In the morning, participants convened in plenary sessions on: the journey from Johannesburg to Delhi; scaling-up renewables for energy security, climate change and economic development; the road to Cancun; the green economy and the role of renewables; and Vision 2020 – the role of renewables for energy security, climate change and economic development. In the afternoon, three parallel sessions including ministerial and multi-stakeholder discussions, and a CEO roundtable were followed by a joint ministerial-multi-stakeholder-CEO “straight talk.”

**Main Conference**

Farooq Abdullah, Union Minister for New and Renewable Energy, India welcomed delegates to New Delhi and emphasized that international cooperation in renewable energy research and development is essential to accelerate the development of solutions to meet the world’s increasing demand for affordable, non-polluting, renewable energy.

**Journey from Johannesburg to Delhi:**

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**Opening Ceremony**

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choice for humanity, called for an international roadmap for developing renewable energy according to countries’ conditions and resources, and stressed the role of education and training.

Describing US legislation on clean and renewable energy, Arun Majumdar, Director, Advanced Research Projects Agency-Energy (ARPA-E), US Department of Energy, stressed the role of innovative solutions and basic science, and highlighted the ARPA-E-sponsored energy innovation summit to be held in February-March 2011 in the US.

THE DIREC THEME: UP-SCALING AND MAINSTREAMING RENEWABLES FOR ENERGY SECURITY, CLIMATE CHANGE AND ECONOMIC DEVELOPMENT: Mohamed El-Ashry, Chairman, Renewable Energy Policy Network for the 21st Century (REN21), highlighted the progress made in renewable energy since the Washington IREC in 2008, emphasizing recent increased political commitment to renewables from both developed and developing countries. El-Ashry noted that, despite the economic recession, renewables growth will continue to be driven by climate change and the need for energy security and energy access, and called on delegates to radically change the world’s energy system for the sake of future generations.

Deepak Gupta, Secretary, Ministry of New and Renewable Energy (MNRE), India, urged government agencies and stakeholders to sign the Delhi International Action Program, and to pledge commitments for renewable energy, noting total commitments pledged are an indication of DIREC’s success.

ROAD TO CANCUN: Kandeh Yumkella, Director General, UN Industrial Development Organization (UNIDO), said neither climate change nor meeting the Millennium Development Goals (MDGs) can be solved without an energy revolution. He listed universal energy access and a 40% reduction in energy intensity by 2030, by doubling energy efficiency, as two universal goals.

Rajendra Pachauri, Chair, Intergovernmental Panel on Climate Change (IPCC), said setting an appropriate price for carbon and focusing on adaptation and impacts to human health are important policy areas for the 16th session of the Conference of the Parties (COP16) of the UN Framework Convention on Climate Change (UNFCCC). He cited the co-benefits of using renewables including energy security and access, reduced air pollution, and higher agricultural productivity and employment.

GREEN ECONOMY AND THE ROLE OF RENEWABLES: Maud Olofsson, Minister for Energy and Enterprise, Sweden, shared her country’s experience in dramatically raising the share of renewable energy using economic instruments. She underscored the goal of freeing transport from the consumption of fossil fuel.

Montek Singh Ahluwalia, Deputy Chairman, Planning Commission, India, noted that the need for new and renewable energy has increased due to India’s growing reliance on petroleum and coal imports. Ahluwalia underscored India’s energy plans, including: reducing the emissions intensity of its economy by 20-25%; taking advantage of abundant solar resources; and providing 500 gigawatts of clean energy through thorium-based nuclear energy by 2050.

VISION 2020 - ROLE OF RENEWABLES FOR ENERGY SECURITY, CLIMATE CHANGE AND ECONOMIC DEVELOPMENT: Moderator Shyam Saran, former Special Envoy to the Prime Minister on Climate Change, India, emphasized the need to focus on what must be done in the short time period prior to 2020. Roberto Menia, Minister of State, Ministry of Environment, Land and Sea, Italy, said that the 450ppm target outlined in the International Energy Agency (IEA) World Energy Outlook 2009 requires investment of US$ 5 trillion between 2010 and 2030, noting in particular the importance of investment in capacity and research and development. He said that Italy expects that renewables will meet 60% of gross internal consumption by 2020.

Arthourous Zervos, President, European Wind Energy Association (EWEA), said that renewables will be the foundation of future energy systems and expressed optimism on the development of a global renewable energy target. He said recent expansion of the sector has exceeded expectations and noted the sector is cost-effective in the long-term.

A.S. Sambo, Director General, Energy Commission of Nigeria, emphasized the challenges of energy poverty and the need for financing, and called for strengthening policy and modernizing the regulation frameworks for the energy sector.

Richard Jones, Deputy Executive Director, IEA, called for defining “sustainable energy” and named several important goals, including: improving energy efficiency; decarbonizing

the power industry; investing in smart grids and long distance transmission; and establishing predictable and transparent incentives.

**Parallel Sessions**

In the afternoon, three parallel sessions provided separate forums for Ministers, Multi-Stakeholders and CEOs to discuss renewable energy from their perspectives.

**Ministerial Discussion:** Vikram Chandra, CEO, NDTV, facilitated a panel session amongst energy ministers from Iceland, Mauritius, Japan, Iran, Portugal, India, the US, Finland, Uganda, Norway, Spain, Scotland, Bangladesh, Bhutan, Sri Lanka and a representative of the Asian Development Bank (ADB). Panelists discussed challenges to global action on energy, options for quick solutions and whether technology can enable renewables to dominate the energy industry. Several ministers emphasized the need for cooperation and collaboration among sectors and across borders but they differed in their optimism on growth in renewables.

Hiroshi Asahi, Director General, Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry, Japan, said optimizing competition was the way forward. Others, including Suresh Kumar, Assistant Secretary, US Department of Commerce, and Jim Mather, Minister for Enterprise, Energy and Tourism, Scotland, UK, said the quest for energy independence could, but should not, impede knowledge sharing and development of international cooperation. Some including Pedro Luis Marin Uribe, Secretary for Energy, Ministry of Industry, Tourism and Trade, Spain, Ahmed Rashid Beebejaun, Deputy Prime Minister, Minister of Energy and Public Utilities, Mauritius, and Farooq Abdullah, Union Minister for New and Renewable Energy, India, also underscored the restrictive costs of technology.

Lyonpo Khandu Wangchuk, Minister of Economic Affairs, Bhutan, and Paavo Väyrynen, Minister of Foreign Trade and Development, Ministry of Foreign Affairs, Finland, raised the importance of synergies between the energy industry and sustainable forestry. Xiaoyu Zhao, Vice President, ADB, discussed the effectiveness of regional cooperation between bank members and announced that it would double lending for climate change mitigation to US$ 2 billion. Additional topics included the importance of combining renewable technologies and the role of women.

**Multi-Stakeholder Discussion:** David Hales, President, College of the Atlantic, moderated the discussion, noting that, although progress in renewables has been significant, renewable technologies are still in their infancy.

Mark Radka, Chief of the Energy Branch, UNEP, said that increased investment in human capital in the sector would yield the greatest gains. David Renné, President, International Solar Energy Society, spoke on the role of his organization in informing renewable energy stakeholders on the latest breakthroughs in solar and other renewable technology. Harish Hande, Managing Director, Selco, underlined that decision-makers cannot afford to delay providing energy access to the poor, and the cost of inaction far outweighs the marginal costs of providing decentralized renewable energy over grid energy.

Jeremy Leggett, Chairman, Solarcentury, and Probir Ghosh, President, invVEST, strongly cautioned that peak-oil is imminent, underlining the importance of the clean energy industry, which will become a US$40 to US$50 trillion industry over the next 20 years. Vijay Mahajan, Chairman, BASIX, emphasized enhancing marketing and development of distribution networks by manufacturers for greater uptake of emerging clean energy technologies.
Ed Norrena, Head BBM Division, Cleantech, said governments must be at the forefront of renewables development. Hugo Lucas, Director for Policy, Capacity Building and Outreach, IRENA, said renewables synergize policy goals, because mitigation, employment, security and energy access all improve when renewables come online.

André Aranha Corrêa do Lago, Director, Department of Energy, Ministry of External Relations, Brazil, urged that international discussions begin addressing unsustainable patterns of production and consumption. Sunita Narain, Director, Centre for Science and Environment, stressed that business models are needed to bring renewables to the poorest of the poor, for whom they will be most beneficial.

CEO Roundtable: Moderators Steve Sawyer, Secretary General, Global Wind Energy Council (GWEC), and V. Subramanian, Secretary General, Indian Wind Energy Association (InWEA), led the discussion. Panelists included: Alf Bjørseth, CEO, SCATEC Solar; Rakesh Bakshi, Chairman, RRB Energy; Gary Conley, CEO, B2U Solar; Fabrice Didier, CEO, Saint-Gobain Solar; Wu Gang, CEO, Goldwind; Kishore Jayaraman, CEO, GE Energy India; Huang Ming, CEO, Himin; K. Subramanya, CEO, Tata BP Solar; Sean Sutton, President, Vestas Asia Pacific; and Harish Mehta, Director of Suzlon.

Panelists described the goals set in the field of renewable energy. Huang Ming drew attention to plans to build a “solar city,” and Rakesh Bakshi called on governments to provide clear and uniform policy guidelines. Several participants suggested putting in place national renewable energy strategies. K. Subramanya highlighted the Jawaharlal Nehru National Solar Mission and said unless rural access to electricity improves, migration to big cities will continue. Fabrice Didier expressed his conviction that the cost of solar and wind energy will become competitive, with or without carbon pricing, and Sean Sutton noted how the focus on research and development is driving down energy costs. The problem of subsidies was mentioned, with some saying their elimination is not necessarily the best approach. In the view of several participants, putting a standard price on carbon would prove difficult; and some doubted the “commercialization” of carbon, placing focus on carbon emissions. One noted that the solar market is driven by a small number of countries mostly through feed-in tariffs, but that in many cases the cost of photovoltaic energy is competitive with peak load production costs. Rakesh Bakshi noted that grid conditions dictate renewables’ design.

JOINT MINISTERIAL – MULTI-STAKEHOLDER – CEO ‘STRAIGHT TALK’: Reporting on the Ministerial discussion, Virginia Sonntag-O’Brien, REN21, highlighted that the discussion emphasized the importance of collaboration and partnership. She said ministers had noted the need to bring down the cost of renewables, but that costs are going down as renewables achieve economies of scale. On energy access for rural areas, she emphasized that decentralized power generation is often cheaper than constructing a grid. Sonntag-O’Brien underscored efforts on a sustainable energy free tariff agreement in many areas, including the World Trade Organization (WTO).

Multi-Stakeholder discussion moderator David Hales highlighted the diverse views reflected on the panel. He noted that discussions centered on a renewable revolution in a broader context. Hales said some felt fundamental disconnects, such as the gap between rich and poor, have to be addressed in order to achieve such a renewable revolution, while others said such a renewables revolution would address these issues inherently.

CEO roundtable moderator Steve Sawyer said discussions had highlighted, inter alia: lowering costs of renewable energies to make them more competitive; scaling up wind and solar energy; assisting the industry to reach maturity; sending clear government signals to markets regarding renewables and fossil fuels; and addressing subsidies to level the energy playing fields and develop domestic renewable energy markets.