



DIREC 2010 Bulletin

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DIREC  **2010**

DIREC 2010 HIGHLIGHTS: THURSDAY, 28 OCTOBER 2010

On Thursday, participants at DIREC convened throughout the day in thematic sessions organized around four main tracks: technology and infrastructure; policy; finance; and renewables access and the Millennium Development Goals (MDGs). Parallel workshops also took place on biofuels and promoting rural entrepreneurship for enhancing access to clean lighting options. The renewable energy exposition and trade show continued.



A new wind turbine design on display at the DIREC trade fair.

MAIN CONFERENCE

TRACK 1 – TECHNOLOGY AND INFRASTRUCTURE

POWER TECHNOLOGY AND INFRASTRUCTURE:

Jeremy Leggett, Solarcentury, moderated a discussion on up-scaling renewable energy and grid integration of renewable energy. Main topics discussed included grid stability and safely introducing renewables into established grid systems. Underlining the importance of energy efficiency and demand-side management programs, Marianne Moscoso-Osterkorn Renewable Energy and Energy Efficiency Partnership (REEEP), said that 90% of power utilities are government controlled and that governments must be persuaded to reform power systems.

Hans Arild Bredesen, Econ Pöyry, noted that distribution grids require upgrades and planning to accommodate renewable energy feed-ins from small-power producers.

Natalia Kulichenko-Lotz, World Bank, noted Bank programs incentivizing developing country governments to invest in renewable energy. Ravi Prasher, US Department of Energy ARPA-E, highlighted research at ARPA-E labs developing advanced energy solutions. During discussions, participants called for expanding renewable energy and attracting financiers by minimizing risk.

HEATING AND COOLING TECHNOLOGIES:

Gerhard Stryi-Hipp, Fraunhofer ISE, highlighted the market potential for solar cooling and heat pumps. Ralph Sims, Centre for Energy Research, noted that successful policies and frameworks have been implemented worldwide for renewable



In the morning, the panel on power, technology and infrastructure discussed grid stability, systems approaches to ensure functioning energy systems and incentivized systems to ensure government investment in renewables.

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The financing innovation - projects, business and technologies panel discussed public and private financing options to enable wider uptake of renewable energy technologies.

heating and cooling, and recommended that other countries draw lessons from these. Ravi Khanna, SCATEC Solar, and Gudni Jóhannesson, Iceland National Energy Authority, noted that practical and attractive applications of renewable heating and cooling would encourage industry growth and emphasized that pragmatic energy choices must be made to avoid system inefficiencies. Olivier Drücke, European Solar Thermal Industry Federation (ESTIF), underlined the importance of product development and market research for mass deployment. Huang Ming, Himin Solar Energy Group, emphasized the importance of branding to consumers, highlighted the success of renewable manufacturers in China's Solar Valley, and together with R.R. Sonde, Thermax, advocated providing consumers with complete renewable energy solutions for their energy service needs.

BUILDINGS: Ajay Mathur, Bureau of Energy Efficiency, India, moderated this session discussing the use of renewables in green buildings, with an emphasis on building design for lower energy consumption. Deepak Gupta, MNRE, India, underlined India's efforts to construct certified green government buildings. Rick Duke, US Department of Energy, noted that partnerships on clean energy between the US and India included knowledge sharing on energy building codes and establishing the India Green Building Council. Andreas Thermann, KfW Development Bank, and Robert Angioletti, French Agency for the Environment and Energy Management, highlighted the application of energy efficiency measurements for building subsidies. Manit Rastogi, Morphogenesis, called for a paradigm shift to eliminate new construction of non-green buildings and ensuring locally appropriate technology. Alastair Adair, University of Ulster, UK, highlighted Northern Ireland's efforts to reduce emissions, saying recent research shows that green buildings yield higher returns. S. Padmanaban, USAID in India, called for more projects demonstrating integration of renewable technology into green building design and further developing energy efficiency certificates for the building industry.

TRACK 2 – POLICY

RENEWABLE ENERGY SCENARIOS: This panel was moderated by Eric Martinot, Institute for Sustainable Energy Policies. The discussion centered on alternative scenarios for the future and the challenges posed by the expected dramatic growth of renewable energy, especially in solar and wind, their cost and contribution to the energy mix. Hans Jørgen Koch, Danish Energy Agency, described his country's successful use of renewables. Julien Pestiaux, European Climate Foundation,

supported by other panelists, said that although enormous infrastructure changes will be required to mainstream renewables, the total cost will be less than expected and that changing consumer preferences will present a bigger problem. Sven Teske, Greenpeace International, noted that investment costs will be offset by fuel savings and will promote employment. Paolo Frankl, IEA, cautioned against overheated renewable energy markets and urged policy to support improved competitiveness of renewable energy.

SUPPORTING POLICIES I (ON-GRID): Li Junfeng, China Renewable Energy Industries Association, urged the removal of trade barriers, a measure that would reduce the cost of renewable energy technologies. Christopher Flavin, Worldwatch Institute, called for a combination of policies, including rules for grid access, to create sustainable markets for renewables. Some panelists highlighted national experiences promoting renewable energy, including those of India and Japan. Others highlighted the need for public support, international cooperation and increased investment, and with Harish Mehta, Suzlon, suggested a fund for renewable energy.

SUPPORTING POLICIES II (OFF-GRID): The panel was moderated by Hemant Lamba, AuroRE, and Akanksha Chaurey, TERI. Panelists discussed the renewable energy situation in rural areas, with many referring to distributed, decentralized generation systems and renewable energy being a factor integrating grid and non-grid power. Chaurey commended the involvement of Indian institutions and NGOs in renewables, and Kinsuk Mitra, Winrock International India, noted more effective use of electricity in villages and urged more private sector involvement. Speakers also noted negative tendencies, including: fragmentation of international efforts; lack of awareness; and the increasing gap between robust energy growth and actual access to electricity, especially for lighting in villages.

STATE AND LOCAL GOVERNMENTS: Griffin Thompson, US State Department, led a discussion addressing renewable energy from the local perspective. Panelists stressed the importance of leadership from local authorities in promoting use of renewable energy, rural empowerment, the challenge of urbanization and the role of city planning. Ray Morgan, Woking Borough Council, UK, underlined that the goal is more than introducing new renewable energy technology, but also assuring sustainable habitats.



The renewable energy scenarios panel discussed time frames and costs of various scenarios in light of the expected massive transition to renewable energy in the coming decades.

TRACK 3 – FINANCE

FINANCING INNOVATION – PROJECTS, BUSINESSES AND TECHNOLOGIES: Moderator Eric Usher, UNEP, began the session noting that for public finance institutions the challenge is how to exit sectors that have successfully scaled up to make way for private sector finance and to identify next steps.

Vivek Tandon, Aloe Private Equity, said that historically Certified Emission Reductions Units provided returns on equity in India, but now it is necessary to improve yields. Anita George, International Finance Corporation (IFC), identified several challenges: the difficulty of matching innovative smaller companies with large investors; regulatory “teething problems” due to the lack of regulatory frameworks in emerging sectors; and adapting technology to new markets.

Christine Eibs-Singer, E+Co, underscored the importance of: helping small entrepreneurs de-risk; considering replication potential; and cataloguing lessons learned. Vivek Mehra, YES Bank, noted the need for reliable finance models to support social innovation and technological development.

Don Purka, ADB, highlighted financing to adapt technologies to new markets and designing insurance policies to reduce risk. Ethan Zindler, Bloomberg New Energy Finance, emphasized that investment in emerging technology startups is declining and noted the importance of public investment.

FINANCING DEPLOYMENT AT SCALE: Chair Rashad Kaldany, IFC for Asia, Eastern Europe, Middle East and North Africa, noted challenges to renewable energy growth, including the nascence of the industry, inadequacy of grid infrastructure, unpredictability of government support and lack of funding in local currencies.

Satish Mandhana, IDFC Private Equity, said India must implement its laws more effectively to see real scaling-up. Craig O’Connor, Exim Bank, US, highlighted that competition amongst financiers is driving down loan costs.

Peter Gutman, Standard Chartered Bank, said energy projects are more about debt than equity, and therefore investments need to be carefully structured and supported to be successful, lamenting the recent solar subsidy collapse in Spain.

Nick Robins, HSBC, highlighted important investment-related energy transitions resulting from financial regulation reforms, including shifts from: developed markets to emerging markets; green stimulus to austerity; carbon-based economies to green growth; supply-to demand-side interest; and from equity to fixed-income instruments.

INITIATIVES TO CATALYZE AND SCALE UP INVESTMENT IN RENEWABLE ENERGY: During this session moderated by Virginia Sonntag-O’Brien, REN21, Jonathan Maxwell, Sustainable Development Capital LLP, described Critical Mass, a project to promote public-private



The track continued by focusing on markets for solar cooling and heating pumps, policy frameworks for heating and cooling and product development and market research.

partnerships, particularly looking at ways to allocate risk and report on lessons learned to improve capital efficiency. He highlighted the proposed Climate Public-Private Partnership (CP3) fund to provide private equity for low carbon and resource efficient infrastructure in Asia.

Martin Schoepe, German Federal Ministry for the Environment, said the Global Renewable Investment Plan (GRIP) is a project to quantify economic benefits, understand effectiveness of policy schemes and stimulate investment through increased international cooperation. Natalia Kulichenko-Lotz, World Bank, underscored the Bank's Strategic Climate Fund and Clean Technology Fund as well as the Scaling-Up Renewable Energy Program, establishing pilot projects in selected low-income countries.

On the Global Climate Partnership Fund, Klaus Peter Pischke, KfW Development Bank, said the fund provides financial and technical assistance to financial institutions in developing countries. Mark Domnik, Deutsche Bank, described Deutsche Bank's Global Energy Transfer Feed-in Tariff (GET FiT) program. He said it is a flexible system to help overcome cost competitiveness, technical, financial and project development constraints of developing renewables in developing countries.

Clifford Polycarp, World Resources Institute, supported creating new funding mechanisms but cautioned against over-proliferation of such initiatives, which could become burdensome for governments and users to manage and access. He said any new investment tools should tap into existing investment mechanisms.

In the ensuing discussion, participants discussed the need for better risk mitigation and hedging options for the proposed investment mechanisms.

TRACK 4 – RENEWABLES ACCESS AND MILLENIUM DEVELOPMENT GOALS

RENEWABLE ACCESS AND MDGs: Kandeh Yumkella, UNIDO, facilitated the discussion on the relevance of energy access to achieving the MDGs.

Deepak Gupta, MNRE, India, said poverty reduction depends on energy access and called for international commitment, commenting that improvements in lighting and rural electrification enhance education, health, and livelihoods. He lamented that, under the UNFCCC Clean Development Mechanism (CDM), basic rural projects go unfunded.

Kadri Nassiep, SANERI, added that internet access is a vital source of educational opportunity and emphasized providing energy access to improve livelihoods. Veerle Vandeweerd, UNDP, emphasized integrative approaches to energy services, such as providing lighting, battery and mechanical power simultaneously.

Rachel Kyte, ICF, emphasized that it is crucial for the private sector to communicate with policymakers to establish appropriate investment incentives at national and international levels. She cautioned that markets must be inclusive to avoid the poor bearing the price of carbon. Kyte highlighted that: business should focus on savings, not profits; subsidies for “concessional finance” can open up markets quickly; and technology quality standards are important.

Manfred Konukiewicz, German Federal Ministry for Economic Cooperation and Development, underlined the need for consumers to be the “first funding mechanism.”

CAPACITY BUILDING: Moderator Leena Srivastava, TERI, said capacity building is important at the national and international policy levels as well as at the grassroots level. Joe Madiath, Gram Vikas, called for access to energy to be viewed as a fundamental right and for capacity building at the user level. Sanjit “Bunker” Roy, The Barefoot College, described his training of trainers program, which teaches uneducated women to become solar engineers, empowering them to electrify their own villages. Mark Radka, UNEP, underlined the need for capacity building amongst negotiators, cautioned against “demonizing” non-renewables and emphasized the importance of networking as a capacity building tool.

RENEWABLES IN INDIA: Experts discussed, *inter alia*, India's: renewables potential; household energy access; and challenges to investment. Farooq Abdullah, MNRE India, underlined the importance of financial incentives to motivate sustainable development. Deepak Gupta, MNRE India, said: India's renewables industry has increased five-fold in recent years; instituting sector financing for renewables is imperative for developing countries; and reducing kerosene, solarizing telecom and enabling rice husk gasification are key focal areas for India's future. Darryl D'Monte, Chairman, Forum of Environmental Journalists of India, expressed disappointment that the conference focused on renewable “electricity” sources rather than renewable “energy” sources, which undermines the significance of cooking energy.



The next session on financing deployment at scale, discussed overcoming hurdles to renewable energy growth, such as lack of adequate power infrastructure, unpredictable government support, and the need to redraw financing structures to accommodate the nuances of renewables.