

## A Special Report on Energy Day

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## Events convened on Tuesday, 19 June 2012

## Energy day at Rio+20

## Opening Session: Achieving sustainable energy for all



2012

INTERNATIONAL YEAR OF  
SUSTAINABLE  
ENERGY FOR ALL

Robert Orr, Policy Coordination and Strategic Planning in the Executive Office of the Secretary-General, moderated the opening session of Energy Day at Rio+20, which was convened under the theme “Achieving Sustainable Energy for All.”

Sha Zukang, Secretary-General of Rio+20, underscored the importance of energy in all three of the dimensions of sustainable development. He welcomed Energy Day as an opportunity to generate new ideas towards energy-related targets, and observed the opportunity for Rio+20 to secure high-level support and commitment to move towards ending energy poverty.

Sheila Oparaocha, Executive Secretary, ENERGIA, addressed issues related to gender and energy. She identified the need to, *inter alia*: align national energy policies with strategies for gender equality; scale-up targeted investments to explicitly address women’s needs, including for cooking, lighting, and communications; and implement social and environmental safeguards to minimize impacts on communities from large-scale energy sector investments.

Josette Sheeran, Vice Chairman, World Economic Forum, reflected on the barriers to sustainable energy developments. She reflected on the “patchwork” of policies that are inconsistent for unleashing new energy technologies as well as distortions on energy supply and demand levels, including subsidies towards fossil fuels.

## Commitments to Action

Moderating the session on Commitments to Action, Chad Holliday, Co-Chair of the UN Secretary-General’s High-Level Group on Sustainable Energy for All (SE4All), said the SE4All Initiative has had over 50 countries and 19 industry groups committing themselves to the initiative and received US\$ 50 billion in commitments.

Robert Bernard, Microsoft, said Microsoft has decided not only to be carbon neutral, but also to impose a carbon fee on anyone at Microsoft whose actions have negative carbon emissions implications.

Pham Hoang Mai, Vietnamese Ministry of Planning and Investment, announced the launch of Vietnam’s green growth strategy, Hoang Mai said the Vietnamese goal is to double the share of renewable energy in the national energy mix by 2020.



L-R: Robert C. Orr, Assistant Secretary-General for Policy Coordination and Strategic Planning, Executive Office of the Secretary-General; Josette Sheeran, Vice President, World Economic Forum; and Sheila Oparaocha, Executive-Secretary, ENERGIA

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Caio Koch-Weser, Vice Chairman, Deutsche Bank, discussed the Bank's scalable Global Energy Transfer Feed-in Tariffs Program or GET FIT concept of public-private cooperation, aimed at "topping up" and improving investor certainty for developing countries' renewable energy feed-in tariff. He described the pilot project, which was implemented in Uganda and outlined the DESERTEC concept of North African renewable energy for Europe.

Emmanuel Limido, President of Centuria Capital and World Institute for Renewable Energy (WIRE), outlined the WIRE initiative, which is a public-private partnership dedicated to filling the gap between available financing and the level of financing needed for project implementation of clean energy in the Mediterranean and African regions.

David Karabelnikoff, Co-Founder, First Alaskans Network, described the First Alaskans Network as a collaborative platform aimed at technology and knowledge transfer to build capacity for Alaskan indigenous professionals to work on sustainability and renewable energy.

## Financing for Energy and Sustainable Development

This session was moderated Andrew Steer, World Bank's Special Envoy for Climate Change, focusing on obtaining public and government funding to meet the 2030 energy goals.

Noting the high predictability and competitiveness of wind energy in Brazil, Elbia Melo, President, Brazilian Association of Wind, stressed the importance of technology advances for lowering wind energy's price. Melo underscored that public policies and subsidies must be provided to renewable energy before markets can make them competitive, thus leading to their increase in the national energy mix.

Oluniyi Robbin-Coker, Sierra Leone's Minister of Energy, suggested that the private sector has more interest in energy generation than distribution. Noting that less than 22% energy investments come from the private sector in developing countries, he stressed the importance for governments to guarantee long-term private investment through the use of power purchase agreements.

Considering the six-fold increase of the clean energy market since 2004, Michael Liebreich, Chief Executive Officer (CEO), Bloomberg New Energy Finance, deplored how little of this market's cash flow is going to least developed countries. He warned that the private sector will not step in to finance energy access for the poor without governmental policies to remove barriers, such as prohibitive tariffs.

Steer drew attention to an International Financial Corporation report, which revealed that the poor are still spending US\$ 37 billion to obtain low-quality, non-renewable energy.

## Country-Level Actions for Energy Access

Moderating this session, Veerle Vandeweerde, UNDP, spoke of a possible turning point at Rio+20 with sustainable energy commitments currently made by many countries.

Sulton Rahimov, Tajikistan's First Deputy Minister of Melioration and Water Resources, highlighted that a limiting factor in his country's energy supply has been electricity generation using hydropower during winter, and stressed that hydropower potential needs to be taken advantage of, in addition to increasing investment in solar and wind power development.

On Zambia's renewable energy progress, Geoffrey Musonda, Zambian Energy Department, elaborated on a master plan to develop large and small hydropower plants to improve energy transmission and access, specifically in rural areas, underscoring the inadequate budget allocation for renewable energy and urged for more support from the international community.

Susan McDade, UN Resident Coordinator, Uruguay, invited participating countries to use the UN country presence for promoting a sustainable energy dialogue space across ministries, in addition to seeking the alliance of regional banks, civil society, and the World Bank.



L-R: Pham Hoang Mai, Vietnam Ministry of Planning and Investment; Chad Holliday, Co-Chair of the Secretary-General's High-level Group on Sustainable Energy for All & Chair of the Board, Bank of America; Caio Koch Weser, Vice Chairman, Deutsche Bank; Robert Bernard, Chief Environmental Strategist, Microsoft; Emmanuel Limido, President, Centuria Capital and WIRE; and David Michael Karabelnikoff, Co-Founder, First Alaskans Network

Christoph Frei, Secretary General, World Energy Council, emphasized skills and finance as critical energy issues to be addressed through the public-private partnerships, saying that no international organization alone can solve this. Frei urged for creating a substantial financial scheme and getting the policy frameworks in place.

Petter Nore, Director, Norwegian Agency for Development Corporation, stressed the importance of political backing from local governments and an integrated multi-stakeholder approach to accelerate the sustainable energy process.

Irene Muloni, Ugandan Senior Minister of Energy and Mineral Development, shared sustainable energy initiatives in Uganda, saying economic development will accelerate if the sustainable energy issue can be solved.

## Sustainable Energy Solutions: Efficiency and renewables

Christine Lins, Executive Secretary, REN21, moderated this panel. Martin Lidegaard, Danish Minister of Climate, Energy and Building, noted that both Denmark and the EU have set ambitious renewable energy and energy efficiency targets, but face two challenges: finance; and modernized energy systems to integrate renewable energy into the market.

Steve Sawyer, Global Wind Energy Council, said the world cannot solve its energy problem simply by increasing supply, but efficiency increases are needed to decrease energy demand. He urged governments to provide a clearer signal they want renewable energy sources by halting subsidies to fossil fuels.

Jan-Willem Scheijgrond, Philips, discussed the en.lighten initiative, which aims to help developing countries make the transition to efficient lighting. He urges all developing countries to sign onto the initiative, and added if all households changed to efficient lighting some 640 mid-sized power plants need not be built.

Tamko Hamza, Office of the Ghanaian Vice President, said his government was committed to policies that promote renewable energy. Hamza said Ghana's target is to have 10% renewable energy sources in the Ghanaian energy mix by 2020.

Marta Bonifert, Executive Director, Regional Environment Center, Hungary, discussed the Global Fuel Economy Initiative, lauding its results in reducing lead and sulphur content in fuel and called for refocus on increasing fuel efficiency.

Asked about promoting research and development (R&D) through more flexible intellectual property rights (IPRs), Sawyer responded it was likely to decrease R&D. He characterized the discussions in the Rio+20 negotiations on weakening IPRs as misguided, and urged, instead, creating proper market conditions to investment.

Asked by the moderator to name key points to reach the SE4All goal, Bonifert replied partnership and capacity building from cradle-to-grave, Hamza underscored the importance of government commitments, financing and partnership, Lindegaard urged building on existing projects and institutions, and the greater use of smart systems, Scheijgrond emphasized building trust among stakeholders, probably through the UN, and Sawyer urged setting an ambitious target, such as 100% electricity through renewable energy by 2050, and "repeating the target until it becomes reality."

## Energy Enabling the MDGs: Water and food security

In this session, on the relevance of the agriculture-energy nexus for the MDGs, moderator Alexander Müller, Assistant Director-General, Food and Agriculture Organization of the UN (FAO), called on panelists to reflect on what must be done to put theory into practice at local, national and international levels.

Susan Reichle, USAID, emphasizing the links between agriculture and energy, stressed: the need for partnerships between government, civil society, financial institutions, and the private sector; agriculture-energy nexus opportunities for business and investment; and transformative change through scaling-up technological and institutional innovations.

On scaling-up innovation, Greg Murray, Chairman of CleanStar Mozambique, remarked that synergies between food and energy production can drive environmental restoration rather than destruction, and rural development rather than rural



Panel on Country-Level Actions for Energy Access

decline. Murray said experience proves these synergies shatter the fallacy of tradeoffs between energy and food, citing CleanStar Mozambique's investments in sustainable cookfuels that benefit rural producers and urban consumers alike.

Christian Friis Bach, Danish Minister for Development Cooperation, said the nexus between water, food and energy introduces tough policy challenges regarding standards and regulations for ensuring sustainable biofuels, guidelines for protecting against land grabs, and incentives for getting prices that are low enough to promote energy access yet high enough to foster energy efficiency.

Simon Trace, CEO, Practical Action, indicated that energy access can support food security through increasing yield and production, easing labor-intensive processing, reducing food waste, and adding value for economically-viable livelihoods. In addition to cookfuels and electricity, Trace remarked that mechanical energy is the under-appreciated "Cinderella of energy access."

The subsequent discussion explored sustainable agricultural expansion, cross-sectoral governance, tradeoffs between organic and conventional agriculture, and challenges to securing domestic finance.

## Energy Enabling the MDGs: Health and women's empowerment

Maria Neira, World Health Organization (WHO), moderated this session. Margaret Chan, Director General, WHO, emphasized the connection between reliable energy access, women and health issues and stressed that while improved access to reliable energy can be a great convenience at the household level, it is a matter of life and death at the health institution level.

Kandeh Yumkella, Director General, UN Industrial Development Organisation (UNIDO), emphasized the universal problem of women bearing the brunt of lack of energy access, and underlined the potential rise in productivity for countries if women had access to mechanised household appliances.

Lakshmi Puri, Deputy Executive Director, UN Women, underlined the linkages between women's empowerment, decentralized affordable energy access, and health outcomes, citing impacts such as: complications in child birth; no access to emergency obstetric care; and an increase in violence against women and girls due to a lack of street lighting.

Presenting on the use of a small mobile solar application to provide power to health-care workers, Laura Stachel, Co-Founder and Executive Director, WE CARE Solar, showed powerful images from rural areas in Africa showing the difference made through relatively small amounts of additional electricity to provide life-saving care.

Leslie Cordes, Global Alliance for Clean Cookstoves, highlighted some of the reasons for upscaling clean cooking facilities, including: availability of new technologies to improve efficiency; cleaner fuels and improved new clean cook stoves; improved better data on health and gender impacts of these stoves; and the ability to better measure and monitor improvements.

Phillipe Meunier, Director, French Ministry of Foreign Affairs, underscored the importance of mobilizing public opinion in putting women and health issues at the centre of the sustainability platform, together with the cross-cutting issue of access to reliable energy sources.

## Energy Monitoring and Planning for Sustainable Development

This panel, moderated by José Goldemberg, University of São Paulo, explored the value of energy monitoring and planning for implementing clean energy technology.

Hans-Holger Rogner, International Atomic Energy Agency, reflected that energy planning is not about predicting the future but analyzing and evaluating a portfolio of possible futures for the benefit of public communication, investor confidence, and efficient resource allocation. Rogner highlighted that planning is a requisite for informed decision making amid market uncertainty, and thus must invest in monitoring systems to check the assumptions and goals of energy plans against continually changing realities.

Mauricio Tolmasquim, President, Empresa de Pesquisa Energética, Brazil, said that hydropower and ethanol have proven critical to Brazil's low-carbon past, and will play a role in its low-carbon future, alongside an even more rapid expansion of wind power and other renewable energy sources.

George Prime, Minister of Carriacou and Petite Martinique Affairs, Grenada, underscored the vulnerability of Small Island Developing States (SIDS) to fossil fuel induced climate change and their commitment to achieving energy security through domestic investments in wind and geothermal energy.



Panel on Energy Monitoring and Planning for Sustainable Development

Thani Al Zeyoudi, Ministry of Foreign Affairs, United Arab Emirates (UAE), highlighted his country's efforts to build on its expertise in the oil and gas industry with major new domestic and international investments in clean energy, including the UAE's goals for building the first commercial-scale carbon and capture storage facility in the Middle East and achieving 25% of energy demand through nuclear power by 2020.

Miguel Fernandez, Bolivia's ENERGETICA, the need for energy planning to engage stakeholders and civil society for locally-appropriate decisions, projects, and investments.

## Local Actions to Advance Sustainable Development

Dolf Gielen, IRENA, moderating the session, opened by noting the key role of cities in energy use and generating carbon emissions, which is due to increasing population and urbanization. Sigurd Heiberg, Chairman, UN Economic Commission for Europe (UNECE), echoed Gielen, saying "we essentially have to accommodate the equivalent of one Rio de Janeiro every month for the next 40 years." He stressed that efficiency must be pursued throughout the chain, and not just at end-use.

Jim Walker, The Climate Group, focused how information technology (IT) can drive the push toward energy efficiency, mentioning The Climate Group's 2008 general report on how smart cities, grids and buildings can produce substantial energy savings, and its current efforts to identify what city leaders need to do to start the transformation towards smarter cities.

Josh Henretig, Microsoft, declared that humanity has just begun to scratch the surface of IT's potential to transform cities. He described Microsoft's experiments to monitor energy use and carbon emissions in real-time on its campus, which had helped the company reduce energy use by 17%, noting this could be applied to cities. He also explained Microsoft's new internal energy monitoring and carbon fee initiative to create accountability for energy use.

RA Rajeev, Thane City's Municipal Commissioner, India, described his city's efforts, including: requirements for solar water heaters; tax incentives for retrofitting; promotion of renewable energy use and energy efficiency in public buildings; solar air conditioning; and induction lighting on streets and public areas.

Following Gielen's question on what to recommend to the UN Secretary-General in the SE4All Initiative regarding cities and buildings, Rajeev suggested requiring net metering, Walker mentioned IT, solar water heating and insulation, and Heiberg urged the UN Secretary-General to convene top experts to consider incentives and building standards that allow new efficiency technologies to enter the scene at low switching costs.

## Energy Actions to Stimulate Innovation and Leverage Private Capital for Sustainable Energy Solutions

Opening the session on "Actions to Stimulate Innovation and Leverage Private Capital for Sustainable Energy Solutions," moderator Amb. Carlos Pascual, U.S. Department of State, introduced three areas for discussion: economic and technical assistance to developing countries to promote clean energy and energy access; public-private partnerships in high-impact areas and energy technology innovation; and financial mobilization and development of innovative business models for expanded trade and investment in clean energy and energy access projects.

John Pershing, US Deputy Special Envoy for Climate Change, underscored the importance of partnerships with other countries and the private sector to achieve sustainable energy for all, saying he welcomed language in the Rio+20 outcome document on energy as it explicitly refers to all three elements of SE4ALL: access, renewable and efficiency.

Donald Steinberg, USAID, discussed USAID programming in sustainable development, low emissions development strategies, and clean energy technologies, including the agency's programme on "Powering Agriculture: An Energy Grand Challenge for Development." He underscored the need for programmes to empower marginalized populations including youth, women and the displaced to serve as planners, implementers and beneficiaries.

John Morton, Vice-President, U.S. Overseas Private Investment Corporation (OPIC), discussed OPIC's expanded lending and coverage for renewable energy investments and new products that reduce financial risk and leverage private capital.

Rick Duke, US Department of Energy, presented on the activities that the Department of Energy has undertaken to further energy technology partnerships and clean energy development through the Clean Energy Ministerial process.



Panel on Energy Actions to Stimulate Innovation and Leverage Private Capital for Sustainable Energy Solutions

Kris Balderston, US Special Representative for Global Partnerships in the Office of the Secretary, discussed progress on the Global Cookstove Alliance, which uses a market-driven approach.

## Financing Actions to Scale Up from the Ground

Suleiman Al-Herbish, Director General, OPEC Fund for International Development (OFID), emphasized OFID's mission to eradicate poverty through its Energy for the Poor Initiative. He said OFID has committed US\$ 1.2 billion since 2008 to support energy projects in some 30 countries since 2008, and that scaling-up will be announced shortly.

Martin Hiller, Director General, Rural Electrification Enterprise, (REEEP), spoke on the importance of bottom-up sourcing of intelligence on energy markets in developing countries, through the use of local sources. He cited examples of projects in: Ethiopia, where sustainable cooperative societies provide communities with renewable and efficient technology; and Cambodia through private rural electrification projects.

Alban Jacquin, Schneider Electric, discussed the "BipBop" approach through: funding local energy entrepreneurs; innovative energy access solutions; training young people on electrical skills to ensure local competencies to maintain, develop and sell these solutions.

Damian Obiglio, ex-CEO, Jamaica Public Service Company, focused on private sector investment in the energy sector in developing countries. On factors deterring investment, he mentioned electricity theft and non-payment. On elements attracting investment, he listed: policies recognizing electricity as a good and service with a cost; laws characterizing electricity theft as a crime; and penalties for electricity thefts. Obiglio concluded that the solution to energy theft was a combination of education and energy-efficient installations.

Pham Hoang Mai, Director General, Vietnam's Ministry of Planning and Investment, focused on his government's solutions for all household energy, including: institutional arrangements to promote rural electrification; financial mobilization; and promotion of renewable energy for remote rural areas.

Michelle Gyles-McDonnough, Resident Coordinator, UNDP Barbados and the OECS, presented the approach of UNDP Barbados to advance energy efficiency and to support renewable energy development, including: identification of alternatives through assessment of existing policies and legislation; verification of the economic viability of selected alternative energy sources; and commercialization of the feasibility studies. Her ending note was "energy will power development and will power the future."

## Launch of the Global Energy Assessment

Opening the Special Session of the Launch of the Global Energy Assessment (GEA), Kandeh Yumkella, Director General, UNIDO, stressed the role of energy in solving various global challenges.

Pavel Kabat, Director/CEO, IIASA, underscored the importance of cooperation among sectors that is demonstrated in the GEA.

Ged Davis, Co-President of the GEA, elaborated on the GEA's approach, aspirational goals, organizational structure and findings. Among other aspects of the GEA, he summarized its aspirational goals as: stabilizing global climate change to two degrees Celsius above pre-industrial levels; enhancing energy security by diversification and resilience of energy supply; eliminating household and ambient air pollution; and universal access to modern energy services by 2030.

Wolfgang Walkdner, Austria's State Secretary to the Foreign Ministry, drew attention to the need for cross-sectoral work on energy and sustainable development and highlighted the value of the GEA to this end.

Nguyen Thien Nhan, Deputy Prime Minister to Vietnam, elaborated on progress made by Vietnam towards sustainable energy goals.

Hasan Mahmud, Bangladeshi Minister of Environment and Forestry, outlined measures made by the Government of Bangladesh towards sustainable energy. He noted the government goal of providing electricity to all citizens by 2021 and elaborated on projects towards sustainable energy including the distribution of compact fluorescent light bulbs and introduction of solar-water heating.

Don-Koo Lee, Republic of Korea's Ministry of Forestry, commended the GEA for its comprehensive analysis on how to transform energy systems.

José Goldemberg, Co-President of the Council of GEA, elaborated on the solutions identified in the study, which show that developing countries do not have to follow the same path used by industrialized countries towards development, but can rather "leapfrog" using clean energy technologies.

Energy Day at Rio+20 closed at 9.29pm.



L-R: Maria de Fatima Cavalcante Tosini, Central Bank of Brazil; Roberto Dumas-Damas, Itaú BBA; Sônia Bruck Pereira, BM&FBOVESP; and Juliana Lopes, AMG