

Hosted by



Government of India

Ministry of New & Renewable Energy

Supported by



DIREC 2010 PROGRAMME AT A GLANCE

**MAIN THEME – UPSCALING AND MAINSTREAMING RENEWABLES FOR ENERGY SECURITY,
CLIMATE CHANGE AND ECONOMIC DEVELOPMENT**

26 October 2010 Vigyan Bhawan

18h00-19h00 PLENARY WELCOME SESSION

18h00-18h10	Lighting of Lamp and Welcome Address
18h10-18h15	Introduction to the conference and the contextual framework
18h15-18h40	Address by Dignitaries
18h40-19h50	Address by Honorable Union Minister for New & Renewable Energy, Government of India
18h50-19h00	Address by Honorable President of India
	Vote of Thanks

DAY 1

27 October 2010 Main Plenary Hall (Ganga) Expo Centre, Greater Noida

09h00-12h30 MORNING SESSION

08h30-9h00	Registration
9h00-9h10	Welcome and introduction by the Chair <i>Dr. Farooq Abdullah, Union Minister for New & Renewable Energy, Government of India</i>
9h10-9h50	Journey from Johannesburg to Delhi (from start up to scale up to mainstream) - Presenting the International Renewable Energy Conference (IREC) concept and process (the creation of the series of world meetings under REN21 and the handover of the next meeting to India)

Mr. Jürgen Becker, State Secretary, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Germany

Mr. Kadri Nassiep, Chief Executive Officer, South African National Energy Research Institute (SANERI)

Mr. Liu Qi, Vice Chairman, Vice Minister of China National Energy Administration

Dr. Arun Majumdar, Director, U.S. Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E)

Moderator: *Mr. Michael T. Eckhart, President, American Council on Renewable Energy (ACORE) & Co-chairman, World Council for Renewable Energy (WCRE)*

9h50-10h10

The DIREC theme: Up-scaling and Mainstreaming Renewables for Energy Security, Climate Change and Economic Development

Dr. Mohamed El-Ashry, Chairman, REN21

Mr. Deepak Gupta, Secretary, Ministry of New and Renewable Energy (MNRE), Government of India (GOI)

10h10-10h30

Road to Cancun

Dr. Rajendra K Pachauri, Director General, The Energy and Resources Institute (TERI) and Chairman, Intergovernmental Panel on Climate Change (IPCC)

Dr. Kandeh K. Yumkella, Director General, United Nations Industrial Development Organization (UNIDO)

10h30-11h00

Tea Break

11h00-11h30

Green Economy and the Role of Renewables

H.E. Ms. Maud Olofsson, Minister for Energy and Enterprise, Sweden

Dr. Montek Singh Ahluwalia, Deputy Chairman, Planning Commission, Government of India

Moderator: *Ms. Sylvie Lemmet, Director, Division of Technology, Industry and Economics (DTIE), United Nations Environment Programme (UNEP)*

11h30-12h30

Vision 2020: Role of Renewables for energy security, climate change, and economic development

Dr. Arthouros Zervos, President, European Wind Energy Association (EWEA) and European Renewable Energy Council (EREC)

Mr. Sam Pitroda, Chairman, National Knowledge Commission & National Innovation Council, India

H.E. Dr Sultan Ahmed Al Jaber, Assistant Minister of Foreign Affairs, and Special Envoy for Energy and Climate Change, United Arab Emirates (UAE)

Ms. Adeola Eleri, Senior Scientific Officer, Renewable Energy Department, Energy Commission of Nigeria

Ambassador Richard H. Jones, Deputy Executive Director, International Energy Agency (IEA)

H.E. Mr. Roberto Menia, Minister of State, Ministry of Environment, Land and Sea, Italy

Moderator -*Mr. Shyam Saran, former Special Envoy to Prime Minister, India on Climate Change*

Session Coordinator: *Dr. P.C. Maithani, Director, MNRE, GoI*

12h30-14h00

Lunch/ Official Side Event

14h00-16h00 AFTERNOON SESSION (Parallel Sessions)

Session I Ministerial Discussion

Introduction by the Moderator

Dr. Prannoy Roy, Chairman, NDTV

Opening Remarks

Dr. Farooq Abdullah, Union Minister for New & Renewable Energy, Government of India

Moderated Ministerial Panel Discussion with a focus on the role of renewable energy in

Session II Multi-stakeholder Discussion

Introduction by the Moderator

Mr. David Hales, President, College of the Atlantic

Moderated panel discussion with panelists from industry, civil society, academia, local policy makers, media and NGOs on the role of renewable energy in climate change mitigation, energy security and providing energy services for the poor.

Panelists

Session III CEO Roundtable

Introduction by the Moderators

Mr. Steve Sawyer, Secretary General, Global Wind Energy Council (GWEC) and

Mr. V. Subramanian, Secretary General and CEO, Indian Wind Energy Association (InWEA)

Panelists

Mr. Jifan Gao, Chairman, Trina Solar

climate change mitigation, energy security and providing energy access for the poor.

3-4 main issues pre-decided

Panelists

H.E. Tawfiq-e-Elahi Chowdhry, Bir Bikram, Adviser to Hon'ble Prime Minister of Bangladesh

H.E. Mr. Antonis Paschalides, Minister of Commerce, Industry and Tourism, Cyprus

H.E. Dr. Ahmed Rashid Beebeejaun, GCSK, Deputy Prime Minister, Minister of Energy and Public Utilities, Mauritius

H.E. Mr. Lyonpo Khandu Wangchuk, Minister of Economic Affairs, Bhutan

H.E. Jose Carlos das Dores Zorrinho, Secretary of State (Minister of State) for Energy and Innovation, Portugal

H.E. Mr. Paavo Väyrynen, Minister of Foreign Trade and Development, Ministry for Foreign Affairs, Finland

H.E. Ms Katrin Juliusdottir, Minister of Industry, Energy and Tourism, Iceland

H.E. Mr. Jim Mather MSP, Minister for Enterprise, Energy and Tourism, Scotland

H.E. Mr. Pedro Luis Marin Uribe, Minister of State for Energy, Ministry of Industry, Tourism and Trade, Spain

H.E. Mr. Patali Champika

Mr. Mark Radka, Chief of the Energy Branch, United Nations Environment Programme (UNEP)

Dr. Sunita Narain, Director, Centre for Science and Environment

Dr. David S. Renné, President, International Solar Energy Society and Principal Project Leader, U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL)

Mr. André Aranha Corrêa do Lago, Director, Department of Energy, Ministry of External Relations, Brazil

Dr. Harish Hande, Co-founder and Managing Director, Selco

Dr. Jeremy Leggett, Founder and Chairman, Solarcentury

Mr. Vijay Mahajan, Chairman, BASIX

Mr. Probir Ghosh, President, invVEST

Mr. Ed Norrena, Head BBM Division, Cleantech, Dept. of Foreign Affairs & International Trade, Ottawa

Mr. Hugo Lucas, Director for Policy, Capacity Building and Outreach, International Renewable Energy Agency (IRENA)

Session Coordinator- Dr. J.R. Meshram, Director, MNRE, Gol

Dr. Fabrice Didier, Chief Executive Officer, Saint-Gobain Solar

Mr. Tulsi Tanti, Chief Executive Officer, Suzlon

Mr. Sean Sutton, President, Vestas Asia Pacific

Mr. Alf Bjørseth, Chairman and Chief Executive Officer, SCATEC Solar

Mr. Gary D. Conley, Chief Executive Officer, B2U Solar

Mr. Kishore Jayaraman, President and Chief Executive Officer, GE Energy India

Prof. Huang Ming, President, Himin Solar Energy Group

Mr. Mark R. Pinto, Executive Vice President & CTO, Applied Materials

Mr. Rakesh Bakshi, Chairman and Managing Director of RRB Energy

Session Coordinator – Ms. Christine Lins

Ranawaka, Minister of Power and Energy, Srilanka

H.E. Dr. Rashid Ahmad bin Fahad, Minister of Environment & Water, United Arab Emirates (UAE)

H.E. Mr. Simon D'Ujanga, Minister of State for Energy, Ministry of energy and Mineral Development, Uganda

H.E. Mr. Per Rune Henriksen, Deputy Minister, Ministry of Petroleum and Energy, Norway

H.E. Dr. Mohammad Saleh Al-Sada, Minister of State for Industry and Energy Affairs, Qatar

H.E. Mr. Simon D'Ujanga, Minister of State for Energy, Ministry of energy and Mineral Development, Uganda

Dr. Irene Freudenschuss-Reichl, Director General for Development Cooperation, Federal Ministry for European and International Affairs, Austria

Mr. Xiaoyu Zhao, Vice President, Asian Development Bank (ADB)

Mr. Suresh Kumar, Assistant Secretary, US Department of Commerce

Mr. Hiroshi Asahi, Director General, Agency for Natural Resources and Energy, Ministry of Economy Trade and Industry, Japan

Session Coordinator- Mr. Girish Kumar, Director, MNRE, GoI

16h00-16h30 Tea Break

16h30-17h00 Joint Ministerial - Multi-stakeholder - CEO 'STRAIGHT TALK'

Moderators of each session will come and discuss the outcomes from each session / debriefing

Moderator: *Dr. Mohamed El-Ashry, Chairman, REN21*

17h00-18h30 Official Side Events

18h30-20h00 Evening Network Reception

DAY 2

TRACK 1 - TECHNOLOGY AND INFRASTRUCTURE

09h00-10h30 Power Technology and Infrastructure

Power from renewable energy sources has been growing steadily over the years and is estimated at 4800 GW (in 2009), which represents about a quarter of global power generating capacity, supplying 18% of the global electricity production. Significant emission reductions are possible through action in the power sector. For the developing countries the challenge lies in ensuring electricity access for economic and social development and at the same time in preventing a lock-in of high-carbon technologies.

Topics

- Scaling up the development and transfer of RE power technology
- Role of private investment
- Value of liberalization in the Power Sector and its effects
- Policy prescriptions for different scale of operations
- Smart and resilient transmission and distribution infrastructure
- Cooperation in R&D for current, new and innovative technologies
- Grid integration of RE: political framework and stakeholder landscape

Moderator & Introduction: Dr. Jeremy Leggett, Founder and Chairman, Solarcentury

Panelists:

- Mr. Suresh Prabhu, Chairman, Council for Energy, Environment and Water, India
- Mr. Hans Arild Bredesen, Manager, Econ Pöyry
- Dr. Marianne Moscoso-Osterkorn, Director, Renewable Energy and Energy Efficiency Partnership (REEEP)
- Ms. Natalia Kulichenko-Lotz, Senior Energy Specialist, Sustainable Energy Department, World Bank
- Mr. Ravi Prasher, Program Director, Advanced Research Projects Agency - Energy (ARPA-E), US Department of Energy

Session Coordinator: Dr. Dilip Nigam, Director, MNRE, GoI

10h00-11h00 Tea Break

11h00-12h30 Heating and Cooling Technologies

Heating and cooling in the industrial, commercial and domestic sectors account for around half of total global energy demand. Biomass, solar and geothermal energy currently supplies the heating and cooling requirements of millions of buildings worldwide, and renewable energy heating and cooling (REHC) has been described as the “sleeping giant” in terms of its potential from a global perspective. Appropriate strategies are needed to promote scale up of RE technologies for heating and cooling and to foster international cooperation to allow replication of effective policies.

Topics

- State of the art of Heating & Cooling technologies
- Combining different technologies to provide heating & cooling services
- Addressing the existing barriers
- Making REHC cost effective
- Successful policy initiatives and case studies that have catalyzed the uptake
- Heating and cooling for different scale of operations

Moderator: Ms. Christine Lins, Secretary General, EREC

Introduction: Mr. Gerhard Stryi-Hipp, Head of Energy Policy and Group Leader, Thermal Collectors and Applications, Fraunhofer ISE

Panelists

- Prof. Ralph Sims, Director, Centre for Energy Research
- Mr. Ravi Khanna, Director, Scatec Solar
- Mr. Olivier Drücke, President, European Solar Thermal Industry Federation (ESTIF)
- Dr. Gudni A. Jóhannesson, Director General, Iceland National Energy Authority
- Prof. Huang Ming, President, Himin Solar Energy Group
- Dr. R.R. Sondhe, Executive Vice President, Thermax Limited

Session Coordinator: Dr. A.K. Singhal, Director, MNRE, GoI

12h30-14h00 Lunch/ Official Side Event

14h00-15h30 Buildings

Buildings alone are responsible for 38% of all human greenhouse gas emissions (20% residential, 18% commercial) and in many countries is the largest GHG source. The increasing number of buildings in developing countries requires the spread and scale up of renewable and energy efficiency technologies, as well as effective regulation to correct market failures.

Topics

- Buildings and renewable energy

- Energy Conservation Building Code
- Solar passive architecture
- Building envelope
- Green rating of buildings

Moderator: Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency, India (BEE)

Introduction: Mr. Deepak Gupta, Secretary, MNRE, GoI

Panelists

- Dr. Fabrice Didier, Chief Executive Officer, Saint-Gobain Solar
- Mr. Rick Duke, Deputy Assistant Secretary for Climate Policy, United States Department of Energy
- Mr. Robert Angioletti, Senior Consultant, French Agency for the Environment and Energy Management (ADEME)
- Prof. A.K. Maitra, Former Director, School of Planning and Architecture
- Mr. Manit Rastogi, Managing Director, Morphogenesis
- Prof. Alastair Adair, Pro. Vice Chancellor, University of Ulster
- Mr. Andreas Thermann, Senior Project Manager, KfW Development Bank

Session Coordinator: Mr. Saurabh Yadav, Knowledge Management Specialist, BEE & Ms. Mili Majumdar, Director, TERI

15h30-16h00 Tea Break

16h00-17h30 Transport

Increasing urbanization and industrialization have led to a phenomenal growth in the transportation demand worldwide and a concentration of vehicles in big cities with subsequent impact on a) the environment due to emission of both greenhouse gases and local pollutants, and b) the economy due to mounting fossil fuel import bill for many countries and depleting fossil fuel resources. The sector needs a transformation in terms of a revolution in technology, infrastructure, transport concepts and political framework, in order to achieve the ambitious CO₂ reduction goals. Alternative forms of energy as well as alternative power packs can play a significant role and will be critical in reducing the dependence on fossil fuels, achieving greater energy security and reducing noxious emissions.

Topics

- Alternate fuels for the transport sector
- Alternate power packs (battery operated vehicles/hybrids)

- Development of 2nd and 3rd -generation biofuels
- Biofuels: the food v/s fuel debate
- New feed stocks for bio-ethanol production
- Emerging technologies Environmental footprint of alternate fuels vis-à-vis petroleum products

Moderator: Prof. Ralph Sims, Director, Centre for Energy Research

Introduction: Mr. Uwe R. Fritsche, Research Coordinator for Systems Analysis, Energy & Climate Division, Oeko-Institute

Panelists:

- Dr. Mathew Abraham, General Manager, Alternate Fuel Technology, Mahindra & Mahindra
- Mr. Tomoya Ichimura, Director General, Smart Community Department, New Energy and Industrial Technology Development Organization (NEDO)
- Mr. Dilip Chenoy, Chief Executive Officer & Managing Director, National Skill Development Corporation
- Dr. Tomas Kaberger, Director General, Swedish Energy Agency
- Mr. Yasuyuki Sando, Chief Engineer and Senior Manager, R&D, Honda Motors

Session Coordinator: Dr. A.R. Shukla, Advisor, MNRE, Gol

TRACK 2 – POLICY

09h00-10h30 Renewable Energy Scenarios

The world has tapped only a small percentage of its vast renewable energy resources. Policy efforts need to be strengthened in order to encourage a massive scale-up of renewable technologies so as to build a long term, stable, low-carbon economy. Energy scenarios are crucial for guiding the development of energy policies and investment decisions. However, it is difficult for many existing models to capture the true potential of renewable energy.

Topics

- Renewable energy scenarios
- New/emerging renewable energy options
- Renewable energy scenarios leading to policy inputs
- Renewable energy resource assessment
- Role of renewable energy in combating climate change

Moderator and Introduction: Dr. Eric Martinot, Senior Research Director, Institute for Sustainable Energy Policies (ISEP)

Panelists:

- Mr. Hans Jørgen Koch, Deputy State Secretary, Danish Energy Agency
- Mr. Julien Pestiaux, Project Manager, European Climate Foundation
- Mr. Paolo Frankl, Head, Renewable Energy Division, IEA
- Mr. Sven Teske, Director, Renewable Energy, Greenpeace International
- Dr. Kirit Parikh, Former Member, Planning Commission, India
- Dr. Karsten Sach, Deputy Director General International Cooperation, Federal Ministry for the Environment, Germany

Session Coordinator: Ms. Namarata Mukherjee, Mercados & Dr. A.K. Varshney, Director, MNRE, Gol

10h30-11h00 Tea

11h00-12h30 Supporting Policies (on-grid)

The current policy environment has yielded significant results in creating a large and diverse renewable energy market. However, policy efforts need to be taken to the next level to encourage a massive scale up of renewable technologies. To increase the share of RE in the overall energy mix, many countries have adopted feed in laws as an effective way to stimulate the expansion of RE based power. The

Renewable Portfolio Standard (RPS) has also been tried out by several countries and states. It is essential to understand as to how effective these policies have been, and how they could be improved upon in the medium and long term to bring more renewable generated power to the grid. Though effective policies for renewable energy depend on the status and maturity of the technology in the respective country, international cooperation and the sharing of best practice on regulatory and policy approaches can accelerate the scale up of RE technologies.

Topics

- Embedding RE policy in energy and infrastructure policy
- Learning from past policies to promote RE power
- Risks and barriers facing large scale deployment of RE power
- The role of Regulators
- Feed-in tariffs / Renewable Portfolio Standards
- Innovative policy and regulatory instruments

Moderator: Dr. Dan Arvizu, Director and Chief Executive, U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL)

Introduction: Dr. Pramod Deo, Chairperson and Chief Executive, Central Electricity Regulatory Commission, India

Panelists:

- Mr. Tulsi R. Tanti, Chairman and Managing Director, Suzlon
- Prof. Li Junfeng, Deputy Director General of Energy Research Institute & Secretary General of China Renewable Energy Industries Association
- Mr. Christopher Flavin, President, Worldwatch Institute
- Mr. Rainer Hinrichs-Rahlwes, President, European Renewable Energy Federation
- Dr. Tetsunari Iida, Executive Director, ISEP

Session Coordinator: Dr. Ashvini Kumar, Director, MNRE, Gol

12h30-14h00 Lunch/ Official Side Event

14h00-15h30 Supporting Policies (off-grid)

A sizeable market for RE is for off-grid, and decentralized applications both in urban and rural settings. Policies to support off-grid renewables should aim to address the high cost of renewable technologies, lack of awareness, need for strong Operation & Maintenance (O&M) infrastructure and supporting up-scaling of deployment in the market mode. The role of renewable energy based Decentralized Distributed Generation (DDG) systems in addressing the issue of energy security is equally important and policies must encourage its possible convergence with the grid expansion programme in developing countries.

Topics

- The role of renewable energy in addressing energy access
- RE for rural development
- Public-private partnership for the development of renewable energy based products/services
- Decentralized RE power and its convergence with grid expansion plans
- Barriers for mainstreaming small scale RE applications
- Sustainability issues of RE based DDG systems

Moderator & Introduction: Mr. Hemant Lamba, Chief, AuroRE

Co-Moderator: Ms. Akanksha Chaurey, Director, TERI

Panelists:

- Dr. S. P. Gon Chaudhuri, Managing Director, West Bengal Green Energy Development Corporation Limited
- Dr. Alf Bjørseth, Chairman & Chief Executive Officer, Scatec Solar
- Mr. Ernesto Macías, President, Alliance for Rural Electrification, Belgium
- Mr. Andy Schroeter, Director, Sunlabob Renewable Energy Co. Ltd.
- Dr. Kinsuk Mitra, President, Winrock International India
- Dr. B C Jain, Managing Director, Ankur Scientific Ltd.

Session Coordinator: Dr. V.K. Jain, Director, MNRE, Gol

15h30-16h00 Tea

16h00-17h30 State and Local Governments

State and local governments around the world continue to enact policies to promote renewable energy, with the overall objectives of climate protection, improved local air quality, energy security, and sustainable local development. Local governments can play multiple roles as (i) decision makers, (ii) planners, (iii) management of municipal infrastructure and role model for citizens and businesses.

Topics

- Best-practice policies at state & local level to promote renewables
- City & spatial planning
- Role of micro-finance and consumer credit for promoting renewables
- Capacity-building to develop local skills to produce, market, install, operate and maintain sustainable energy technologies

Moderator & Introduction: Mr. Griffin Thompson, Manager Energy and Climate Programs, US State Department

Panelists:

- Mr. Ray Morgan, OBE, Chief Executive of Working Borough Council, UK
- Mr. Wolfgang Jung, Vice Managing Director and Head of Project Group on Future Energies at Science Park, Gelsenkirchen
- Mr. Nobuo Taniguchi, Deputy Director, Renewable Energy Section, Urban and Global Environment Division, Bureau of Environment, Tokyo Metropolitan Government
- Mr. Prithvi Raj Sawhney, Mayor of Delhi
- H.E. Jose Carlos das Dores Zorrinho, Secretary of State (MoS) for Energy and Innovation, Portugal

Session Coordinator: Dr. A. K. Tripathi, Director, MNRE, GoI

TRACK 3 – FINANCE

09h00-10h30 Financing innovation – projects, businesses and technologies

Financing innovation in the renewable energy sector from technology and business development through transfer and early deployment requires new forms of risk capital provision. Although the market potential for renewables is significant in most countries, early projects are hard to finance due to elevated risks and associated first-mover costs. New approaches to financing innovation are needed, some of which involve new forms of public/private cooperation.

Topics

- The costs and rewards of being a first mover in the renewable energy space
- How to lower the risk premium and cost of capital associated with investments in innovation
- The role of public finance mechanisms
- Financing innovation at the bottom of the pyramid

Chairperson: Mr. Xiaoyu Zhao, Vice President, Asian Development Bank (ADB)

Moderator and Introduction: Mr. Eric Usher, Manager, Seed Capital Programmes, UNEP

Panelists:

- Dr. Vivek Tandon, Founder, Aloe Private Equity
- Ms Christine Eibs-Singer, Co-Founder and Chief Executive Officer, E+Co
- Mr. Ethan Zindler, Head of Policy Analysis, Bloomberg New Energy Finance
- Ms. Anita George, Director- Infrastructure, International Finance Corporation (IFC)
- Mr. Debashish Majumdar, Chairman cum Managing Director, Indian Renewable Energy Development Agency Limited (IREDA)
- Mr. Don Purka, Senior Investment Specialist, Private Sector Operations Department, ADB

Session Coordinator: Mr. Rakesh Bhalla, IREDA

10h30-11h00 Tea

11h00-12h30 Financing deployment at scale

To achieve large-scale deployment of technologies that have been commercially proven requires large-scale investment. Weak financial markets create not only a problem of access to finance, but also introduce a bias towards investment in fossil fuel based technologies. Many of the RET are still relatively

new to market so the commercial chains, networks, marketing and financial links and other institutional structures that service traditional energy technologies are not fully in place. In low-income countries government intervention and development finance is necessary to unlock and scale-up investment in RE technologies (cover incremental costs, share risks, provide underlying finance in LDC). But to achieve large-scale deployment, a large share of financing will have to come from the private sector.

Topics

- Risks and barriers facing the large scale deployment of renewable energy technologies
- Role of financial institutions in catalyzing commercial investment

Chairperson: Mr. Rashad Kaldany, Vice President, IFC for Asia, Eastern Europe, Middle East and North Africa

Moderator & Introduction: Ms. Kirsty Hamilton, Associate Fellow, Chatham House

Panelists:

- Mr. Clifford Polycarp, Senior Associate, World Resources Institute - WRI
- Mr. Nick Robins, Head, Climate Change Centre of Excellence, HSBC
- Mr. Craig O'Connor, Director, Office of Renewable Energy & Environmental Exports, Exim Bank, USA
- Mr. Peter T. Gutman, Global Head, Renewable Energy & Environmental Finance, Standard Chartered Bank
- Mr. Satish Mandhana, Managing Director, IDFC Private Equity

Session Coordinator: Mr. K. S. Popli Director (Technical), IREDA

12h30-14h00 Lunch/ Official Side Event

14h00-15h30 Financing for small businesses and end-users

To start a new business activity, project or to develop a new technology, a renewable entrepreneur needs various sources of capital and business-development support. Given the nascent stages of the RET industry, there is limited availability of investment capital to finance the high up-front costs associated, especially with the initial stages of developing a RET project. Due to various barriers and market failures that inhibit financier engagement in (particularly off-grid) RE markets, there are many financial and non-financial gaps. These gaps make it difficult to launch new businesses or even to expand an existing and proven one.

Topics

- Enterprise Development Services for Clean Energy SMEs
- Scaling up access to Early Stage/Seed Capital for RE projects
- Approaches for softening loan financing: Interest rate reductions, green mortgages, guarantee facilities
- Importance of microfinance

- Development of new end-user finance products by local banks/MFIs
- Leveraging existing networks, building new market linkages
- Creation of opportunities for incoming generating activities

Moderator & Introduction: Ms. Richenda Van Leeuwen, Senior Director, UN Foundation

Panelists:

- Mr. Daniel Magallon, Managing Director, Basel Agency for Sustainable Energy
- Mr. Eric Usher, Manager, Seed Capital Programmes, UNEP
- Mr. Patricio Boyd, Director Rural Operations, Emprenda, Argentina
- Mr. Charan Singh, Chairman, Aryavart Gramin Bank

Session Coordinator: Dr. D.K. Khare, Director, MNRE

15h30-16h00 Tea

16h00-17h30 Initiatives to catalyse and scale up investment in renewable energy

Topic

Initiatives to catalyse and scale up of investment in renewable energy

- Scaling Up Renewable Energy in Low Income Countries (SREP)
- Global Energy Transfer Feed-in Tariff (GET FIT)
- Global Climate Partnership Fund
- The Critical Mass project
- Global Renewables Investment Plan - GRIP

Moderator & Introduction: Ms. Virginia Sonntag-O'Brien, Executive Secretary, REN21

Panelists:

- Mr Jonathan Maxwell, Founding Partner & Chief Executive Officer, Sustainable Development Capital LLP
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- Dr Klaus Peter Pischke, Energy Sector and Policy Division, KfW Development Bank
- Ms. Natalia Kulichenko-Lotz, Senior Energy Specialist, Sustainable Energy Department, World Bank
- Dr. Martin Schoepe, Head of Division International and EU Affairs of Renewable Energy, German Federal Ministry for the Environment

Session Coordinator: Mr. K. S. Popli, Director (Technical), IREDA

TRACK 4 – RENEWABLES, ACCESS AND MDGs

09h00-10h30 Renewables, Access & MDG

Some 2-3 billion people, living in developing countries, still lack access to affordable and clean energy services for both consumption and productive uses. Lack of access to clean, sustainable and affordable energy, where feasible from low carbon sources, has been recognized across multiple areas as a key constraint in the attainment of the Millennium Development Goals (MDGs), particularly in terms of creating the economic conditions necessary for reducing poverty.

Topics

- Development of a global Partnership for Energy Access
- Development of an effective communications/ media campaign focusing on building support for achieving energy access
- Mobilize resources to achieve access to clean energy
- Engagement of all stakeholders
- Energy Justice

Chairperson: Dr. Kandeh K. Yumkella, DG, UNIDO

Panelists:

- Dr. Manfred Konukiewitz, German Federal Ministry for. Economic Cooperation and *Development* (BMZ)
- Mr. Kadri Nassiep, Chief Executive Officer, South African National Energy Research Institute (SANERI)
- Ms. Veerle Vandeweerd, Director , Environment and Energy Group, Bureau for Development Policy, United Nations Development Programme (UNDP)
- Ms. Rachel Kyte, Vice President, IFC
- Mr. Deepak Gupta, Secretary, MNRE, Government of India
- Ms. Sylvie Lemmet, Director, Division of Technology, Industry and Economics (DTIE), United Nations Environment Programme (UNEP)

Session Coordinator: Dr. P.C. Maithani, Director, MNRE, Gol

10h30-11h00 Tea

11h00-12h30 Capacity Building

Capacity Building on energy policy making, energy regulations, energy planning and project financing, as well as in the latest technologies and best practices available for improving the efficiency of energy use, and for increasing the use of renewable energies are needed to increase access to energy. Priority needs to be given to those initiatives which are focused on tackling the poverty agenda through the provision of sustainable energy services for lighting, communications, water pumping, education, health and wealth creating activities.

Topics

- Availability of information and education of rural population
- Enhancing communication and awareness raising among key stakeholders and decision makers of the potential of RE sources and how these sources could bring them a sustainable form of energy supply
- How to increase understanding of environmental issues and their implications at all levels, from the local to the global, and to influence opinion and policy in ways that promote sustainable forms of development
- How to motivate industry, investors, researchers and government agencies to continuously share information that will facilitate dissemination of RETs
- Creation of opportunities for incoming generating activities
- Developing innovative and decentralized approaches to poverty reduction by harnessing solar energy would be appropriate.
- Training and networking for energy policy makers, regulators, and planners
- Strengthening existing Energy Centres, Agencies and Industry Associations

Moderator & Introduction: Dr. Leena Srivastava, Executive Director, TERI

Panelists

- Dr. Joe Madiath , Executive Director, Gram Vikas
- Mr. Berthold Breid, Chief Executive Officer, Renewables Academy AG (RENAC)
- Mr. Ryan Glenn Anderson, Advisor and Team Leader, Renewable Energy Finance, Norwegian Agency for Development Cooperation Norway
- Mr. Mark Radka, Chief of the Energy Branch, United Nations Environment Programme (UNEP)
- Mr. Hugo Lucas, Director for Policy, Capacity Building and Outreach, International Renewable Energy Agency (IRENA)
- Mr. Bunker Roy, Director, The Barefoot College

Session Coordinator: Mr. P.C. Pant, Director, MNRE, GoI

12h30-14h00 Lunch/ Official Side Event

14h00-15h30 Woman Empowerment

Women are the mainstream users and producers of energy and they have in a number of cases demonstrated their interest by taking active roles in renewable energy projects that produce real benefits towards their empowerment: that improve their quality of life, reduce their workload, reducing the health hazards associated with indoor burning of firewood or provide them with opportunities to increase their income. Women are already playing diverse roles in some renewable energy activities as energy consumers and beneficiaries, as micro entrepreneurs, as extension workers and caretakers and as leaders, networkers and lobbyists.

Topics

- How to incorporate gender sensitivity in national policy making
- What are the necessary steps to involve women in different stages of project development
- How to provide incentives for women and women's organizations to overcome the barriers often faced in obtaining credit
- Renewable energy for improving the households' quality of life
- Income generation activities for women in energy service delivery
- Separate resources for dealing with women's energy poverty issues

Moderator & Introduction: Dr. Veena Joshi, Senior Advisor, SDC

Panelists:

- Mr. Dipal Chandra Barua, Founder & Chairman, Bright Green Energy Foundation
- Dr. Nandita Mongia, Principal Advisor, South Asia Regional Initiative - Energy
- Ms. Jayshree Vyas, MD, SEWA Bank
- Ms. Adeola Eleri, Nigeria, Senior Scientific Officer, Renewable Energy Department, Energy Commission of Nigeria

Session Coordinator: Mr. K.P. Sukumaran, MNRE-UNDP ACE Project

15h30-16h00 Tea

16h00-17h30 Renewable Energy in India

The development and utilization of renewable energy has been accorded a high priority by the Government of India. The current policy environment in India, undoubtedly, has yielded significant results. India is ranked fifth globally for installed wind capacity and second for biogas generation, and runs one of the most diverse and biggest renewable energy programmes in the world. The Government policy has been successful in creating a fairly large and diversified manufacturing base, and an infrastructure to support Renewable Energy Technology (RET) design, development, testing and deployment. So far, an aggregate capacity of over 17,000 MW has been installed, based on renewable energy technologies.

Topics

- Status of renewable energy deployment in India
- Barriers to mainstreaming RE in India
- Role of RE in addressing energy security
- RE as a driver for rural development
- Role of R&D and technology development
- Policy, regulatory and fiscal measures to promote RE deployment

Chairperson: Dr. Farooq Abdullah, Union Minister for New & Renewable Energy, Government of India

Moderator: Mr. Suresh Prabhu, Chairman, Council for Energy, Environment and Water, India

Introduction: Mr. Deepak Gupta, Secretary, MNRE, Government of India

Panelists:

- Mr. B K Chaturvedi, Member, Planning Commission, India
- Dr. Pramod Deo, Chairperson and Chief Executive, Central Electricity Regulatory Commission, India
- Mr. Darryl D'Monte, Chairman, Forum of Environmental Journalists of India
- Mr. Jens Burgtorf, Director, Indo-German Energy Programme (IGEN), GTZ
- Dr. Shonali Pachauri, Deputy Program Leader of the Population and Climate Change (PCC) program, International Institute for Applied Systems Analysis (IIASA)
- Dr. Jyoti Parikh, Executive Director, IRADe

Session Coordinator: Mr. A.K. Varshney, Director, MNRE, GoI, Ms. Namarata Mukherjee, Mercados

17h30-19h00 Official Side Events

18h30-20h00 Evening Network Reception in Parallel to Official Side Event

DAY 3

DAY 3 - 29 October Main Plenary Hall 09h00-12h30 HALF DAY SESSION

- 09h00-10h30 Plenary: Key findings from all sessions
- Track 1: Technology and Infrastructure - Prof. Ralph Sims, Director, Centre for Energy Research
 - Track 2: Policy - Dr. Eric Martinot, Senior Research Director, Institute for Sustainable Energy Policies (ISEP)
 - Track 3: Finance - Mr. Eric Usher, Manager, Seed Capital Programmes, UNEP
 - Track 4: Renewables, Access and MDG - Mr. Suresh Prabhu, Chairman, Council for Energy, Environment and Water, India

10h30-11h00 Tea Break

- 11h00-12h30 **Plenary: Concluding Session**
- Chairperson** : Dr. Mohamed El-Ashry, Chairman, REN21
- Initial Statement – Mr. Thomas Friedman
- Address by H.E. Mr. Trond Giske, Minister of Trade and Industry, Norway
- Political Declaration - Dr. Farooq Abdullah, Union Minister for New & Renewable Energy, Government of India
- Invitation to host next International Renewable Energy Conference – H.E. Dr. Sultan Ahmed Al Jaber, Assistant Minister of Foreign Affairs, and Special Envoy for Energy and Climate Change, United Arab Emirates (UAE)
- Delhi International Action Programme – Award - Ms. Virginia Sonntag-O'Brien, Executive Secretary, REN21
- Close of the DIREC 2010 – Mr. Deepak Gupta, Secretary, MNRE, GoI

12h30-14h00 Official Side Events

Session Coordinator: Ms. Ritu Bharadwaj, Winrock International India