy-efficient lighting.

(i) En.lighten's integrated policy approach (IPA)
(ii) Current status of en.lighten phase I (eg. which Asia countries have committed and their respective status of implementation)
(iii) Share important learnings from en.lighten phase I (CFL) as it aims to evolve to phase 2 (LED)
(iv) Plans for en.lighten phase 2 (LED) (as appropriate to share)

Franziska Zimmermann, Director, Government Affairs and Strategic Relations, Philips ASEAN Pacific

Presentation title: **LED Standards: En.Lighten**

The en.lighten initiative is a public-private partnership led by UNEP, supported by GEF, Philips Lighting and OSRAM. The commitment includes international and multi-stakeholder expert taskforces and its Global Partnership Programme in coordination with 46 partner governments. The Asian Development Bank officially participates in two key en.lighten taskforces. This presentation will focus on the private sector perspective on the importance of multi-stakeholder approach (en.lighten) to support effective transition to energy efficient lighting, and highlight existing challenges in Asia on LED standards from a local & regional industry perspective.

(v) Private sector perspective on importance of multi-stakeholder approach (en.lighten) to support effective transition to energy efficient lighting
(vi) From a local & regional industry perspective, highlight existing challenges in Asia on LED standards

Pierre Cazelles, Director, Partnerships Asia, International Copper Association

Presentation title: **Harmonization of Energy Performance Standards for Air Conditioners (ACs) in ASEAN**

The presentation will introduce the program to harmonize energy performance standards for ACs in ASEAN, currently lead by the Copper Alliance and UNEP, with funding from the EU. This program, implemented under the Steering of the 10 ASEAN Ministries in charge of Energy, will result in: 1) harmonizing the standards in ASEAN for the testing methods; 2) having ASEAN countries adopting harmonized policies to increase MEPS for ACs; 3) building the capacity of testing laboratories; 4) Assisting AC manufacturers to improve the energy performance of ACs; 5) creating consumer awareness on the benefits of higher efficient ACs. This 4-year program (2013–2016) will result in a market transformation in favor of higher efficient ACs, which will result in reducing the electricity consumption from households in ASEAN by 5,373 GWh per year, equivalent to a reduction in CO2 emission by 2.7 million tons per year.

Session 8: Mining for Energy Efficiency through Data Collection and Analysis

4:00 pm – 5:30 pm

Data is an increasingly important tool for identifying and developoing energy efficiency savings opportunities in buildings and industry. This session will present several examples of the role that data on energy consumption and facility operations can play in developing and monitoring energy efficiency projects in the Asian region.

SESSION CHAIR
Laura Van Wie, Vice President, International Programs, Alliance to Save Energy

PRESENTERS
James M. Donovan, Chief Executive Officer, American Data Exchange Corporation Group

Presentation title: **Defining "Big Data" in the Environmental World**

Standardizing environmental data so it can be analyzed is a conversation that still occurs on a regular basis, but companies are stymied when it comes to figuring out what information they need and where it resides. The exhaustive list includes obvious information collecting from direct emission sources, but it also includes energy and utility bills, recycling statistics, supplies used (from janitorial to paper products), business travel itineraries, and much more – across the supply chain. When businesses realize that this information is in formats as disparate as paper invoices, spreadsheets, and metering and monitoring systems, it's no wonder that companies are reluctant to 'inventory' their entire operations. The thought of tackling this 'Big Data' project is manageable, however, without straining an entire organization's staff. And, companies that are able to improve their environmental performance are more profitable – with big data being the key to connecting sustainability initiatives to the bottom line.

Saj Kumar, Vice President, SCM, SRM, MFG & PLM, Line of Business Solutions, SAP Asia Pacific and Japan

Presentation title: **Driving Energy Efficiency – An Environmental and Cost Imperative**

Companies are beginning to understand the true cost of energy and to learn to deal with volatile energy markets and growing energy demand. Energy must be managed as carefully as other processes, materials, and costs. Governments are also introducing standards and laws around energy management. High energy consumers are now bound to appoint energy officers, build an energy management plan and report on energy consumption periodically. Governments can work with standards bodies and solution providers to help companies drive higher energy efficiency through incentives and tools.

The proposed presentation will cover energy management technologies/IT solutions that companies are using to drive energy efficiency including setting energy consumption targets and reporting on energy consumption internally and to government, and a case study on how a large oil refiner saved $120M in energy costs by embarking on an energy management project across the enterprise – challenges faced, innovative solutions and outcomes.

Jean-Marc ALEXANDRE, Manager, Energy EfficiencyProgram, International Copper Association (Southeast Asia)

Presentation title: **The ASEAN Energy Management Scheme (AEMAS) and the Energy Management Gold Standard (EMGS)**

ASEAN countries are leading the way in encouraging the adoption of ISO 50001 through the AEMAS, which provides comprehensive training to energy managers on how to implement a sustainable energy management system based on ISO 50001. Under this program, ASEAN countries are one step ahead of ISO 50001 by encouraging factories and buildings to adopt the Energy Management Gold Standard which, on top of ISO 50001, requires companies to demonstrate investment in energy efficiency projects and ascertain improvements in energy efficiency. To date, over 2,000 energy managers have been trained and companies like CP (Southeast Asia's largest food processing company), PTT (Thailand's oil company), Texas Instrument, San Miguel and Toshiba already had some of their facilities (factory, building) certified under the Energy Management Gold Standard.

Ashis Pati, Assistant Manager, Projects, ITC Limited, Paperboards and Specialty Papers Division

Presentation title: **Energy Management at ITC Paperboards and Specialty Papers Division Unit at Bhadrachalam, India**

ITC as a company is committed to build a sustainable, secure and inclusive future for its businesses through a Triple Bottom Line approach which focuses on economic, environmental and social aspects in a holistic manner. Since paper making is an energy intensive industry, efficient energy management becomes one of the most significant contributors to the sustainable development of our paper and paperboards factory at Bhadrachalam. This presentation will talk about how ITC is able to effectively manage our energy initiatives by enabling shop-floor level visibility into use of electricity, steam, water, fuels etc. The presentation will focus on how we have been able to directly interface plant machines with Enterprise Resource Planning tools to automatically aggregate data in customized dashboards for people in different levels of management - which in turn has enabled effective monitoring of Key Performance Indicators (KPIs) with respect to energy and environmental performance.

DAY 1

Session 9: Scaling up Clean Cooking Solutions

4:00 pm – 5:30 pm

Since the creation of the Global Alliance for Clean Cookstoves, whose goal is to provide 100 million households with access to clean cooking solutions by 2020, the topic of clean cooking has gained attention among the international donor and development community. The US government has pledged US $50 million for clean cookstoves over a timeframe of 5 years. More efficient and cleaner cooking solutions exist and can be provided through market-based mechanisms, however for around 2 billion people in Asia these solutions are inaccessible. for the lack of success of cookstoves in many Asian countries, ranging from lack of government support and regulatory framework, financing and consumer awareness or willingness.

SESSION CHAIR
Rehan Kausar, Unit Head, Project Administration, Energy Division, Southeast Asia Department, Asian Development Bank

PRESENTER
Iwan Baskoro, Program Director and Technical Advisor, Geres

PANELISTS
Wim van Nes, Senior Strategy Officer, SNV
Govind Pokharel, Executive Director, Alternate Energy Promotion Center
Iqbal Mahmud, Deputy Secretary, Power Division, Ministry of Power, Energy & Mineral Resources

27 June 2012

- Policy and Regulatory Dialogue
- Accelerating Energy Efficiency
- Maximizing Energy Access
- Catalyzing Clean Energy Finance
- Promoting Renewable Energy
- Emerging Clean Energy Technologies

Session 10: Getting to a Low-Carbon Economy: Pieces of the Puzzle

9:00 am – 10:30 am

This session will include presentations on a low carbon road map for Beijing, policy frameworks to support grid integration of renewable energy in Indonesia, and the development of regulatory frameworks for carbon capture and storage.

SESSION CHAIR
Pradeep Perera, Principal Energy Specialist, East Asia Regional Department, Asian Development Bank

PRESENTERS
Alexander Ochs, Director, Climate and Energy Program, Worldwatch Institute

Presentation title: **Low Carbon Road Maps—the Necessary Policy and Regulatory Frameworks**

The Worldwatch Institute's Sustainable Energy Roadmaps have become a powerful tool to build the capacity of communities around the world to improve access to sustainable, reliable, and affordable energy. This presentation will present the methodology and key insights from its application in a number of countries and regions.

Chizuru Aoki, Climate Mitigation Cluster Coordinator and Senior Technology Transfer Officer, Global Environment Facility

Franck Jesus, Senior Climate Change Specialist, Global Environment Facility

Joint presentation title**: Investing in Urban Systems and Transport: GEF Experiences and Lessons Learned**

The Global Environment Facility (GEF) has supported over 50 sustainable transport and urban systems projects since its inception in 1991, in close cooperation with recipient countries and GEF Agencies. The GEF has allocated approximately $300 million to these projects, leveraging over $3 billion in co-financing. Asia has had the largest share, with more than 20 projects. The GEF projects focus on reducing greenhouse gas emissions, and include integrated approaches to promoting energy-efficient low-carbon cities. The presentation features key projects and lessons learned from the GEF experiences with investing in urban systems and sustainable transport. The GEF's continued commitment to facilitate local efforts towards safer, cleaner, and more resilient cities with positive impacts on the global commons will also be discussed.

Zhuang Xing, Associate Professor, Energy System Analysis Research Center, Energy Research Institue, National Development and Reform Commission

Presentation title: **A Study on Beijing Low-Carbon Energy Development Roadmap**

The climate change has become one of important factors for sustainable economic and social development in the world. Beijing has established her ambitious low-carbon energy development goal towards a world city. This presentation is on the study of low-carbon energy roadmap for Beijing. The study provides several results: The firstly to define the total energy control target and CO_2 emission reduction goals; secondly, it is stressed that realizing the goal of energy saving and emission reduction to close to the level of the World's Cities; thirdly, it is critical for Beijing to develop a secure and diversified energy supply system; fourthly, the low-carbon development strategy should be integrated in the city economy development to improve the city's competition capability as a world class city.

Milosz Mogilnicki, Resident Advisor, PLN (Perusahaan Listrik Negara), U.S Department of Treasury, Office of Technical Assistance

Sutiyo Siswanto, Senior Manager for Hydro Energy, New and Renewable Energy Division PT PLN (Persero) Head Office

Presentation title: **Integration of RE in Indonesia, Challenges and Opportunities for PLN**

The Government of Indonesia spent $9.7 Billion in 2011 on electric power subsidy provided to the PLN, Indonesian state own electric utility. The PLN is under immense pressure to lower its average production cost, but at the same time increase its electrification rate in the country. Given Indonesia's unique geographic and demographic composition, PLN faces many challenges in the process of integration of RE technologies ranging from pure technical and engineering challenges to those political, financial and economic. The presentation will analyze the process of policy development procedures and mechanisms, directly related to the integration of small (under 10MW) projects to PLN's existing power system. Large emphasis will be put on PLN's goals and challenges associated with the RE integration into its existing power system, but also highlight most recent regulatory developments (FIT, incentives) promoting RE in Indonesia, which could successfully help increase S.E. Asia's largest RE market.

Session 11: Scaling Up Energy Efficiency for the SME Market: Tricks of the Trade

9:00 am – 10:30 am

The small and medium enterprise (SME) sector in Asia is critical in driving economic development and jobs creation. This sector is also particularly difficult to target for energy efficiency improvements. This session will draw from practical experience in Vietnam, Cambodia, and India to present proven approaches to engaging SME operators and mobilizing the finanzing needed to realize energy savings potential.

SESSION CHAIR
Koshy Cherail, President, Alliance for an Energy Efficient Economy

PRESENTERS
Mayte de Vries, Consultant, Energy Access and Business Development, ETC-Foundation
Do Thuy Ha, Local Project Coordinator, MEET-BIS Vietnam

Joint presentation title: **Promoting Efficient Technologies in SMEs in Vietnam**

Mainstreaming Energy Efficiency through Business Innovation Support (MEET-BIS) will present on the project's role in introducing innovative business development and sales techniques for effective sales of energy efficiency equipment to SMEs.

Energy efficiency technical supply companies in Vietnam traditionally tend to focus on large accounts. Entering into the rapidly developing SME market requires new sales skills and techniques. MEET-BIS supported technical product suppliers to develop and internalize a new approach to market.

During its four years, the project partnered with suppliers of energy efficient technology. Together, market research was performed and innovative business development and sales techniques were introduced for effective SME sales.

Up to Q4 2012 the project promoted improved technologies under 3,000 SMEs and mobilized over 300 SME investment. This EU funded project is in its final stage, and is implemented by ETC-Energy, TriodosFacet and AidEnvironment.

Alexander Ablaza, Principal Advisor, Energy Efficiency, Development Finance International, Inc.

Presentation title: **Maturing Energy Efficiency Finance - SME Models for Development Finance that Leverage Private Sector Investments**

Previously, IFOs and MDBs maintained the notion that large EE technology providers can, by themselves, lead the transformation of energy end-use markets toward higher-efficiency technologies. Today, IFOs and MDBs are starting to gain some understanding of the reluctance of the private sector to assume full credit risks related to EE finance and how the needed financing structures, aggregation vehicles and technology delivery models are outside the comfort zones of both the IFO/MDB and the private sector. Both sides will need to build and work through an investment platform that allows a more effective aggregation of EE projects as a new investible asset class that will reduce risk and attract more private capital. We will need to see what EE finance models have been mainstreamed by IFOs/MDBs (EE credit lines, risk sharing facilities, bulk procurement through sovereign loans) and how new models can be developed to leverage the technology inputs, market reach and internal resources of EE technology providers.

Pamli Deka, Research Consultant, New Ventures India

Presentation title: **The Contradiction Between Attractive ROIs and Low Customer Adoption of Energy Efficiency Products**

Through field-work we uncover real barriers, customer satisfaction issues and perception challenges related to Energy Efficiency (EE) products. The common belief that upfront financing is ”the” barrier for penetration of EE products gave way to a new set of findings. Lack of confidence in the available solutions, perceptions and failures seen in existing installations have slowed down EE penetration. Despite having access to finance, prospective customers fail to find an integrated solution provider with technology that can be customized as per their requirements.

Through our website, we share our insights from our surveys about how vendors can accelerate customer adoption. Off-the-shelf technology cannot lead to large scale EE penetration. We need a common platform to share these issues and discuss solutions. Our website (http://nvindia.biz/energy/) will be used as an online tool and our workshops will become a platform to help overcome these barriers across geographies.

Benoit Lacroix, Manager, Solar Systems & Energy Audits, Kamworks

Presentation title: **Introducing Energy Efficiency in Cambodia - Helping Businesses to Pick-Up the Low Hanging Fruits**

With a rapid growing energy demand, a high potential for energy savings and very high energy costs, Cambodia is a world of opportunities for energy efficiency. However, the development of the sector faces many issues, from the low level of awareness to the lack of standards and regulations. Where foreign business will often use the practices of their origin country, local ones usually do not consider the efficiency issues – until they receive a higher and higher bill, and find out how and where they can save.

For 2 years now, Kamworks, a social enterprise established in Cambodia in 2006, has been helping many businesses to improve their energy efficiency, from small restaurants to 400 room hotels and 22 floors office towers. This presentation describes how Kamworks managed to steadily raise the interest of local business on energy efficiency issues, and summarizes lessons learnt from the field.

DAY 2

Session 12: Catalyzing Energy Access: Removing Policy and Regulatory Barriers to Social Enterprise

9:00 am – 10:30 pm

The United Nations has declared 2014-2024 as the Decade of Sustainable Energy for All. Yet the International Energy Agency has predicted that, at current rates of electrification, by the year 2030, 1.2 billion people will still have no access to electricity, compared to 1.4 billion today. To accelerate sustainable energy access, the right policy and regulatory groundwork must be laid to allow innovative and transformational business models that are already delivering access to energy to be scaled up and sustained. The World Resources Institute's recent issue brief on *"Implementation Strategies for Renewable Energy Services in Low-Income, Rural Areas"* makes clear that a range of innovative business models are needed to deliver energy access. This session will explore these models and the policy and regulatory environments they require to fully develop.

SESSION CHAIR
Alex Doukas, Research Analyst, World Resource Institute

PRESENTER
Sanjoy Sanyal, Director, New Ventures India- WRI

PANELISTS
Ajaita Shah, Chief Executive Officer and Founder, Frontier Markets

Rustam Sengupta, Chief Executive Officer, Boond

Bart Édes, Director, Poverty Reduction, Gender and Social Development Division, Regional and Sustainable Development Department, Asian Development Bank

OPEN SPACE SESSIONS

International Renewable Energy Agency (IRENA) REMAP 2030 (Auditorium A)

27 June 2013, 11:00 am – 12:30 pm

Doubling the Global Share of Renewable Energy: A Roadmap to 2030

Introduction

The International Renewable Energy Agency (IRENA) is developing REMAP 2030—a global renewable energy roadmap to double the share of renewable energy (RE) in the global energy mix by 2030 (measured as share of total final energy consumption). The Roadmap is based on a bottom-up country-by-country analysis of RE options between 2010 and 2030, and projections of the costs associated with those options. Based on this analysis, a cost supply curve is developed that includes both planned RE options and additional RE options that are deemed as "realistically feasible" between now and 2030.

It is an evolving process. The aim of this session is to not only present REMAP methodology, discuss selected country studies , and but more importantly to make the REMAP study more inclusive by reaching out for energy experts and relevant institutions for potential collaboration with IRENA on this important mission.

REMAP Process

The country analysis aims to explore the country potential to contribute to the global target of doubling the RE share by 2030. The aim of the country analysis is to identify actionable items that can be put into practice if governments decide to do so. National analysis will then provide the building blocks to achieve the global SE4ALL target. Countries have been requested to nominate national REMAP experts to evaluate and verify the results, and country-related results as well as policy recommendations will be cleared with national IRENA focal points.

In 2013, the REMAP process will focus on largest economies in terms of their expected energy use and demand growth in 2030. This will be complemented with analysis for smaller economies that have expressed interest. The role of smaller economies should not be underestimated because some small countries may have early opportunities and ambitious plans for energy transition to higher RE share and they can provide valuable insights and act as lighthouses for energy transitions elsewhere.

Structure of the Session

The session will start with an overall introduction of REMAP and relevant IRENA activities, followed by a presentation on REMAP methodologies and preliminary findings from four country case studies. ADB will share its perspectives on the doubling of renewable shares in the region. Discussion session will be highly interactive in order to meet the following three purposes: 1) gain as many different perspectives as possible through intensive and extensive discussions with the experts and audience; 2) identify potential key individual experts and institutions that would be engaged in the further development of REMAP; 3) formulate a couple of specific sub-tasks that could contribute to the development of REMAP.

The session will end with summarized key outcomes/messages out of the discussions and a couple of potential sub-task groups that could work within IRENA's REMAP.

DAY 2

AGENDA

11:00 am – 11:15 am	**Yong Chen,** Country Support Program, IRENA **IRENA and Doubling the Global Share of Renewable Energy**
11:15 am – 11:45 am	**Asami Miketa,** Innovation and Technology Centre, IRENA IRENA's REMAP2030 and country studies (Peoples's Republic of China, India, Indonesia, Japan)
11:45 am – 12:00 pm	**Anthony J. Jude,** Chair, Energy Committee, Senior Advisor and Practice Leader (Energy), Regional and Sustainable Development Department, Asian Development Bank ADB's perspective on doubling the global share of renewable energy
12:00 pm – 12:30 pm	Discussion on the country studies and REMAP way forward – Discussants from the respective countries – Q&A and open discussion

Supporting the Energy Transition in Asia—Policies and Regulations to Enhance RE Markets (Auditorium B)

27 June 2013, 11:00 am – 12:30 pm

Germany has become famous for its *Energiewende*. Yet, energy transitions can be found all over the world as countries outline and sharpen their future energy systems. What do these transitions look like in Southeast Asia? Which policies are implemented to achieve these transitions? What lessons can be learned for other countries? These and other questions will be discussed during the GIZ side event about policies and regulations to enhance renewable energy markets.

AGENDA

OPENING

Robert Kressirer, Country Director, Philippines, GIZ

Mario Sander von Torklus, Executive Director, Asian Development Bank

KEY NOTE

The German Energiewende and the Asian Perspective of Energy Transition

Christoph Menke, University of Applied Sciences, Trier, and Joint Graduate School of Energy and Environment, Bangkok, Thailand

SOUTHEAST ASIAN EXPERIENCES

Thailand: Poonpat Leesombatpiboon, Senior Policy and Plan Analyst, Ministry of Energy

Philippines: Maris Cerezo, Deputy Director, Renewable Energy Management Bureau, Department of Energy

Indonesia: Jon Respati, Director of External Relations, International Institute for Clean Energy and Climate Change

Vietnam: Ho Thi Lan Huong, Renewable Energy Expert, Institute of Energy, Ministry of Industry and Trade

Open Panel Discussion

Bridging the Gap: the Challenges and Opportunities of Scaling Up Finance for Climate Mitigation Projects in Asia (Auditorium C)

27 June 2013, 11:00 am – 12:30 pm

11:00 am – 11:10 am	**Zeph Taylor,** Clean Energy Advisor, USAID E3 GCC, Introduction & Overview & Co Panel Moderation Peter Storey, CTI PFAN Global Coordinator, Co-Panel Moderation
11:10 am – 11.20 am	**Nagaraja Rao** CTI PFAN Country Coordinator (India)
11:20 am – 11:30 am	**Coy Navarro,** CTI PFAN Country Coordinator Philippines
11:30 am – 11:40 am	**Sov Leang,** CEO Sun-eee Pte Ltd.
11:40 am – 11:50 am	**Don Purka,** Principal Climate Specialist, Asian Development Bank
11:50 am – 12:30 pm	**Panel Discussion**

Q&A

The panel will present CTI PFAN's new streams of work in Asia and explore the challenges and opportunities for scaling up the provision of investment and financing for Clean Energy in the Asian context, addressing the following topics:

i. A readout of CTI PFAN's activities and experiences to date and an outline for the plans for scale up in Asia;

ii. introduction and overview of 2 PFAN country operations in India and the Philippines, focussing particularly on the effort to step change PFAN's capacity and coverage;

iii. comments from Asian project developers using CTI PFAN to finance and implement mitigation technology transfer projects, focussing in particular on the challenges faced by project developers and what is missing from existing support services in the project development value chain;

iv. comments from investors / financial experts helping CTI PFAN to scale up its financing facilitation activities for mitigation projects, focussing on the challenges and barriers that investors and banks see in the existing markets and potential solutions to overcome these;

v. The following themes/opportunities will be explored:
   a. Sector Segmentation
   b. Bundling Approaches
   c. Partnering with other Institutions & Activities
   d. Development of Financing Instruments

Each of the panellists will make short introductory statements around the above issues which will then be used to open up a discussion amongst the panel members and the audience. The goal is to showcase CTI PFAN's activities, raise awareness of the services available, discuss the challenges and opportunities of the scaling up process and create an opportunity for knowledge-sharing among those involved in similar work.

WORLD RESOURCES INSTITUTE

Financing the Transition to Renewable Energy: The Role of Cities (Auditorium D)

27 June 2013, 11:00 am – 12:30 pm

Purpose of session: The announcement of a new ADB-WWF collaboration to inspire investors and cities to commit new investments for a renewable energy (RE) future. The collaboration aims to accelerate RE investment in Asia-Pacific as part of WWF's global Seize Your Power (SYP) campaign. Increasing financing for renewable energy can be achieved faster if public funds are effectively leveraged to attract private investments. The ADB partnership on WWF's Earth Hour City Challenge Programme aims to provide inspiration for low carbon and renewable energy development in cities in the Asia Pacific. The findings of the WWF-WRI report on meeting renewable energy targets across some countries of the world will also be discussed.

Target audience: Investment community representatives, city and city network representatives, ADB staff, policy makers and media from the region and the world.

Expected outcomes:

1) Announce ADB's commitments towards renewable energy with a specific new announcement around WWF's Earth Hour City Challenge Programme.
2) Increase interest among new cities to join the Earth Hour City Challenge (EHCC).
3) Inspire the private sector to follow ADB's lead on RE investment in cities.
4) Amplifynew ADB renewable energy investments and rise in renewable power in general through online and traditional media.
5) Disseminate findings of the WWF-WRI report on meeting renewable energy targets.

Session on WWF-WRI report	
11:00 am –11:10 am	**Welcoming Remarks,** WWF
11:10 am –11:20 am	**Meeting Renewable Energy Targets: Global Lessons from the Road to Implementation,** WRI
11:20 am – 11:30 am	Q & A
Session on WWF and ADB collaboration on cities, energy access and renewables	
11:30 am – 11:40 am	**Introduction to WWF's Seize Your PowerCampaign** (Including an introduction to the Earth Hour City Challenge), WWF
11:40 am – 11:50 am	**ADB perspectives on its collaboration with WWF on the Seize Your Power Campaign/EHCC,** ADB
11:50 am – 12:20 pm	**Panel discussion:** Accelerating City Investment for a Renewable Energy Future: A Multi-Stakeholder Approach to Prevent Carbon Lock-in Insights from ADB, ICLEI, representatives from city governments and commercial banks
12:20 pm – 12:30 pm	Questions from the floor and closing statements
12:30 pm	**Networking Lunch**

World Intellectual Property Organization Session (Briefing Theater 2)

27 June 2013, 11:00 am – 12:30 pm

Innovation, Technology Transfer and Intellectual Property – Opportunities and Challenges

MODERATOR
Christian Wichard, Deputy Director General, WIPO, Switzerland

PANELISTS
Anthony Jude, Senior Advisor and concurrently Practice Leader (Energy), ADB, Philippines

Paul Basil, Founder & CEO, Villgro Innovations Foundation, India

Kingsley Kalusha, SS Gate, People's Republic of China

Working at Asian Development Bank and Presentation on Career Opportunities (Knowledge Hub ADB Library)

27 June 2013, 11:00 am – 12:30 pm

Presentation on Career Opportunities in ADB

Ann Rennie, Deputy Director General, Budget, Personnel, and Management Systems Department, ADB

DAY 2

Plenary 2: High Level Panel on Climate Change Financing

2:00 pm – 3:30 pm

Climate Change poses serious threats to the economies of Asia-Pacific countries. In order to prevent the catastrophic impacts of climate change, we need to keep global temperatures below 2 degrees and protect vulnerable communities and ecosystems. Huge investments are needed to enable countries to transition to a low-emission, climate resilient future. According to the IEA, this transition will cost approximately $10 trillion dollars in energy investments alone by 2050. There is clearly a huge gap in financing available for climate action vs. the needs of developing countries.

This high-level panel will bring together government leaders civil society and private sector stakeholders and MDB representatives. They will focus on how to scale up financing for climate change action in the Asia-Pacific region.

CHAIR and MODERATOR
Bindu Lohani, Vice President, Knowledge Management and Sustainable Development, Asian Development Bank

PANELISTS
Mary Ann Lucille Sering, Vice Chair and Executive Director, Climate Change Commission and Office

Manish Bapna, Executive Vice President and Managing Director, World Resources Institute

Mario Sander, Executive Director, Constituency Office for Austria, Germany, Luxembourg, Turkey and the United Kingdom

Sungwoo Kim, Regional Head, Climate Change & Sustainability Practice, KPMG Asia Pacific

Session 13: Enhancing Readiness for Climate Financing

4:00 pm – 5:30 pm

This session will describe a range of approaches to building readiness for climate financing. The presentations will cover access to green financing mechanisms in Asia, an analysis of the private sector perspective on climate finance, case studies of climate readiness activities, a facility to finance innovative climate technologies and approaches.

SESSION CHAIR
Samuel Tumiwa, Deputy Regional Director, North American Representative Office, Washington DC, Asian Development Bank

PRESENTERS
John Bruce Wells, Chief of party, LEAD Program, United States Agency for International Development (USAID)

Presentation title: **Fast Out of the Gate – Access to Green Growth Finance in Asian Countries**

Total current climate investment amounts to 20 to 30% of what is required for a global transition to a low carbon economy. This presentation will share key findings of the USAID report *"Fast out of the gate: how developing Asian countries can prepare to access international green growth financing,"* based on data collected in 2012. The report reviews main public and private sector funds and mechanisms for financing low emission projects, businesses and infrastructure in the Asia region to mitigate climate change and provides recommendations on how to further increase

access to climate finance. Focus is placed on countries that are part of the Low Emissions Asian Development program (Asia LEAD) – Bangladesh, Cambodia, India, Indonesia, Lao PDR, Malaysia, Nepal, Papua New Guinea, the Philippines, Thailand, and Vietnam.

Aman Srivastava, Research Assistant, Climate Finance Program, World Resources Institute (WRI)

Presentation title: **The Role of Climate Finance in Creating an Enabling Environment for Investment in Clean Energy**

Readiness activities, designed to create enabling policy, institutional, industry and financial sector conditions, are essential to catalyzing public and private investment in low-carbon energy. This panel discussion will draw on experiences from several country case studies to identify key lessons for developing countries and funders in creating "readiness" for scaled-up investment in clean energy. Panelists representing government, industry and the financial sector in Asian case study countries will discuss their experiences of the role of climate finance in catalyzing clean energy investment. A panelist representing an international finance institution will provide a contributor's perspective. Panelists will then discuss recommendations for providers of international climate finance, most pertinently the Green Climate Fund. The discussion will raise awareness among national policy makers and international development finance institutions of the role of climate finance in creating attractive conditions for investment, leading to a greater emphasis on readiness activities and ultimately contributing to scaled-up low-carbon energy.

Hirak Al-Hammad, Project Coordinator, International Advisory Services , Frankfurt School of Finance & Management gGmbH

Stefan Drenkard, Head of Energy Advisory Services, FS-UNEP Collaborating Centre for Climate and Sustainable Energy Finance, Frankfurt School of Finance and Management gGmbH

Presentation title: **Fostering Innovation in the Finance Industry**

Climate Finance Innovation Facility provides Asian banks/FIs with technical assistance (TA) and funding to innovate new products and services for the renewable energy and energy efficiency sectors. A broad range of activities eligible for support, including market assessment, business plan, institutional and staff capacity building, promotion, product roll-out, etc. Over 20 climate focused financial products are being supported and implemented in 15 FIs located in India, Nepal, Pakistan, the People's Republic of China, Mongolia, Vietnam, Cambodia, Philippines, Indonesia, and Tonga. Many of these supported financial products are being replicated in the country/region. The presentation will comprise of impacts of the facility, case studies on innovative finance mechanisms across the region and how associated TAs have created over $50 million investment opportunities for the FIs through establishment of new products and services in the climate mitigation sector. The facility is funded by the BMU, Germany and jointly managed by Frankfurt School-UNEP Collaborating Centre and UNEP.

Sungwoo Kim, Regional Head, Climate Change & Sustainability Practice, KPMG Asia Pacific

Presentation title: **Private Sector's Perspective of Climate Finance**

The overall objective of the presentation is to explore options for how, in practical terms, the private finance sector can increase its participation in financing clean energy sector in the medium- to long-term along with Green Climate Fund, $100 billion per year. The private sector has different capabilities including risk management, innovative nature, and efficiency in delivering outcome, complementing those of governments and civil society. Therefore, for a practical, effective and efficient sustainable development agenda, an enhanced role of the private sector will be required. The presentation will share invaluable experience based on the opinion from private sector, specifically finance experts ranging from financial investors to strategic investors. The presentation will answer the questions: (i) Does the conventional measure of financial viability adequately take into account a range of risks that the issue of climate change presents to existing portfolios? (ii) With the conventional measure of financial viability, how appealing are the large-scale low-carbon investments in comparison with business-as-usual? (iii) How would the public sector help shift towards large-scale and long-term low-carbon investments?

DAY 2

Session 14: Global and Regional Perspectives on Renewable Energy

4:00 pm – 5:30 pm

This session will include presentations on global, regional and national perspectives on Renewable Energy. The presentations will discuss key issues for governments and regional policies and regulatory mechanisms which may enhance and encourage renewable and alternative energy production and use.

SESSION CHAIR
Sridhar Samudrala, President and Chief Executive Officer, International Energy Consulting Co

PRESENTERS
Laura Williamson, Communication and Outreach Manager, Renewable Energy Policy Network for the 21st Century

Presentation title: **Renewable Energy Status**

The presentation will cover the latest findings of REN21's 2013 *Renewables Global Status Report* (launched on 12/6/13) and REN21's recently launched *Renewables Global Futures Report*. The *Renewables Global Status Report* (GSR), first released in 2005, has become the most frequently referenced report on renewable energy market, technology and policy trends. The report is a true collaborative effort consisting of more than 500 contributors, including authors, researchers, and reviewers. The REN21 *Renewables Global Futures Report* provides a pioneering synthesis of the full range of credible possibilities for the future of renewable energy. The report is not one scenario or viewpoint, but captures the contemporary thinking of 170 leading experts from around the world. It incorporates the results of 50 recently published and prominent energy scenarios by a range of organisations as well as estimates of future global investment in renewable energy and projections for global technology markets.

Hendrik Meller, Chief Advisor, Renewable Energy, Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH

Presentation title: **Renewables - Yes we Can! Setting the Right Framework Conditions for Renewable Energy Development in Europe and Asia**

The presentation will highlight the importance of incentive policies for renewable energies. It will draw on the experience of Europe (especially Germany) and Asia (especially Philippines and Thailand) regarding the Feed-in Tariff and other incentive policies for renewables. The presentation will cover the price and cost trends (e.g. impact on consumer rates; comparison with fossil fuel costs) as well as market development looking into employment effects, CO2 emission savings and investments in RE. It will emphasize the role of energy sector institutions, e.g. regulatory bodies and the system operators. Furthermore, the presentation will address the major obstacles with regard to RE development and give an outlook of future trends in policy design.

The presentation will be based on facts of the German "Energiewende" and on the knowledge and achievements of GIZ in implementing RE projects throughout Asia (especially in the Philippines & Thailand) and in other developing countries worldwide.

Philip Napier-Moore, Project Director, Mott MacDonald

Presentation title: **PV industry status and trends: Lessons learnt from Thailand's First Five Years of Utility-scale PV**

Since 2009, utility-scale solar photovoltaic (PV) plants have taken off in Thailand, with 1 GW expected to connect to the grid within 2013. While public data is scarce, Mott MacDonald has supported the majority of this new PV capacity, over 1 GW of PV developments in Thailand, and is therefore uniquely placed to draw lessons from the trends observed. This presentation will provide an overview of operating plants, cost and technology trends, the key changes observed

as the Thai PV industry has matured over the past 5 years, common technical issues and mitigations from implemented projects, and comment on the future industry prospects. Analysis of lessons relevant to other countries in the region supporting solar PV will be provided, including for solar-diesel hybrid schemes, for off-grid regions and islands.

Frank Haugwitz, Director, Asia Europe Clean Energy (Solar) Advisory Co. Ltd.

Presentation title: **The People's Republic of China's Solar PV Energy Policy Prospects and its Domestic Market Impact until 2015**

March 2011 PRC approved its 12th Five-Year-Plan stipulating policy objectives and quantitative targets that will directly impact industries connected to renewable energies including photovoltaic. Due to support policies the PRC's domestic market experienced 3.5 GW of installations in 2012. Driven by a number of factors the National Energy Administration set official targets for PV of 35 GW and 50 GW by 2015 and 2020 respectively. In this context, govt institutions announced PV support policies designed to stimulate domestic demand for PV. In this context, between March 2009 and today the govt. financially subsidized Roof-Top and Building Integrated PV systems and approved so far along with the Golden Sun Demonstration projects 6.3 GW. Since August 2011 a national FIT triggered 2.7 GW in 2011 and for 2012 approx. 4.5 GW. The latest announcement is calling for a policy to support distributed generation of PV aiming at self-consumption at site.

Session 15: Developments in Biomass, Carbon Sequestration and Fuel Cells

4:00 pm – 5:30 pm

This session will present developments in technologies that utilize carbon based fuels, with presentations on renewable biomass, carbon capture, and fuel cells (using natural gas) covering both large and small scale applications.

SESSION CHAIR
Ashok Bhargava, Director, Energy Division, East Asia Department, Asian Development Bank

PRESENTERS
Chandrashekar Iyer, Executive Director, Infrastructure Consulting Division, Meghraj Capital Advisors Private Limited

Presentation title: **Unlocking the Potential of Biomass Power**

Biomass can have a substantial role to play to meet energy demand for developing economies such as India. Development of biomass helps support rural economy and can improve energy access in rural areas. However, the resource has not been able to take off due to limited engagement of rural communities, lack of clarity in prices, no standard fuel supply and commercial agreements, and wavering supply. India has had a mixed bag experience with biomass. The aim of the proposed presentation shall be to present the experience in India in taking forward biomass based generation, the barriers that have hindered the deployment and suggest policy, regulatory, commercial and financial innovations required to give the much required push to the fuel. The presentation shall suggest business model that can be deployed in increasing the share of biomass in our energy mix.

Ricky Tsui, Leader of Research & Development, Arup East Asia

Presentation title: **Algae for Energy Production and Carbon Sequestration**

The development of biomass not only can prompt agricultural economy development, realizing waste to energy, but also improve national energy security, especially for those developing agricultural countries in Asia such as the People's Republic of China (PRC), India and the Philippines etc. This presentation will firstly give a brief review on few biomass technologies

widely used in the PRC's i.e. crop straw fired power plant, biomass pellet, biogas plant and biofuel. Those industries are facing various challenges, e.g. unstable material supply, competition with arable land use, low efficiency of material collection and growth. Therefore, considering the advantages of algae, e.g. high cultivation speed, high productivity per-acre, no need of arable land and so forth, this presentation will then focus on algae by illustrating its application process, from selection, cultivation to end products, in combination with Arup's research experience. Algae's prospective applications and further research needs will also be discussed at the end of the presentation.

Alice Gibson, Capacity Development Manager, Global CCS Institute

Presentation title: **Status of Carbon Capture Technologies**

Carbon capture and storage is one of the vital emerging clean energy technologies needed to help achieve our CO2 mitigation goals - in addition to renewables, nuclear, and energy efficiency technologies.

This presentation will provide an overview of the global status of CCS projects. In will also highlight the status of capture technologies as a key aspect of CCS, key challenges to large-scale demonstration of capture, as well as the industries that are already capturing CO_2 at a commercial scale and how we can move towards greater commercial-scale demonstration.

Lim Then Poh, Business Development Manager, Ballard Power Systems

Presentation title: **Commercially Viable Fuel Cell Telecom Backup Power Solutions**

Learn how fuel cell power generation systems provide complete backup power solutions for wireless telecom providers, and other critical networks. We will discuss how fuel cell systems for backup power deliver solid reliability at an attractive lifecycle cost with important business benefits not available from traditional power sources.

For telecom service providers occasional, prolonged power outages can be devastating. Dantherm's fuel cell generator system is one of the most reliable solutions on the market today, offering a number of advantages over conventional batteries and diesel generators. Compact and scalable, with the ability to rapidly respond to changes in power demand, Dantherm's fuel cell systems provide dependable clean power at a lower cost and higher efficiency.

Vincent Ghim, Team Leader, Business Strategy & Marketing Group, Energy Fuel Cell Business Division, POSCO Energy

Presentation title: **Clean & High Efficiency Energy Solution – Fuel Cell**

A fuel cell is a highly efficient and ultra clean power generation system, which produces electricity and heat from the electrochemical reaction between hydrogen and oxygen without combustion. The features of this technology, such as high efficiency, reliability, distributed generation and eco-friendliness, provide a viable solution for the Asian-Pacific region where has been facing rapid urbanization and intensive energy consumption. This presentation will focus on POSCO Energy's experiences with fuel cell development.

28 June 2013

- Policy and Regulatory Dialogue
- Accelerating Energy Efficiency
- Maximizing Energy Access
- Catalyzing Clean Energy Finance
- Promoting Renewable Energy
- Emerging Clean Energy Technologies

Session 16: Panel Discussion—Public and Private Sector Roles in Financing Clean Energy

9:00 am – 10:30 am

This panel discussion features a range of approaches to public-private cooperation, including leveraging and blending of public and private finance, loan guarantee products, and the finance of green transportation in small cities.

MODERATOR
Carolyn Keating, Director, Investment Funds, Overseas Private Investment Corporation

PANELISTS
Pankaj Sehgal, Managing Director & Head, Investments, SUN Group

Hisaka Kimura , Head, Private Sector Infrastructure Finance, East Asia Unit, Asian Development Bank

Hallam Chow, Partner, Energy, Infrastructure, Project and Asset Finance, White & Case LLP, Asia

Alison Eskesen, Senior Advisor, Development Credit Authority, United States Agency for International Development

Alain Ries, Head, Sustainable Transport and Energy Division, Agence Francaise de Development

DAY 3

Session 17: Experience and Case Studies of Biogas and Biomass Energy

9:00 am – 10:30 am

This session will include case studies from India, Vietnam, Singapore and the United States. The emphasis will be on bio-fuels, bio-gas, and commercialization of unconventional fuels for power/ electricity generation and use.

CHAIR
Anurag Mishra, Senior Clean Energy Specialist, United States Agency for International Development

PRESENTERS
Chandra Shekar Jadhav, Director, Marketing, Nandan Cleantec Limited

Presentation title: **Promoting Bioenergy into Rural India**

Taking into account the limited natural resources and rural energy needs, Nandan, an Indian sustainable bioenergy company, has adopted vertically integrated approach and formulated innovation and improvement at each level from seed to oil with its primary focus of development of non-edible oil seed crops with minimal input requirements and which can be grown on undervalued marginal degraded land.

NCL is currently implementing second generation technology for biodiesel conversion, which completely transforms the economics of bio-energy cultivation by converting the oil component of the seed as well as pruned biomass into green diesel, giving greater benefits.

To meet rural energy requirement Nandan, considering the individuality of each area, has developed innovative operational methodologies, ensuring sustainability, generating employment, investing into rural development and improving infrastructure. The models are as follows the Public Private Panchayat Partnership, Public Private Partnership, Estate, Self-Help Groups and NGO Models.

Wim J. van Nes, Senior Strategy officer, Renewable Energy ,SNV Netherlands Development Organisation

Presentation title: **Building a Medium-Scale Biogas Sector in Viet Nnam**

This presentation will highlight SNV's vision of building a market driven medium-scale biogas sector in Vietnam. Over the last 18 months SNV has introduced an affordable, locally designed and produced medium-scale biogas model for the intensive livestock sector. Building off the lessons from the trial and SNV's experience of over a decade managing the nationwide domestic biogas programme, SNV plan to make that vision a reality.

SNV will demonstrate that medium-scale biogas technology has the potential to offer the current 21,000 medium scale farmers the triple win of renewable energy generation, waste control and fertiliser production.

There are benefits for the environment: at market saturation medium scale biogas could produce 950 GWhe of clean energy and mitigate 4 million tonnes of CO2e per year from avoided methane emissions. And there are benefits for the farmers: the technology removes barriers to farm expansion and increases rural economic activity and agricultural productivity.

David M. Robins, Senior Water and Sanitation Specialist, RTI International

Presentation title: **Codigester Creator Toolkit - Enabling Codigestion of Agricultural Wastes for Maximum Methane Productivity**

Co-digestion is the anaerobic digestion of multiple waste feedstocks in one digester. Feedstocks include livestock manures and underutilized crop and food wastes (including fats-oil-grease).

When feedstocks are properly combined, methane generation can exceed 10 times the amount produced from individual feedstocks. While the variables are exacting, the benefits of much greater energy production are driving significant interest. To enable co-digestion at scale, RTI International and North Carolina State University are developing a Co-digester Creator toolkit that allows operators to plan the optimal mixing of wastes to achieve an appropriate carbon to nitrogen ratio (C:N) and digester sizing and operation scenario. Cost, energy, and other outputs are estimated to allow comparison of different digester units and gas handling designs. The toolkit is intended not only to help agricultural enterprises properly manage co-digestion, but also to provide quick, customizable analysis to show that proposed projects are bankable based on their energy outputs.

Kazunari Fukui, Marketing Director, APAC, GE Power & Water

Presentation title: **Commercialization of Unconventional Fuel Based Power Generation**

With increasing electrification needs, abundance of biomass resource and improvement in various gasification technologies, there is growing potential in accessing unconventional fuel sources for clean power generation in ASEAN. By utilizing gasifiers to convert biomass to syn gas and using the fuel for gas engine based power generation, these waste-to-energy applications have potential to provide power in areas not connected to the main grid, allowing for wider electrification in the region. However, aside from technical feasibility, there are numerous challenges in enabling these projects to become common practice, and various creative commercialization approaches are required.

This presentation will explore ASEAN potential around biomass (including woodchip, rice husk and palm waste) and low-rank-coal (LRC), through the real experience of developing various project opportunities in the region. It will then discuss potential future path and support mechanism required for to enable broader commercialization of these clean technologies in the region.

Session 18: Innovations in Ocean Power, Solar and Large-Scale Storage

9:00 am – 10:30 am

This session will present the status and merits of various ocean and solar power technologies as well as energy storage options that can help match intermittent renewable energy supply with demand patterns.

SESSION CHAIR
Yongping Zhai, Director , Energy Division, South Asia Department, Asian Development Bank

PRESENTERS
Lourdesiree Latimer, Chief Executive Officer, Director Bell Pirie Power Corporation Energy Island Bell Pirie Ltd.

Presentation title: **Can Ocean Power Asia? Case Study of the Cabangan 10 MW OTEC Pilot Plant in the Philippines**

Ocean energy from thermal energy conversion (OTEC) is an abundant resource untapped in Asia. This clean emerging technology can offer base load power scalable across the region. The presentation will describe the Cabangan 10 MW OTEC pre-commercial project. It will outline the energy climate of the Philippines, its market characteristics and the government policies that make OTEC possible. It will identify the barriers and enablers encountered by the developer in the course of securing the project's service contract, feed-in-tariff rate and permits and licenses and the

challenges of designing a couture investment model to commercially finance this newly emerging technology. OTEC provides an innovative energy source that is abundant in Asia. By describing the technical, regulatory and commercial challenges, and how they can be met this presentation will present tangible lessons to enable OTEC to be part of the energy mix across the region.

Peter Gnos, Ocean Kinetics, Market Manager ANDRITZ HYDRO GmbH

Presentation title: **Introducing Tidal Stream Technology to Chile, Indonesia and the Philippines**

The tidal technology from Andritz is new and has only been installed in the European Marine Energy Centre (EMEC) in Orkney, Scotland. The 1 MW tidal turbine paves the way for commercial tide turbines.

Christian Holter, Founder, Shareholder, and CEO, S.O.L.I.D GmbH, Graz, Austria & SOLID Asia Energy Service, Singapore

Presentation title: **Solar Cooling for Asian Countries-Potential, Challenges and Hurdles**

Most sunbelt including south Asian and Southeast Asian countries face the challenge of increasing energy consumption by air conditioning. This causes increased electricity consumption and often results in brown outs and black outs as not only the power plant park is overstressed but even worse, the electric grid cannot provide enough capacity. Especially in peak load operation the overall efficiency of power plant- transmission- and chillers is usually extremely low. AC causes between 25% and 70% of the total national electric consumption.

Solar driven AC can uses the same peak energy of the sun that causes the need of AC. So, especially with solar thermal driven absorption chillers, the electric infrastructure is significantly discharged. Solar thermal collectors collect heat and provide this heat- sometimes using a tank for storing energy for off sun hours- to absorption chillers.

Besides increasing the use of renewable energy, Solar AC contributes supporting the local economy as leading manufactures of absorption chiller are based in east Asia and a significant part of the construction value goes to local companies.

The presentation will highlight the basic aspects of the technology, show the solar AC potential based on the IEA roadmap, outline well suited projects, show some best practice projects in the region and explain the ESCo projects.

Hasan Rehan, Director, Professional Channel, Philips, ASEAN Pacific

Presentation title: **Solar Lighting as a Keystone of Energy Access in Rural, Off-Grid Areas**

With almost 800 million people in Asia living with intermittent or no access to the electrical grid, there is sizeable business opportunity to provide clean and sustainable off-grid solar lighting. Recent reports indicate market potential of such lighting to be US$10 billion, of which US$4 billion is estimated for 7 countries across South and Southeast Asia. In addition, solar lighting in road and urban areas has garnered interest and initial funding from public institutions keen to advance the use of renewable energy. Recent examples are ADB projects to procure solar LED street lighting, such as a US$ 2 million project in Nepal tendered in May 2012 and a US$ 15 million project in Bangladesh expected to be tendered in 2013. Given solar lighting is a relatively new technology, Philips will like to share industry best practices and quality technical specifications. This will promote awareness on the benefits of solar lighting to address energy access in rural, off-grid areas and what is needed to ensure a successful system is procured, installed, serviced (including training of locals for basic O&M, plus setting-up the necessary distribution and after-sales support network in rural areas). Success stories which could be of interest for Philips to share/discuss at ACEF, for replication in Asia: (i) 1000 Villages Project in Guiyang, People's Republic of China where solar LED street lighting was provided, this project was recognized as a best practice at the 2011 UN Climate Change Conference (ii) Cairo to Cape Initiative, where Philips partnered with international foundations and local NGOs to provide Solar LED lighting for communal areas in villages across Africa.

Haiyan Sun, President for Asian Pacific/Middle East/Africa, Trinasolar Limited

Presentation title: **Smart Energy Storage System Solution**

This presentation introduces Blue Ocean Energy Storage (BOES), a new product from Trinasolar. BOES provides optimal energy storage solutions for a variety of space and situations, such as the residential, commercial and office buildings, manufacturing sites as well as public facilities. The system offers smart use of energy together with energy efficiency and renewable energy with optimized control of overall energy use.

SIDE EVENT: Ergo Exergy Underground Coal Gasification (Auditorium D)

9:00 am – 12:30 pm

Application of Ergo Exergy UCG Technology in International Large-Scale Industrial projects

MAIN TOPICS

i. Key Features of Ergo Exergy UCG technology as a large-scale UCG mining technique
ii. Technical parameters and performance of Ergo Exergy UCG technology in current international projects
iii. Environmental parameters and performance of Ergo Exergy UCG technology in current international projects
iv. Products and by-products of UCG, their clean-up and processing
v. Green-house emissions and Ergo Exergy UCG technology
vi. UCG as a source of feedstock for value-added commercial products: technical and environmental issues
vii. Economics of Ergo Exergy UCG technology application in large-scale commercial projects for production of value-added products

Several Points on Facilitation of International Commercial UCG projects

MAIN TOPICS

i. Technical and environmental aspects of UCG projects facilitation
ii. Regulatory aspects of UCG projects facilitation
iii. Stakeholders aspects of UCG projects facilitation
iv. Human resources, education and professional aspects of UCG projects facilitation
v. Investing into large-scale UCG projects: bridging the chasm

DAY 3

Session 19: Strategies for Scaling Up Energy Efficiency Finance

11:00 am – 12:30 pm

This session includes presentations on a range of approaches to financing energy efficiency, including government and utility initiatives, as well as financing through commercial banks.

SESSION CHAIR
Thomas K. Dreesen, Chairman and Chief Executive Officer, Energy Efficiency Project Investment Company Limited

PRESENTERS
Amit Bando, Executive Director, International Partnership for Energy Efficiency Cooperation

Presentation title: **Unlocking Capital to Overcome First Cost Barriers in Implementing Energy Efficiency Initiatives**

This presentation provides lessons from several countries including France, Japan, India, Russia and the USA to demonstrate how efficient financing programs can address key barriers to unlock the capital needed to accelerate the pace of deployment of EE measures. Successful financing programs have several common features: (i) finance is provided by one or more lending agencies (public, private or government), (ii) credit enhancement (loan guarantee) is provided by a separate revolving or non-revolving fund, and (iii) the interest rate buy down is provided by a separate dedicated fund (generally federal or state funds). Often, repayment is made through on-bill arrangements and the security towards repayment is a lien on the utility meter. These and other "lessons learned" are part of the presentation.

Noel N. Verdote, Operations Officer Sustainable Energy Finance Program, International Fund Raising Congress

Presentation title: **Sustainable Energy Finance: SMEs and Beyond**

Since 2008, IFC Philippines Sustainable Energy Finance program played a catalytic role for private partner banks to open their lending facility to energy efficiency and renewable energy projects. Under the second phase of the SEF program, two new players joined catering to a different set of market: MSMEs and base of the pyramid. This presentation will focus on the progress the program has brought in to accelerate financing of EE/RE projects in the country and how it expanded to the new markets.

Dilan Sawalius Batuparan, Vice President, International Division, Indonesia Eximbank

Presentation title: **Developing Energy Efficiency Financing Program: A Cooperation Between ADB and Indonesia Eximbank**

As the demand for the energy keep raising, while the supply's still scarce, the need to create efficiency in every aspect of energy consumption is increasing. To ensure the success, every stakeholders has to be stimulated to exploit its resources to support the implementation of the concept. One of the important stakeholder is banking industry. The presentation is about Energy Efficiency Financing Program of Indonesia Exim Bank which is developed with the support of Asian Development Bank. The program is initiated as part of ADB loan facility to Indonesia Eximbank. The facility was signed in 2011. The presentation will discuss about the background, the concept developed, the obstacles encountered during the development process and the future of the program.

Alexander Tan, Vice President and Head, Finance and Controlling, Philips Lighting Growth Geographies

Presentation title: **Financing Options for Building EE: Indoor Lighting**

This presentation will cover performance contracting and using the ESCO model for turnkey EE Lighting project, and focus on the steps to creating a performance contract, essentials to design and adopt EE lighting in a government building or industrial facility, lifecycle costing for the project and other details, along with analysis of success stories and ways to replicate these successes.

Riley Allen, Global Research Manager, The Regulatory Assistance Project (RAP)

Presentation title: **Funding and Financing Energy Efficiency through the Utility Enterprise**

It is well recognized that end-use energy efficiency is the least expensive resource – but that it is underutilized by consumers. Among the many barriers to energy efficiency is easy access to capital. The utility enterprise can play a pivotal role in overcoming financial barriers. There are many models for employing the utility enterprise to both fund and finance energy efficiency. The purpose of this presentation will be to feature some of the well-formed models that are being used and under consideration for funding and financing energy efficiency through the utility enterprise.

Session 20: Strategies and Ingredients Needed to Scale up Renewable Energy

11:00 am – 12:30 pm

This session will include presentations on methods to create renewable jobs, incorporate old/new renewable technology and scale up renewables energy use thru various approaches used in Philippines, Serbia, and the United States.

SESSION CHAIR
Steve Sawyer, Secretary General, Global Wind Energy Council

PRESENTERS
Anna Abad, Climate and Energy Campaigner, Greenpeace Southeast Asia

Presentation title: **Green is Gold: How Renewable Energy can Save Us Money and Generate Jobs**

Green is Gold - this is a report launched by Greenpeace in January. The report is a first of its kind that lays out how renewable energy can save the government money, bring jobs to the country, create wealth, expand access to energy for the most vulnerable in poor communities, and foster national energy independence.

Dan Millison, Manager, Transcendergy, L.L.C.

Modular Energy Systems: A Key Pathway to RE < C

The rapid decline in costs of solar PV and wind power are due largely to expanded manufacturing capacity, technological advances, and an important but mostly overlooked aspect: the modular nature of these systems, which facilitates “plug and play” construction, quick start up, and staged expansion. Modular build-out allows for much smaller start-up investment and earlier revenue realization compared to conventional centralized generation plants, a critical consideration in developing countries. Rapid expansion of mass production capacity (a “Model-T” approach) is critical to deliver RE at parity with coal, thus, accelerated development of modular systems is an attractive pathway to achieving RE < C, but will require a fresh look at financial and economic assumptions underpinning project development. This presentation will cover learning rates for wind and PV, and review the status of modular geothermal, hydropower, and concentrating solar thermal.

Martin Sobek, Investment Officer, International Finance Corporation, World Bank Group

Presentation title: **Ashta HPP (Albania) - Turning a Doubtful Concept into a Technological Trailblazer**

Ashta Hydroelectric Power Plant in Albania is a great example how improved PPP legislation can lead to increased investment in renewable energy. The project involves a very innovative technology (Straflomatrix turbines - first of its kind in the region). The advantages of this concept are its 1) low investment cost, 2) easy and inexpensive maintenance, and 3) shorter construction periods, compared to conventional plants. Implemented in line with Equator principles and strict social and environmental performance standards, it will improve services for around 170,000 people, will save in excess of EUR 35 mil. in imports of power and has already brought in over EUR 170 mil. of direct investment. It is often mentioned in various forums/conferences/workshops as a model example how hydropower concessions/PPPs should be done. The construction is completed – operation commenced in September 2012. The same concept/contractual structure has been replicated in other projects in the region.

E. Ian Baring-Gould, National Technical Director, Wind Powering America, National Wind Technology Center, National Renewable Energy Laboratory

Presentation title: **National Scale Wind Resource Assessment for Power Generation, Modern Approaches to Support the Development of a Nations Wind Energy Potential**

The development of economically viable wind farms is dependent on a number of critical factors, with wind resource being one of the most important. However, the collection of enough high quality wind data to justify the large investment in a utility scale wind project in itself is a time consuming and costly proposition. One method that has been demonstrated to help lower the risks associated with early wind energy prospecting has been the use of national wind resource assessment tools and maps, a capability that has evolved greatly over the last decade. In this talk the presenter will provide an update on national scale wind resource assessment modeling tools, will compare results between a national wind assessment for the Philippines that was conducted in 2001 to one that is currently underway and will provide an assessment of the shortcomings of national wind assessments when it comes to project development.

Joonki Song, Senior Manager, Utility Solutions, EnerNOC, Inc.

Presentation title: **Balancing Renewables with Demand Response**

BPA recently explored the potential for industrial customers to help address these balancing needs, including multi-directional demand response (DR) with EnerNOC. This presentation will present the results of two innovative pilots that characterized the capabilities of a large paper mill and a portfolio of refrigerated warehouses to provide technology-enabled DR. Through the results of more than 50 DR event dispatches controlling dozens of megawatts (MWs) of load, we will present key insights and implications for industrial customers, utilities, and technology providers. In particular, the presentation will explore: the participating customer experience; the technical requirements of interfacing with existing energy management and control infrastructure; the interaction between bi-directional load control and energy efficiency activities; and the business impact of frequent process interruptions. Finally, we will discuss learnings that will inform the path forward for similar resource development throughout the commercial and industrial landscape, both within BPA's footprint and beyond.

Session 21: New Platforms for Technology Innovation

11:00 am – 12:30 pm

The session will start with an introduction of new collaboration platforms to promote clean energy technology innovation in the Asia-Pacific, followed by an expert panel discussion on key innovation support needs in developing countries.

SESSION CHAIR
Toru Kubo, Principal Climate Change Specialist (Clean Energy), Asian Development Bank

PRESENTERS
Anne-Marie Verbeken, Climate Finance and Technology Expert, Consultant, Regional and Sustainable Development Department, Asian Development Bank

Presentation title: **Global CTCN and Pilot ADB-UNEP project**

The pilot Asia-Pacific Climate Technology Network and Finance Center is a joint project of ADB and UNEP to facilitate technology transfer and diffusion through financial and institutional mechanisms. The role of UNEP is to lead interventions to enhance the enabling environment for climate technology transfer and deployment processes through supporting the design of country-driven and also regional climate technology transfer initiatives and institutions. ADB is leading the investment facilitation interventions, and is concentrating on mobilizing public and private sector investment in climate technologies through a range of technical support and expert advice services for project development, market-based IP transfer, early stage private equity investment and the integration of climate technology financing needs into national development plans and investment priorities.

Patrick Chan, Managing Director, Visionedge Technologies

Presentation title: **Tapping Regional - Global Network for Cleantech Growth in Asia : Brighter Prospects for a Market Place**

The presentation will provide a backdrop as regards the need for a platform for enabling clean energy technology transfer, both north-south and south-south in the Asian region. The presentation will discuss about the model (platform) developed for attracting global clean energy technology developers to Singapore. The platform will facilitate / assist incubation of clean energy technologies (including RE & EE) and also acceleration / fast track of matured technologies in the region to achieve large scale : investments, GHG emission reductions and technology transfer. The platform will be operating on the principles similar to that of ADB's recent efforts in establishing a Low Carbon Technology Market Place in Asia. The presentation will also cover how such a platform will create multiple opportunities to all stakeholders including propelling the transformation of local economy for good and in the process achieve green yet inclusive growth.

MODERATOR
Toru Kubo

PANELISTS
Anne-Marie Verbeken

Patrick Chan

Chizuru Aoki, Climate Mitigation Cluster Coordinator and Senior Technology Transfer Officer, Global Environment Facility (GEF)

Joaquín Fernández de Pierola, Vice President,Business Development, Abeinsa

DAY 3

Plenary 3: Reports from the Chairs of the Thematic Tracks

Policy and Regulation, Energy Efficiency, Energy Access, Clean Energy Finance, Renewable Energy, and Emerging Clean Energy Technologies

2:00 pm – 3:30 pm

This session will take stock of the discussions and agreements in the 21 breakout sessions during the previous three days. The Chairs of the six Thematic Tracks—policy, finance, energy access, energy efficiency, renewable energy, and emerging technologies—will provide a summary of key points, findings, observations, and concerns raised during their sessions. Drawing on the ideas and case studies presented in their tracks, they will provide pieces of an overall picture of where we are in the development of clean energy in Asia, and will address the following questions:

1. What recent or continuing clean energy developments in each discussion deserve more attention and more resources in future?

2. How can clean energy development be better mainstreamed with other competing investment and development objectives across the Asia Pacific region?

3. What inherent strengths can Asia's institutions deploy, either individually or in partnership, to meet the clean energy challenge? Where are our remaining weaknesses?

MODERATOR
Peter du Pont, Vice President, Government & Clean Energy Consulting, Nexant

TRACK CHAIR, POLICY & REGULATION
Kala Mulqueeny, Principal Counsel, Office of the General Counsel, Asian Development Bank

Kala Mulqueeny leads the law, policy and development programme relating to the environment, energy, and climate change and legal empowerment at the Asian Development Bank (ADB), where she is a Principal Counsel. She has led ADB's Asia Pacific Dialogue on Clean Energy Governance and Regulation among energy policy-makers and regulators in Asia, and USAID, the International Energy Agency, and World Resources Institute. She has spearheaded the creation of the Association of South-East Asian Nations Energy Regulators' Network, and the Asian Judges Network on Environment. After the 2004 Asian tsunami, she led work in Sri Lanka to implement a legal aid and governance project that has helped about 80,000 people. She is an Asia 21 Young Leader of the Asia Society, a 2010 Yale World Fellow, and has a Doctorate from Harvard Law School. Prior to heading to Yale, she was an Adjunct Professor equivalent at the University of the Philippines, and taught an intensive course at the Law College of the Australian National University. Australasian Legal Business: Legal News named her one of the Top 40 Lawyers in 2010.

TRACK CHAIR, ENERGY EFFICIENCY
Koshy Cherail, President, Alliance for an Energy Efficient Economy

Dr. Koshy Cherail is the President, and one of the founders of the Alliance for an Energy Efficient Economy (AEEE) in India. AEEE was incorporated in 2008, as an industry association of the Energy Efficiency companies. Koshy has over 25 years of experience in policy research and consulting with various bilateral and multi-lateral agencies, including World Bank, USAID and GTZ (now GIZ). Koshy has been associated with various efforts to organise the ESCOs and EE businesses in India, which culminated in the formation of AEEE, which has around 60 members today. The Alliance has brought together India's leading EE equipment manufacturers, technology and service providers, ESCOs and consultants on a single platform.

TRACK CHAIR, ENERGY ACCESS

Jiwan Acharya, Senior Climate Change Specialist, Sustainable Infrastructure Division, Regional and Sustainable Development Department, Asian Development Bank

Jiwan Acharya is a Senior Climate Change Specialist (Energy) in the Sustainable Infrastructure Division of the Regional and Sustainable Development Department since 1 September 2008. He is a key member of ADB's Climate Change Team and is responsible for overseeing ADB's several key initiatives including the Technical Support Facility under the Carbon Market Program as team leader, and Energy for All Initiative. He is now focusing on mainstreaming climate change in ADB's operations through promotion of clean energy, low carbon technologies, CDM, access to energy among others. Acharya, has a Master of Arts in Economics, Master of Science in Energy Systems and Management and a Bachelor of Science in Electrical Engineering.

TRACK CHAIR, CLEAN ENERGY FINANCE

Samuel Tumiwa, Deputy Regional Director, North American Representative Office, Washington DC, Asian Development Bank

Sam Tumiwa is the Deputy Representative of the Asian Development Bank's North American Representative Office in Washington, D.C. He serves as a liaison between ADB's Manila headquarters and North American policymakers and stakeholders in the private and public sectors, and conducts public and media outreach. He also serves to strengthen collaboration with other multilateral institutions based in North America. He joined ADB in 2001. Prior to his assignment in Washington, DC, he was in ADB's Regional and Sustainable Development Department where he served in the office of the Director General, developing the department's annual work program and managing its budget. Between 2005 and 2009, he coordinated ADB's clean energy program and spearheaded ADB's efforts to increase annual investment in clean energy to $2 billion a year 2013. He also established and managed ADB's Clean Energy Financing Partnership Facility, a $250 million fund to facilitate and catalyze greater investments in clean energy, and Climate Change Fund, a $40 million fund to address both climate change mitigation and adaptation. He also started ADB's Energy for All Initiative, a collaborative effort to focus on projects to focus on providing cleaner, more efficient and renewable energy to the 1.6 billion people in the region that are still dependent of traditional energy. Between 2001–2005, He served as an investment officer in the energy division of the South Asia Regional Department where he oversaw the design and implementation of a variety loans and technical assistance projects related to power sector restructuring, policy development, capacity building, clean energy, industrial environmental management, rural electrification and climate change in Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka. Prior to joining ADB, Mr. Tumiwa worked as a consultant on industrial environmental management, cleaner production, and industrial efficiency. He also pioneered work on the use of supply chain corporate social responsibility to improve industrial environmental performance of industry in Asia. He has over 20 years of professional experience as a development professional and has a Bachelors of International Relations and Master's in Development Studies.

TRACK CHAIR, RENEWABLE ENERGY

Sridhar Samudrala, President and Chief Executive Officer, International Energy Consulting Co

Sridhar B. Samudrala , Founder and CEO of International Energy Consulting Corp., Assistant Professor, Electrical at SUNY Delhi College of Technology, and Director Asia for WADE is responsible for all Asia operations. He was the former Deputy Program Manager for Asia at the U.S. Energy Association an NGO in Washington DC where he managed over 40 utility and regulatory partnership (Bangladesh, Bhutan, People's Republic of China, India, Indonesia, Maldives, Nepal, Pakistan, Philippines, and Sri Lanka). Sridhar has over 25 years extensive experience and knowledge in US and renewable energy, international energy/electricity regulation, distribution, generation and privatization of power in developing countries. He holds a Bachelor of Engineering degree in Mechanical and Nuclear Engineering along with a U.S. Coast Guard Third Assistant Engineering License in motors, gas & steam turbines from the State University of New York at Maritime College. Sridhar has worked for several consulting

firms on developing projects in Asia particularly in India. He has financed and operates his own Dairy based on renewables. He has authored book on the Thailand Smart Grid Handbook, India Energy Policies, Thailand Roadmap for Decentralized Energy, CHP/DE-China, South Asia Utility Practices, and Climate Change Mitigation Options for USAID. In addition he also serves on several boards of companies.

TRACK CHAIR, EMERGING CLEAN ENERGY TECHNOLOGIES
Toru Kubo, Principal Climate Change Specialist (Clean Energy), Asian Development Bank

Toru joined ADB in 2004 as the first full-time staff to focus on climate change mitigation issues. In 2006, he designed and launched the Carbon Market Program which focuses on providing up-front carbon finance and technical assistance to boost investment in clean energy and other low-carbon development projects across the Asia-Pacific. In addition to coordinating assistance on carbon market issues, he has been in charge of designing and implementing initiatives focused on accelerating the diffusion of climate change mitigation and adaptation technologies, new market mechanisms to address energy security, and public-private partnership schemes to leverage private capital for climate change solutions. In 2011, he went on an eight-month special assignment to the secretariat of the UN Framework Convention on Climate Change (UNFCCC) to support the design and establishment of the Green Climate Fund and the Climate Technology Centre and Network, both closely related to ADB's climate change program operations. Toru is currently on an extended leave to work on his doctoral research at the University of Oxford's Environmental Change Institute and Transport Studies Unit. His research focuses on technology and policy options to address the dual challenges of energy security and climate change in Asia. He is expected to return to full-time duty at ADB in late 2014. Toru is a mechanical engineer by training with particular expertise in energy efficiency. Prior to joining ADB, he served as the Asian Business Manager and Policy Analyst at Trexler Climate + Energy Services, an energy sector business consulting firm in Portland, Oregon, and Research Associate at the American Council for an Energy-Efficient Economy, a non-profit think tank in Washington, DC.

Plenary 4: Asia Clean Energy Forum Closing Plenary

Panel Discussion on Asia Clean Energy Priorities-- 2014 and Beyond, Special drawing for iPads and Closing remarks

4:00 pm – 5:30 pm

This session will bring together four distinguished international panellists from the public, private, and non-profit sectors to reflect on some of the key themes and messages put forth by the Track Chairs in the previous session. The panel discussion will challenge ACEF participants with a vision of the future, and address questions such as, "What can each of us do to make a difference?" And "How can we really Unlock Asia's Clean Energy Future?" And "What are some examples of key initiatives and approaches that can truly 'accelerate' progress so that energy efficiency and renewable energy become a mainstream option for energy and economic development?"

MODERATOR
Manish Bapna, Executive Vice President and Managing Director, World Resources Institute

PANELISTS

Jigar Shah, Partner/CEO/Board member, Inerjys/Jigar Shah Consulting/ Carbon War Room

Leena Srivastava, Hony. Executive Director (Operations) The Energy Research Institute

Kadri Nassiep, Chief Executive Officer, South African National Energy Development Institute

Anthony Jude, Senior Advisor, and concurrently Practice Leader **(**Energy), Regional and Sustainable Development Department, Asian Development Bank

Raffle Draw

A raffle draw will take place and lucky participants may win one of eight iPads or five Barong dress shirts.

Closing Remarks

Brian Castelli, Executive Vice President, Programs and Development, Alliance to Save Energy

Orestes Anastasia, Senior Regional Climate Change Advisor, Regional Development Mission for Asia, United States Agency for International Development

Woochong Um, Deputy Director General, Regional and Sustainable Development Department, Asian Development Bank