



Plenary session on Policies for Renewable Energy Markets Development - Heat and Transport, co-chaired by Renate Künast, Germany's Federal Minister for Consumer Protection, Food and Agriculture, and Hans Christian Schmidt, Denmark's Minister for the Environment.

RENEWABLES HIGHLIGHTS: WEDNESDAY, 2 JUNE 2004

The second day of *renewables 2004* began with a Plenary session on policies for renewable energy market development, focusing on electricity, heat and transport. In the afternoon, the Plenary addressed financing options for renewable energy, as well as strengthening capacities, research and technology development, and institutions. A senior officials meeting took place in the afternoon. In addition, several side events were held throughout the day, including the "Day of Geothermal Power." The final day of the Sustainable Energy Finance event also took place.

PLENARY SESSIONS

POLICIES FOR RENEWABLE ENERGY MARKET DEVELOPMENT

In the morning, delegates met in Plenary to consider policies for renewable energy market development. The first part of the session focused on the electricity sector, followed by presentations and discussions on heating and transport.

Electricity: Session Co-Chair Carlos Magariños, Director General of the UN Industrial Development Organization (UNIDO), outlined UNIDO's work to ensure universal energy access for the poor. He expressed confidence that *renewables 2004* would provide clear guidance on the development of renewables.

Ma Shenghong, Beijing Jikedian Renewable Energy Development Center, briefed participants on China's Brightness and Township Electrification Programme, which aims to bring modern energy to thousands of remote rural communities. While indicating that renewable energy is a least cost option for remote villages, he noted that government grants and support remain essential, as costs are still relatively high.

Aloys Wobben, Enercon GmbH, explained that wind farms add value by providing a second income for farmers, as well as a range of employment opportunities.

Jayantha Nagendran, DFCC Bank, briefed participants on an energy services delivery project in Sri Lanka that provides both on-grid and off-grid hydro and solar home systems. Nagendran noted that public-private partnerships and a multi-stakeholder approach have contributed to high quality service.

Steve Westwell, BP Solar, highlighted that solar energy would

become competitive with mainstream grid-supplied electricity on a price per kilowatt hour basis within 15-20 years if cost reduction trends continue. However, he added that ongoing government support will be required if the solar energy business is to become self-sustaining.

In the ensuing discussion, BUSINESS AND INDUSTRY noted its support for internalizing external costs. Responding to a question on local opposition to wind farms, Wobben noted ongoing progress in reducing noise and other causes of complaints.

Heat and transport: Freddie Mthlathedi, Southern African Development Community (SADC), presented the SADC Programme for Biomass Energy Conservation. He highlighted that the Programme raises awareness among biomass energy users, and improves business opportunities for suppliers of more efficient stoves. He recommended that *renewables 2004* recognize sustainable biomass energy as a critical component of renewable energy, and that countries integrate traditional biomass energy into all energy policies and strategies.

Jürg Hofer, City of Basel, Switzerland, briefed participants on municipal policies for the promotion of renewable energy and energy efficiency, including a renewable energy and energy efficiency promotion tax for energy providers, a consumption tax, and a solar power exchange programme.

Felix ter Heegde, Netherlands Development Organization, and Sundar Bajgain, Nepal's Biogas Support Programme, spoke about domestic biogas. Ter Heegde noted that biogas substitutes for firewood, coal, dung cake and kerosene, and highlighted a variety of benefits, including reductions in air pollution, deforestation and greenhouse gas emissions. Bajgain outlined Nepal's domestic biogas support programme, which resulted in the installation of 115,000 biogas units.

Emílio la Rovere, Federal University of Rio de Janeiro, briefed participants on the Brazilian Ethanol Programme that supports bio-fuels derived from sugar cane and used for transport. He noted significant technological progress since the Programme was launched in the 1970s, adding that the Programme has also created 720,000 direct jobs, reduced reliance on oil imports and vulnerability to oil price fluctuations, and helped mitigate climate change.

FINANCING OPTIONS FOR RENEWABLE ENERGIES

In the afternoon, delegates examined financing options for renewable energy. Dipal Barua, Grameen Shakti (a not-for-profit rural power company in Bangladesh) noted that 70% of people in Bangladesh lack access to the electricity grid. He reported on Grameen Shakti's work to promote affordable solar home systems in rural and remote off-grid areas by providing four different financing models with varying down payments and interest rates. He explained that the organization also provides additional support, including a warranty system and the training of local engineers.

Andrea Kuhlhava, Czech Energy Agency, briefed delegates on the Czech Republic's energy efficiency and renewable energy activities, including its Joint Implementation (JI) projects. She observed that JI projects increase energy efficiency and facilitate achievement of national targets to source 8% of total energy consumption from renewables by 2010.

Christine Eibs-Singer, E+Co, and Abeeku Brew-Hammond, Kumasi Institute of Technology and Environment, explained that



Len Good, CEO and Chairman of the GEF, co-chaired the Plenary Session on Financing Options for Renewable Energies.

their organizations provide services and capital to small- and medium-sized enterprises (SMEs) working on renewable energy. Cayetano Hernández, Spain's Institute for Energy Diversification and Energy Efficiency, reported on the benefits of third party financing. He suggested that this financing approach overcomes barriers for potential investors, including

high initial capital outlays, problems securing external financing, and difficulties in evaluating a project's technical feasibility.

Reflecting on the session, Jamal Saghir, World Bank, highlighted the critical importance of financing for scaling-up renewables. While stressing the importance of subsidies and support, he suggested that it was necessary to start moving towards a market-based approach.

STRENGTHENING CAPACITIES, RESEARCH AND TECHNOLOGY DEVELOPMENT, AND INSTITUTIONS

On Wednesday afternoon, Alberto Calcagno, UNEP-Dams and Development Project (DDP), and Brian Hollingworth, a consultant on South Africa's World Commission on Dams (WCD) follow-up

process, spoke about stakeholder dialogues on dams. Calcagno presented several dialogue initiatives in relation to the WCD, while Hollingworth focused on South Africa's multi-stakeholder initiative, which he said sets out a clear process for addressing a sensitive issue.

Jean-Louis Bal, Application of Solar Thermal Energy in the Mediterranean Basin, and Mohamed Ezzedine Khalfallah, Tunisia's National Agency for Renewable Energy, briefed participants on a project to provide solar water heating installations in several Mediterranean countries.

Frederick Morse, US Solar Energy Industry Association, introduced the Concentrating Solar Power Global Market Initiative, which concentrates solar power in a dish to produce steam or electricity directly.

Ingvar Fridleifsson, UN University Reykjavik, described a geothermal energy training programme in Iceland for professionals from developing countries.

Joachim Luther, Fraunhofer Institute for Solar Energy Systems, briefed participants on research and development on photovoltaics in Germany, highlighting the positive cooperation between government, industry, and research and development institutes.

Summarizing the presentations, Stephen Karekezi, African Energy Policy Research Network, noted the benefits of an open process that involves as many stakeholders and countries as possible.

SENIOR OFFICIALS MEETING

This meeting was chaired by Michael Hofmann (Germany), Co-Chair of the *renewables 2004* International Steering Committee (ISC). Mohamed El-Ashry, Conference Facilitator, briefed delegates on the process of drafting the political declaration. He explained that the first draft had been circulated to governments and stakeholders in April 2004, with a revised draft text circulated on 17 May. Based on comments submitted both orally and in writing during *renewables 2004*, he said he would prepare a third draft to be presented to the Plenary on Thursday, 3 June. He expressed hope that ministers would adopt the declaration on 4 June.

Following his presentation, many delegates provided comments on the draft declaration. Several developing countries expressed concerns regarding the: concept of internalizing the external costs of energy generation; selective use of language from the Johannesburg Programme of Implementation (JPOI); assumptions regarding future discussions to take place during the 14th and 15th sessions of the Commission on Sustainable Development; proposed international review and reporting processes to follow-up *renewables 2004*; and proposals to direct a percentage of financial flows from International Financial Institutions for renewable energy. Noting that the majority of renewable energy technologies are owned by industrialized countries, developing countries expressed concern that this could lead to a dependence on foreign-owned technology. Some developing countries also proposed additional language referencing the principle of common but differentiated responsibilities, and emphasizing the need for industrialized countries to fulfil their existing commitments for financial assistance and technology transfer to developing countries on concessional terms.

Regarding targets, several developed countries expressed disappointment that the draft fails to specify renewable energy targets and that it does not go beyond the language agreed to in the JPOI. These delegations proposed language that the setting of targets is a

prerequisite for successful renewable energy expansion strategies at national, regional and global levels. They also expressed support for retaining language on the internalization of external costs as an important measure in promoting renewable energy. One developed country said it was sufficient that the issue of targets was addressed in the Policy Recommendations document, while several developed and developing countries opposed text on targets. In order to facilitate consensus, a developed country proposed that the declaration recognize the utility of targets, without making them a prerequisite for all countries.

A group of developing countries, announced that they had a detailed proposal based on the outcomes of a regional preparatory meeting for *renewables 2004*. A developing country said the conference outcomes should not weaken the agreements reached in the JPOI. Another developing country suggested introductory text stating that the declaration was neither prescriptive nor binding. A developed country suggested that in the event of no consensus on the declaration, its endorsement could be made optional. Several delegations raised concerns of a procedural nature, such as the need for sufficient time to comment on the third draft, and the process for taking into account written and oral comments.

Rainer Hinrichs-Rahlwes (Germany), Co-Chair ISC, then introduced the Policy Recommendations document, explaining that it contained a non-prescriptive menu of options. He also introduced the International Action Programme, which currently lists over 123 voluntary actions and commitments announced by governments and other stakeholders.

and said application of the WCD's recommendations would present a severe setback to economic advancement in his country.

Link to more information:

<http://www.unep-dams.org>
<http://www.irn.org>
<http://www.hydropower.org>

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 Patrick McCully: patrick@irn.org
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Day of Geothermal Power

Organized by UNEP Energy, the Federal Institute for Geosciences and Natural Resources, Rödl & Partner, German Geothermal Union, Center of Geo-Research Potsdam, International Geothermal Association and KfW Bankgroup

This side event included four sessions, during which participants reviewed the latest advances in geothermal power technology, considered the potential for market development, outlined project implementation, and identified actions for moving forward.

The meeting opened with a keynote speech by John Lund, Oregon Institute of Technology, who noted that geothermal energy is currently produced by 23 countries, serving 60 million people and supplying 1% of world energy needs. During the first session, participants heard presentations reviewing available technologies for harnessing geothermal power and outlining their distribution and applicability.

Presentations on market development covered a range of issues, including what determines insurance costs, how to develop legal frameworks that support geothermal energy projects, and how to minimize risk for investors. Participants were briefed about Germany's Renewable Energy Act, which sets tariffs, provides priority access and secures distribution for renewable electricity, including geothermal. A World Bank representative introduced the Bank's GEO-Fund, which seeks to guarantee the geological risks associated with geothermal development projects.

The afternoon session opened with briefings on lessons learned from the implementation of geothermal projects in Iceland, Kenya, Guatemala, Nicaragua, the Russian Federation and Hungary. Participants identified several drivers for geothermal energy including: local availability, inexhaustibility of supply, energy source diversification, fluctuating oil prices, and reduced environmental impacts compared with conventional energy sources. Barriers identified included high exploration and initial investment costs, and a lack of private finance and institutional will.

On moving forward, speakers presented national and regional plans for the development of geothermal projects. One presenter described the intention of the Philippines to become the world's largest consumer of geothermal energy. Participants heard of a project in the eastern Caribbean that aims to foster local legal, technical and financial expertise and generate comprehensive data-sets as a basis for attracting commercial investment. One speaker described the Federal Institute for Geosciences and Natural Resources' GEOTHERM-Programme, which aims to remove the barriers to the

SIDE EVENTS

Is the World Commission on Dams Report a suitable tool for assessing the sustainability of hydropower?

Presented by UNEP - DDP

Alberto Calcagno, UNEP-DDP, explained that the UNEP-DDP aims to promote dialogue on how to improve the planning and management of dams and their alternatives, based on the WCD's core values and strategic priorities.

David Grey, World Bank, said the Bank was opposed to any requirement to "comply" with the WCD Report, but noted that it uses the Report as guidance. He stated that there has been a major decline in World Bank lending for all hydropower infrastructure, including dams and hydropower.

Patrick McCully, International Rivers Network, urged the exclusion of large hydropower from renewables initiatives, stressing that large hydropower fails to provide the poverty reduction benefits of decentralized renewables. He also warned that including large hydropower in such initiatives would divert much-needed funds away from new renewables.

Richard Taylor, International Hydropower Association (IHA), said hydropower issues were inadequately addressed in the *renewables 2004* programme. Describing the WCD Report as an "embarrassingly one-sided review," he highlighted the IHA's sustainability guidelines, which he said are rigorous and pragmatic.

George Mpombo, Zambia's Minister of Energy and Water Development, expressed support for dam construction in Africa,

development of geothermal energy in developing countries. Highlighting the “vast untapped potential” of geothermal energy in Eastern Africa, the final speaker described the African Rift Geothermal Energy Development Facility that seeks to provide a risk-sharing tool for partial risk guarantee to reduce uncertainty.

At the end of the event Klaus Töpfer, UNEP Executive Director and Heidemarie Wieczorek-Zeul, Germany’s Federal Minister for Economic Cooperation and Development, signed a collaborative agreement for financial and technical support of the African Rift Geothermal Energy Development Facility.

Link to more information:

<http://www.uneptie.org/energy>
<http://www.geothermie.de>

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RELATED EVENT

Sustainable Energy Finance

Presented by UNEP and the Basel Agency for Sustainable Energy

On the second day of the Sustainable Energy Finance event, Andrew Dlugolecki, Andlug Consulting, presented the CEO Briefing on Renewable Energy, which calls for the development of clear policies to help build confidence in the long-term future.

In parallel breakout sessions, participants discussed how carbon finance and export credit finance can foster investments in renewable energy. Several speakers underscored that the levels of carbon finance are insufficient to catalyze renewable energy projects at current carbon prices, while it creates a hard-currency revenue stream that can leverage private funding. Veronique Bishop, World Bank, suggested that projects co-funded by ODA be allowed to generate carbon credits. Participants called for improved clarity on various issues relating to the Clean Development Mechanism, including the use of ODA, the linkage to the EU Emissions Trading Scheme, host country approval processes, and rules for methodologies. The group on export credit finance called on export credit agencies to address barriers to renewable energy projects.

Participants also discussed public-private partnerships (PPPs), SME finance, and infrastructure finance. Youba Sokona, ENDA, underscored the need for PPPs for energy projects in rural regions in the South. Participants agreed that SMEs are critical for delivering clean energy in developing countries, while noting that the services and capital needed to increase the number of SMEs is lacking. Meanwhile, participants of the infrastructure finance group heard presentations on project finance for renewable energy, renewable energy funds under development, and innovative financing structures. Tom Murley, Hg Capital, underscored that renewable energy can be an attractive alternative for institutional investors, even though they seldom fit traditional private equity return targets.

In the evening, UNEP Executive Director Klaus Töpfer opened the executive panel discussion. Jürgen Trittin, Germany’s Federal Minister for the Environment, Nature Conservation and Nuclear Safety, stressed the need to bring down production costs of renewable energy technologies, create a stable legal framework, define national targets, and identify additional funding for renewable

energy. Lucien Bronicki, Omat, said renewable energy could provide a hedge against oil price fluctuation. Leonard Good, GEF CEO/Chairman, addressed the challenges related to off-grid renewable energy in developing countries, outlining several risk mitigation measures. Peter Woicke, World Bank Managing Director, emphasized the importance of grants for training on implementation and operation of renewable energy technologies.



Attila Kujbus, Hungarian Oil and Gas, emphasizes the importance of feasibility studies prior to the implementation of geothermal projects.

Links to more information:

http://www.sefi.unep.org/sef_bonn
<http://carbonfinance.org/>
<http://www.enda.sn>

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THINGS TO LOOK FOR TODAY

PLENARY: The opening of the Ministerial Segment will take place from 9:00 am-12:00 pm. Gerhard Schröder, Chancellor of the Federal Republic of Germany, will make the opening address, followed by keynote speeches from UNEP Executive Director Klaus Töpfer and other dignitaries. Further statements will be heard from Margot Wallström, European Commissioner for the Environment, Peter Woicke, Managing Director of the World Bank, and several ministers. Participants will also hear reports from the Multi-Stakeholder Dialogue and the International Parliamentary Forum.

Plenary will reconvene from 5:00-8:00 pm to discuss the *renewables 2004* outcomes, including the reports from the Ministerial Roundtables, as well as the draft Policy Recommendations, International Action Programme, and political declaration.

MINISTERIAL ROUNDTABLES: Three Ministerial Roundtables will convene from 2:30-4:30 pm. The Roundtable on Policies for Renewable Market Development will take place in the Plenary Hall. The Roundtable on Financing Options for Renewable Energy will meet in the Bundesrat. The Roundtable on Strengthening Capacities, Research and Technology Development, and Institutions will convene in the Wasserwerk.