



WIREC 2008 Ministerial Bulletin

A daily report of the Washington International Renewable Energy Conference 2008

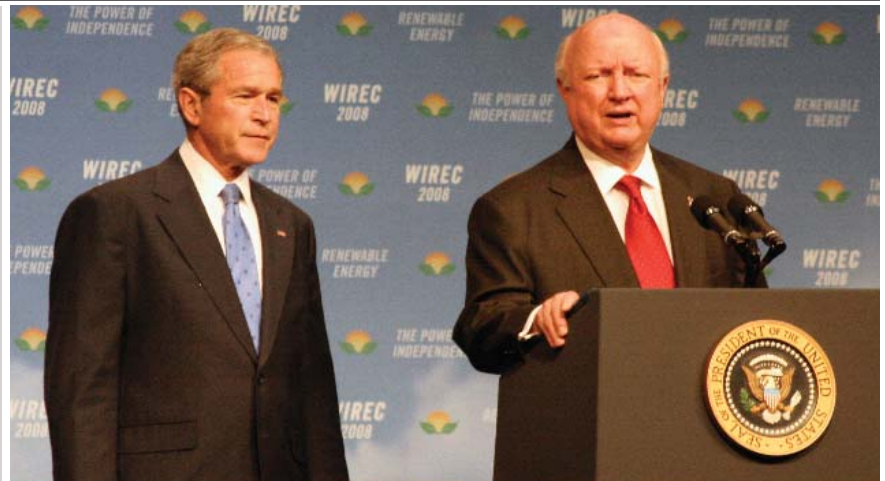
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WIREC 2008 MINISTERIAL HIGHLIGHTS: WEDNESDAY, 5 MARCH 2008

WIREC 2008 convened on Wednesday, 5 March, for the second day of the three-day conference. George W. Bush, President of the United States of America, spoke to participants in the morning. WIREC 2008 participants then attended 23 plenary and workshop sessions on subjects related to the themes of: market adaptation and finance; agriculture, forestry and rural development; state and local authorities; and R&D. At the end of Wednesday, over 80 pledges had been submitted for the Washington International Action Program.



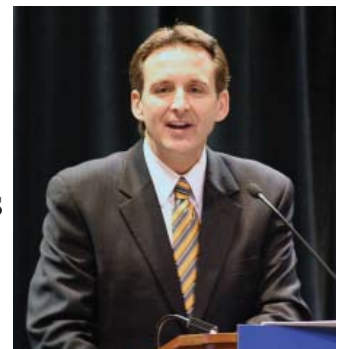
US President George W. Bush was introduced by Samuel Bodman, U.S. Secretary of Energy.

SPECIAL ADDRESS

George W. Bush, President of the United States of America, addressed the conference, stating that America needs to change its habits and get off oil. Bush highlighted security, economic and environmental reasons to reduce fossil fuel dependency, and described goals and policies in the transportation and electricity generation sectors, including a goal to reduce gasoline consumption by 20% over 10 years. He said he sees a day when each house can be an electric generator of its own and feed power back to the grid. He stated the US is serious about confronting climate change and that an effective international agreement must include commitments by every major economy, with no free riders. He said the major economies meetings that the US is hosting are parallel to the UN process, and seek to enable the UN process to become effective. Bush called for a clean technology fund for wealthy countries to help poor countries clean up their environments, adding that he has called on Congress to commit US\$ 2 billion for this purpose. Bush also said tariffs and barriers on exports of clean technologies should be eliminated to enable them to move freely around the world.

from the Bali roadmap. Maud Olofsson, Deputy Prime Minister and Minister for Enterprise and Energy, Sweden, told of Sweden's transition to a green economy. She said it is possible to combine welfare development with climate care and stressed that biofuels must not conflict with food or have large environmental impacts.

The Governor of Minnesota, Tim Pawlenty, noted his state's concerns for energy prices, national security, greenhouse gases, and interest in "green collar" jobs. Reuben Jeffery III, Under Secretary for Economic, Energy and Agricultural Affairs, US Department of State, highlighted the need for the EU, US and Brazil to agree to common standards on biofuels, and called attention to a clean technology fund committed to by the US, UK and Japan. Michael



Tim Pawlenty, Governor of Minnesota.

Liebreich, CEO, New Energy Finance, forecasted the clean energy sector to stabilize at about US\$650bn/yr around 2030.

GRID CONNECTED GENERATION: MARKET ADOPTION AND DEPLOYMENT OF NEW TECHNOLOGY:

The moderator highlighted Denmark's 20% annual share of wind power, with up to 35% monthly share and 100% hourly share, noting there had been no problems with the grid. Christine Wörlen, Deutsche Energie-Agentur GmbH (dena) – German Energy Agency, compared the effects of reviews of the German feed-in tariff with those from lapses in the US Production Tax Credit (PTC), and noted the role of policy continuity and adjustment in sustaining

MARKET ADOPTION AND FINANCE

PLENARY: This plenary was moderated by Gregory Manuel, Special Advisor to the Secretary of State and International Energy Coordinator, US Department of State. Alexander "Andy" Karsner, Assistant Secretary of Energy Efficiency and Renewable Energy, US Department of Energy, noted that renewables address mitigation, finance and technology transfer, three of the pillars

exponential growth of wind power. Terry Hudgens, President and CEO, PPM Energy, said 119,000 US jobs will be lost by 2009 if the PTC is not extended. Ian Simm, Chief Executive Officer, Impax Group PLC, cautioned against “spaghetti” policy, or too many policies at the same time. He noted the impacts of the credit and equity market crisis on the renewable sector, while highlighting the sector’s long-term investment potential. Lucien Bronicki, Chairman and Chief Technology Officer, Ormat Technologies, Inc., said geothermal provides base-load weather-independent power.

DISTRIBUTED AND OFF-GRID GENERATION: MARKET ADOPTION AND DEPLOYMENT OF NEW TECHNOLOGY:

This session was facilitated by Jeff Leonard, President and CEO, Global Environment Fund. Most of the discussion centered around the need for both private and government financing to scale up R&D and increase production and deployment of renewable technology. Panelists described efforts in China and other large countries to move toward greater use of renewables, and urged smaller least developed countries to use multilateral development banks and donor organizations to step up off-grid renewables financing and usage. Participants urged long-term government commitment to renewable development policies and emphasized the importance of opening up global renewable trade, while protecting intellectual property rights.

RENEWABLE FUELS: MARKET ADOPTION AND DEPLOYMENT OF NEW TECHNOLOGY: This session was facilitated by Paolo Frankl, Head of Renewable Energy Unit, International Energy Agency. Panelists addressed a range of issues, including: the market difficulties facing corn-based ethanol, newly promising cellulosic technologies, particularly in sugarcane genetics; and the attractiveness of biodiesel, for its ability to “integrate into existing infrastructure.” Panelists also emphasized: the remaining “valley of death” in financing newly proven technologies; the importance of a decentralized approach, whereby government acts as both a provider of land and market consumer; the importance of extending tax credits such as the biodiesel tax credit, and the need to resist the urge toward protectionism.

GRID-CONNECTED GENERATION IN MATURE MARKETS: Binyamin Ben-Eliezer, Minister of National Infrastructure, Israel, highlighted energy security, Israel’s leadership in solar energy, and commitment to become a renewables high tech center. Christopher Eckerberg, Vice President and Head of Public Affairs, Vattenfall, underscored problems with transmission grids and consumer attitude. Pat Wood III, Principal, Wood3 Resources and Past Chairman of Advisory Board, Airtricity North America, identified success factors for wind power deployment in Texas, including the

ability to build new transmission and allocate transmission costs, and Texas’ electricity market integration and robustness. Another speaker said in order to get good policy enacted and implemented it is important to understand the “laws of physics” between the worlds of finance and politics. He noted the US roughly spends US\$1bn a day in oil imports.

DISTRIBUTED AND OFF-GRID GENERATION IN MATURE MARKETS: This session was moderated by Wolfgang Palz, Chair of the World Council for Renewable Energy. He and the panelists highlighted the enormous market potential for renewable energy and the impressive decline in the cost of renewable technologies, and underscored the critical role of long-term stable and transparent policy and economic incentives for deployment of renewable energy. They discussed challenges for renewable energy, including: manufacturing at the volume and scale needed for market deployment; development of energy storage; bundling off-grid and distributed generation investments to create funding incentives; US subsidies for coal and biofuels; and the necessity of extending federal and state level incentives for renewable energy.

RENEWABLE FUELS IN MATURE MARKETS: Harry Duynhoven, Associate Minister of Energy and Minister of Transport Safety, New Zealand, moderated this session. Speakers discussed the importance of consistent policies to promote the uptake of biofuels, including those related to establishing the required infrastructure, encouraging R&D partnerships between government and industry, and adopting meaningful, targeted and temporary incentives for all renewable fuels stakeholders. Mark Fulton, Managing Director, Global Head of Strategic Planning and Climate Change Strategist, Deutsche Bank, said current uncertainties with respect to biofuels include carbon debt, whether incentives will disappear, and whether trade barriers will be an issue. Speakers also highlighted the importance of credible, peer-reviewed research and of certification and global standards, including standardized products.

GRID-CONNECTED GENERATION IN EMERGING MARKETS: V. Subramanian, Ministry of New and Renewable Energy, India, and V.K. Garg, Power Finance Corp., overviewed India’s renewable energy sector, policies and measures. Among others, they highlighted that India has too many regulatory commissions and grid connection problems. They noted that India is switching from subsidies based on installed capacity to those based on generation, and highlighted the need for more information on technical and economic viability to secure financing. Dana Younger, International Finance Corporation (IFC), noted that while renewables are maturing, they are still not low cost technologies for developing countries. He underscored remarkable wind power growth in China and India, and described growth for different renewable technologies in developing countries. Jeffrey Sachs, Columbia University, identified three megatrends in the energy sector: lack of pricing of carbon into energy choices; access to electricity in rural developing areas; and energy resource constraints by mid-century. He underscored that the climate agenda and the poverty agenda are intersecting as never before.

DISTRIBUTED AND OFF-GRID GENERATION IN EMERGING MARKETS: This session was moderated by Mark Radka, UN Environment Programme, who, along with panelists, identified several critical issues needing to be addressed including: innovative ways to finance the start up and recurrent costs of generation and distribution; the importance of coverage targets and



Panelists during the session on Grid-Connected Generation in Mature Markets.



Panelists during the session on Distributed and off-grid generation in Emerging Markets.

timetables; the policy and economic context as well as the scale and location of generating facilities; the critical role of governmental leadership mobilizing initial resource requirements and creating incentives for private sector investment; and that electricity is not just about technology but is a service.

RENEWABLE FUELS IN EMERGING MARKETS: Hernan Martinez Torres, Minister of Energy and Mines, Colombia, moderated this session. Yusof Basiron, CEO, Malaysian Palm Oil Council, and José Sergio Gabrielli de Azevedo, President and CEO, Petrobras, discussed the Malaysian palm oil and Brazilian light vehicle biofuel sectors, respectively, with Gabrielli noting the importance of regulatory actions in consuming and producing countries to increase biofuel consumption, including requiring a mandatory blend and requiring mileage improvements. Anil Cabraal, Lead Energy Specialist, World Bank, said the World Bank has not developed a position on the issue yet, and said certification and standards should be addressed on a multilateral basis. Glenn Prickett, Senior Vice President, Conservation International, emphasized the importance of establishing a global price for carbon.

AGRICULTURE, FORESTRY AND RURAL DEV.

PLENARY: The morning plenary on Agriculture, Forestry and Rural Development was moderated by Thomas Dorr, Chairman, Secretary's Energy Council, US Department of Agriculture (USDA). Chuck Conner, Deputy Secretary of Agriculture, USDA, highlighted the successes of USDA programs at the interface between agriculture and renewable energy. Marcos Jank, President and CEO, Brazilian Sugar Cane Industry Association (UNICA), highlighted comparative advantages of ethanol from sugar cane, noted the many trade and non-trade barriers to ethanol while fossil fuels move freely, and said we should move to unobstructed trade. Andrzej Dycha, Under Secretary of State, Ministry of Agriculture and Rural Development, Poland, said it was unacceptable to import biomass that was not produced in conformity with sustainability criteria. Arthur Cua Yap, Secretary, Department of Agriculture, the Philippines, noted that his country's high oil price vulnerability index led to the launch of a national biofuels initiative that includes increasing the ethanol/gasoline mix, increasing the production of a variety of food stocks and addressing infrastructure requirements in transportation and irrigation.

SUSTAINABILITY, TECHNOLOGY AND DEVELOPMENT: Claudia McMurray, Assistant Secretary of State for Oceans, Environment and Science, US Department of State, moderated this session, which heard about renewable energy activities in Latin America and the Caribbean, India and Brazil.

Speakers emphasized the importance of technology for innovation and the opportunity for international investment in biofuels, among other issues. William Dar, Director General of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), highlighted ICRISAT's development of a "smart crop," sweet sorghum, and said greater investments in international agricultural research must be made to fully harness science and technology for biofuel development.

RURAL AND ECONOMIC DEVELOPMENT: James Kunder, Deputy Administrator, US Agency for International Development, moderated this session. Panelists discussed the central role of energy access for economic and social development, the wide variety of national circumstances and approaches required, from Rwanda to Japan to the US, the diversity of technologies and policy tools available, the energy crisis in Africa, the importance of including bottom-up approaches and the scale of resources required.

DEVELOPMENT OF BIOBASED PRODUCTS INDUSTRY (NON-FUELS): Roger Conway, Director, Office of Energy Policy and New Uses, USDA, moderated this session, during which presenters from industry, USDA, and an African NGO spoke. A representative from DuPont gave a brief account of developing and bringing bioproducts to market, following which USDA Sustainable Operations Council Chair, Boyd Rutherford, gave a government procurement perspective. He described the energy, economic and environmental effects of the government procurement preference program for biobased products. A speaker from an NGO in Mali spoke about the importance of biofuels in poorer countries, and stressed the importance of avoiding conflicts between traditional uses of biomass and new technologies. Subjects of ensuing discussion included: cellulosic ethanol R&D, generating "demand pull" for bioproducts, and uses of biofuel and bioproduct production byproducts.

THE ROLE OF FORESTRY IN RENEWABLE ENERGY: Mark Rey, Vice Chairman, Secretary's Energy Council, USDA, moderated this panel, in which representatives from government, industry, and non-governmental organizations discussed the role of forestry in bioenergy and climate change. Discussion centered around sustainable production, research and development, and continued production of conventional products. Panelists stated that: forests have significant potential to contribute to renewable energy and reduce greenhouse gas emissions; sustainability is critical to the use of forest biomass for bioenergy; it is important to strike a balance between bioenergy and conventional forest products; and more R&D is needed to improve economic viability and environmental sustainability.

STATE AND LOCAL AUTHORITIES

RENEWABLE ENERGY POLICY & FINANCING INITIATIVES: LESSONS LEARNED AND EMERGING STRATEGIES: Panelists discussed state and local initiatives to advance renewable energy markets and projects. Many participants discussed the context-dependence of energy decisions, noting that technologies cannot take off by themselves, but require planning and training of local people. Local level tools for advancing renewables expansion include: clean energy funds to help consumers with bills, renewable portfolio standards, and public fiduciary institutions mobilizing pensions and government treasury funds for investment in new technologies. One participant suggested that federal agencies



Panelists in the state and local authorities session on economic development and renewable energy.

shift from funding projects to making block grants available to state and local governments for renewables development.

ECONOMIC DEVELOPMENT AND RENEWABLE ENERGY: STATE AND LOCAL AUTHORITIES: Katie McGinty, Secretary, Pennsylvania Department of Environmental Protection, moderated this session. Panelists underscored the need for governments to: provide stable, clear, and predictable policies to enact private industry with investment security; finance research and development; support microfinance to increase access to energy; remove barriers to cross-border trade; and make renewable energy cost-effective. Speakers recommended that governments link policies to job creation and tie policy to other objectives such as environmental protection and economic growth. Participants said that finding land to develop projects impedes investment. Speakers recommended that governments invest in education, public information, and workforce training for a new green economy.

RESEARCH & DEVELOPMENT

PLENARY: Speakers discussed various aspects of renewable energy research and development (R&D), with a consensus that significantly more money for R&D is needed. John Holdren, Harvard University, gave a survey of the renewable energy R&D landscape, stressing that research, development, demonstration and deployment are iterative, not linear processes. Other speakers discussed the requirements for renewable energy growth in China, the need for R&D cooperation, and the urgency of scaling up R&D spending. Ossur Skarphedinnsson, Iceland, described Iceland's successes developing their geothermal and hydroelectric potential, and encouraged other countries to do the same. Arthouros Zervos, European Wind Energy Association, explained that R&D needs for different technologies depend on the technologies' current level of development.

BIOENERGY FEEDSTOCKS: Four speakers from government, industry and academia discussed prospects and concerns about a scale-up of bioenergy feedstock production. One panelist discussed scaling up biofuels production from forest resources, stressing the need to: protect economic value of forest resources; create incentives for third party sustainability certification; reduce financial risk; and integrate the forestry sector into carbon markets. Another panelist described Brazilian sugar cane production, emphasizing social aspects of crop production and the ability to plant cane on degraded lands. Both academic panelists raised cautions about large-scale biofuels production. One stated that, due to land use changes, biofuels are more greenhouse gas intensive than gasoline. The other said that there is no silver bullet, but was optimistic about bioengineered poplar as a feedstock.

BIOENERGY CONVERSION PROCESSES: This session discussed, among other issues: breaking plant fibers into sugar, which participants said is the biggest barrier to making biofuels cost effective; that all biofuels are not created equal; that different geographic locations may specialize in different biofuels; that biomass supply and logistics need to be developed; that local communities must capture some of the economic benefits of biofuel processing; that conversion of sugars to biofuels other than ethanol using nanotechnology should be pursued; and R&D on efficient storage batteries.

WIND AND SOLAR: This session, moderated by Joachim Luther, Chairman, International Science Panel on Renewable Energies, discussed the history and future of wind and solar R&D. Participants discussed the need for: stable, consistent policies; increased grid interoperability; a larger market to drive economies of scale; and storage for intermittent sources of energy. Other topics included: the strong growth of wind power in the US; the rapid yearly growth of photovoltaics, and the need to continue this rapid growth into the future.

MINISTERIAL LUNCHEON

Robert Mosbacher, Jr., President and CEO, U.S. Overseas Private Investment Corporation (OPIC), described the OPIC commitment to cap and reduce by 20% the GHG emissions of its portfolio and announced a global call for proposals of funds for renewable energy investment (solar, wind, geothermal, biomass). He said OPIC will commit US\$500 million to finance one third of the funds and the funds will mobilize US\$1 billion.

PLEDGE UPDATE

At the close of the day, the Washington International Action Program, which is the collection of pledges to drive up renewable energy, had collected more than 80 pledges from over 40 nations and other entities. New Zealand set the goal of producing 90% of their electricity from renewables by 2025, while the Council of the European Union pledged to reduce greenhouse gas emissions by a minimum of 20% by 2020.

WIREC 2008 SUMMARY REPORT

The WIREC 2008 Ministerial Bulletin summary of the conference will be available on Tuesday, 11 March 2008, online at:

<http://www.iisd.ca/ymb/wirec2008/>



Participants in the Convention Center lobby.