



# CEM Bulletin

**iisd | Reporting Services**

**A Summary of the Clean Energy Ministerial 6 (CEM6)**

Published by the International Institute for Sustainable Development (IISD) in collaboration with the CEM Secretariat

**ONLINE AT [HTTP://WWW.IISD.CA/ENERGY/CEM/2015/](http://www.iisd.ca/energy/CEM/2015/) VOLUME 181, NUMBER 12, SUNDAY, 31 MAY 2015**



**CLEAN ENERGY MINISTERIAL**

Accelerating the Transition to Clean Energy Technologies

## A SUMMARY OF THE CLEAN ENERGY MINISTERIAL 6 (CEM 6): 27-28 MAY 2015

The Clean Energy Ministerial 6 (CEM6) took place in Merida, Mexico from 27-28 May 2015. Around 250 participants attended the conference, including ministers and other high-level delegates from the 23 participating governments, as well as representatives from the private sector and international organizations.

During the meeting, ministers considered the opportunity presented by a more ambitious second phase of the CEM ("CEM 2.0") and launched global efforts to address three critical technology and policy challenges – a CEM Global Lighting Challenge, a Power System Challenge, and a scaled-up Clean Energy Solutions Center. Minister also established a new CEM steering committee to provide strategic guidance to the forum and its initiatives year-round.

Following these actions, ministers discussed: potential priority initiatives for ministerial focus at CEM7, including a new work stream on global sustainable cities, the ISO 50001 energy management standard, and the CEM's Clean Energy Education and Empowerment (C3E) Women's Initiative.

For the first time since it was established in 2009, the forum added a new member. During the opening session of CEM6, the Kingdom of Saudi Arabia was officially admitted to the CEM, bringing total membership to 23 countries plus the European Commission.

A series of public-private roundtables took place addressing clean topics including: power system transformation and utilities of the future; accelerating energy productivity; sustainable urban energy systems; achieving a social license for clean energy deployment; finance for clean energy access; and public-private consortia for advanced clean energy technology.

The ministerial was preceded on 26 May by several side events on Mexico's renewable energy roadmap, policy innovations and collaboration opportunities in Latin America and the Caribbean, powering energy productivity through efficiency, charting a course for power system transformation in Latin America, and fossil fuel subsidy reform. It also included a pre-session meeting on clean energy progress and an award ceremony recognizing successes in: energy efficient electric motors; smart grids for renewable energy integration; and clean energy education and empowerment.

### A BRIEF HISTORY OF THE CEM

The CEM is a high-level global forum involving the world's major economies in promoting policies and programmes that advance clean energy technology. The CEM has three major goals: improving energy efficiency; enhancing the supply of clean energy; and expanding access to clean energy around the world.



Ministers attending the 6th Clean Energy Ministerial (CEM) in Mérida, Mexico

The CEM grew out of the Major Economies Forum on Energy and Climate in July 2009, which agreed to launch a global partnership to drive transformational low-carbon and climate-friendly technologies. At the Conference of Parties to the UN Framework Convention on Climate Change that took place in Copenhagen, Denmark in December that year, US Secretary of Energy, Steven Chu, announced that the first CEM would be hosted in Washington DC.

The CEM includes ministers from 23 countries and one regional group that together produce about 80% of global carbon emissions and account for 90% of clean energy investments. The members of the CEM are: Australia, Brazil, Canada, China, Denmark, the European Commission, Finland, France, Germany, India, Indonesia, Italy, Japan, the Republic of Korea, Mexico, Norway, Russian Federation, Saudi Arabia, South Africa, Spain, Sweden, the United Arab Emirates (UAE), the United Kingdom (UK) and the US.

### IN THIS ISSUE

|  |   |
|--|---|
| A Brief History of the CEM . . . . .                                 | 1 |
| Report of the Meeting . . . . .                                      | 2 |
| The opportunity presented by the second phase of the CEM. . . . .    | 2 |
| Scene-Setter Presentations and Discussion . . . . .                  | 3 |
| Clean Energy Finance Presentation and Panel Discussion . . . . .     | 3 |
| Public-private Roundtable Discussions . . . . .                      | 4 |
| 2015 Prioritized Initiatives For Ministerial Focus At CEM6 . . . . . | 6 |
| Closing and Next Steps . . . . .                                     | 8 |
| Upcoming Meetings . . . . .  | 8 |
| Glossary . . . . .   | 9 |

The *CEM Bulletin* is a publication of the International Institute for Sustainable Development (IISD) <info@iisd.ca>, publishers of the *Earth Negotiations Bulletin* © <enb@iisd.org>. This issue was written and edited by Asheline Appleton, Tasha Goldberg, and Teya Penniman. The Digital Editor is Herman Njoroge Chege. The Editor is Tomilola Akanle Eni-ibukun, Ph.D. <tomilola@iisd.org>. The Director of IISD Reporting Services is Langston James "Kimo" Goree VI <kimo@iisd.org>. Funding for coverage of this meeting has been provided by the CEM Secretariat. IISD can be contacted at 161 Portage Avenue East, 6th Floor, Winnipeg, Manitoba R3B 0Y4, Canada; tel: +1-204-958-7700; fax: +1-204-958-7710. The opinions expressed in the *Bulletin* are those of the authors and do not necessarily reflect the views of IISD. Excerpts from the *Bulletin* may be used in other publications with appropriate academic citation. Electronic versions of the *Bulletin* are sent to e-mail distribution lists (in HTML and PDF format) and can be found on the Linkages WWW-server at <http://www.iisd.ca/>. For information on the *Bulletin*, including requests to provide reporting services, contact the Director of IISD Reporting Services at <kimo@iisd.org>, +1-646-536-7556 or 300 East 56th St., 11D, New York, New York 10022, USA.



<http://enb.iisd.mobi/>

The CEM maintains a ‘distributed leadership’ approach, whereby members can participate in initiatives that are of interest to them, but are not obliged to participate in all CEM initiatives.

Under four thematic areas of clean energy supply, energy efficiency, integration and human capacity, the CEM has launched 13 initiatives to date: the Multilateral Solar and Wind Working Group; the Bioenergy Working Group; the Sustainable Development of Hydropower Initiative; the Carbon Capture, Use and Storage (CCUS) Action Group; the Super-Efficient Equipment and Appliance Deployment Initiative; the Global Superior Energy Performance Partnership; the 21st Century Power Partnership; the International Smart Grid Action Network; the Electric Vehicles Initiative; the Global Sustainable Cities Network; the C3E Women’s Initiative; the Clean Energy Solutions Center; and the Global Lighting and Energy Access Partnership.

The International Energy Agency, the International Partnership for Energy Efficiency Cooperation, and the International Renewable Energy Agency are official observer organizations of the CEM and work closely with the CEM to track progress on global clean energy and on sectoral initiatives.

The first CEM took place in Washington DC, US, in July 2010. Subsequent annual meetings took place in Abu Dhabi, UAE in April 2011; in London, UK in April 2012; in New Delhi, India in April 2013; and in Seoul, Republic of Korea in May 2014.

## REPORT OF THE MEETING

The Clean Energy Ministerial 6 (CEM6) opened on Wednesday morning, 27 May. Pedro Joaquín Coldwell, Secretary of Energy, Mexico, welcomed Ministers and delegates to CEM6 and Saudi Arabia as the newest CEM member. He highlighted the potential for the CEM to democratize energy, outlining his country’s efforts to promote clean energy, including through: tax incentives allowing accelerated depreciation of investments; policies to reduce greenhouse gases (GHGs); and regulations to reduce energy consumption in buildings.



Pedro Joaquín Coldwell,  
Secretary of Energy, Mexico

### THE OPPORTUNITY PRESENTED BY THE SECOND PHASE OF THE CEM

Ernest Moniz, Secretary of Energy, US, highlighted progress on CEM initiatives that have shared best practices and policy experiences, and provided market signals to spur a broad transformation to clean energy access. He cited negative impacts from natural disasters confronting many countries as motivation to work harder for a global transition to clean energy that will serve all.

Moniz announced strategies to improve the CEM through the creation of a ‘CEM 2.0,’ designed to “pick up the pace” of the clean energy revolution by matching efforts to ambition, including by: creating a CEM Steering Committee; deepening private sector engagement; tracking progress; and improving communications. He highlighted the importance of prioritizing cross-cutting ideas to encourage ambition and effectiveness of the CEM’s initiatives.



Wan Gang, Minister of  
Science and Technology,  
China

Wan Gang, Minister of Science and Technology, China, identified the need to accelerate development and cooperation so as to make progress towards a clean energy transformation through: creating policies that promote green energies; increasing investments to support such policies; and improving mainstream energy systems to become more efficient.

Ibrahim Baylan, Minister of Environment and Energy, Sweden, emphasized that his country prioritizes developing sustainable, secure and competitive energy systems, and providing investors and industry with clear signals on clean energy. He said Sweden could be a showcase for decarbonizing the energy sector in a cost-effective way that also creates new jobs. He called for “stepping up” efforts and welcomed the CEM 2.0 initiative.

Moon Jae-do, Vice Minister, of Trade, Industry and Energy, Republic of Korea, stressed that the challenges ahead could be solved through cooperation to transform “great ideas into real solutions.” He encouraged the CEM to make strong commitments to find faster ways to address the global energy challenges.

Suhail Mohammed Al Mazrouei, Minister of Energy, United Arab Emirates (UAE) observed that his country has resolved that by 2021, 24% of the energy mix, including nuclear energy, will be clean with zero carbon emissions. He highlighted the UAE’s clean energy investments in developing countries worth more than US\$35 billion. He said the CEM has managed to successfully position itself as a platform for ministerial-level interaction and that it must now become a transformational mechanism for the cities of the future.

Dominique Ristori, Director-General Energy, the European Commission, stressed that 2015 is especially important as the year of the 21st session of the Conference of the Parties (COP 21) of the UN Framework Convention on Climate Change. He highlighted the need for increased investment, especially in smart grid measures.

Federica Cattoi, Ministry of Foreign Affairs and International Cooperation, Italy, underscored the importance of sharing best practices to speed up the transition to clean energy on a global scale. She shared national experiences in four CEM initiatives that have helped to increase renewable resources, reduce fossil fuel dependency by lowering subsidies, boost collaboration and support the greening of cities.

Khalid Abuleif, Ministry of Petroleum and Mineral Resources, Saudi Arabia, expressed pleasure at becoming a member of the CEM, highlighting the CEM’s potential to catalyze national level action. He outlined Saudi Arabia’s commitment to clean energy in five areas: energy efficiency; renewable energy; carbon storage; liquid fuel to clean energy switch; and research and development.

Ajay Mathur, Bureau of Energy Efficiency, India, said the key challenge is to make new buildings and home appliances more efficient and described his country’s efforts to ensure light-emitting diode (LED) lights become the norm.



Federica Cattoi, Ministry  
of Foreign Affairs and  
International Cooperation,  
Italy



Participants at the opening session of CEM 6

Greg Rickford, Minister, Natural Resources Canada, endorsed CEM 2.0, noting that the CEM is an opportunity for concrete deliverables. He stressed that his country is working to ensure that domestic industry has the tools to adopt ISO 50001 as the new energy management systems standard.

### SCENE-SETTER PRESENTATIONS AND DISCUSSION

**CLEAN ENERGY PROGRESS REPORT:** Maria van der Hoeven, Executive Director, International Energy Agency (IEA), shared the IEA Clean Energy Progress Report, highlighting that the availability of technology at the “right cost” is the enabling factor for the transition to clean energy. She explained how metrics, *inter alia*: support the design and implementation of policies that can influence countries to meet targets for clean energy; and evaluate progress by tracking the roll-out of innovative technologies.

Van der Hoeven highlighted opportunities for private and public sector collaboration in: supporting different phases of clean technology deployment; tracking progress; and strengthening capacity for policy makers to demonstrate a stronger vision.

**INTERNATIONAL RENEWABLE ENERGY AGENCY (IRENA) REPORT:** Adnan Amin, Director General, IRENA, highlighted the launch of “REmap 2030 – A Renewable Energy Roadmap,” and cited examples of positive global progress, evidenced by increased investment flows for renewable energy. He observed that the transition to clean energy is driven by investment and appropriate policies to unlock the production of equipment and drive down costs in order to deliver clean energy.

Amin forecasted that the next phase of development would be centered on flexibility and adaptability to produce market mechanisms and grid integration, specifically identifying the opportunities in energy storage.

**WORLD ENERGY COUNCIL TRILEMMA REPORT:** Christoph Frei, Director General, World Energy Council, shared results from surveys of energy leaders from more than 80 countries. He noted that key priorities include energy price volatility, climate change framework, electric storage, and carbon capture and storage (CCS).

Frei discussed three clean energy “myths”: demand growth can be fully met by clean energy sources; GHG emissions can be reduced by 50% by 2050; and universal access will be achieved in the next 10-15 years. He stressed the importance of balancing links within the energy trilemma: energy security, energy equity, and environmental sustainability.



Christoph Frei, Director General, World Energy Council

Frei said energy leaders want an international framework to address climate change with a single target for GHG emissions, and that key priority actions must address trade and technology transfer, carbon pricing, financing, and regional integration. He also highlighted demand management and energy efficiency, prioritizing innovation and market design.

**VIDEO ADDRESS REGARDING COP 21:** COP 21 President-Designate, Laurent Fabius, France, observed that shifting from an economic system founded on fossil fuel consumption to a less carbon-intensive model is a major change, equivalent to the industrial revolution, and requires innovative technology and social transformation. He called for going “further and faster” and for governments, corporations and researchers to join forces to achieve common objectives.

### CLEAN ENERGY FINANCE PRESENTATION AND PANEL DISCUSSION

Moderator Michael Liebreich, Chairman, Bloomberg New Energy Finance, presented on the global trends that are driving overall investment in clean energy, and named several emerging instruments, including yield codes and green bonds. He depicted change in investments by region, reporting that the highest rate of growth in renewable energy is in developing countries, due in part to renewable energy being a cheaper way to meet demand.

Marshal Salant, Citigroup, shared experiences from renewable energy projects, outlining risks that should be considered. He described efforts to increase security by creating debt pools and security pools, and utilizing yield codes. He pointed to a missing link between developers looking to raise funds and investors wanting to make investments.

Rachel Kyte, Vice President and Special Envoy for Climate Change, World Bank, explained the Bank’s approach to providing solutions to clients through a range of products needed in a world that is being fundamentally altered by climate change. She called on ministers to help make energy efficiency more attractive, citing the opportunity available from allowing a period of maturation, such as with the green bond market.

Kai Buntrock, SOWITEC Group, emphasized the need to match the local energy base to the source of funding, value risks appropriately, and allow commercial finance to focus on product innovation. He suggested using public finance to help address risks.

Josué Tanaka, European Bank for Reconstruction and Development, called for expanding the range of financing tools,



Kai Buntrock, SOWITEC Group

especially for smaller countries. He stressed the importance of project preparation and suggested that local commercial banks could aggregate loans for smaller projects to help build capacity.

Ensuing discussions addressed a broad range of topics including: market design and impacts of subsidies on mature markets; risks associated with foreign exchange and policy; expanded knowledge of risks; how to encourage insurance companies to do their homework; the power of governance to provide fair, long-living and certain guidance; and access to market by cities.

#### **PUBLIC-PRIVATE ROUNDTABLE DISCUSSIONS**

On Wednesday morning and afternoon, six high-level roundtable discussions were held on: accelerating energy productivity; sustainable urban energy systems; achieving a social license for clean energy deployment; power system transformation and utilities of the future; finance for energy access; and public-private consortia for advanced clean energy technology research.

#### **ACCELERATING ENERGY PRODUCTIVITY:**

This session was moderated by Deborah Wince-Smith, President and CEO, Council on Competitiveness. She invited representatives to discuss the energy productivity paradigm in order to create partnerships, share best practices and forge a new era of engagement.

Participants noted the need to raise awareness on differentiating energy efficiency from energy productivity. Participants agreed on the importance of developing new supportive infrastructure for emerging products and/or resources to increase energy productivity. They also noted the challenge of retrofitting traditional and existing sources of energy, buildings and systems, pointing to the need for good governance to enable support.

Several government representatives shared best practices, highlighting, *inter alia*: setting clear and high benchmarks to encourage creativity; promoting tax incentives to spur behavioral changes; correcting and harmonizing energy pricing; and engaging a wide range of stakeholders.

Participants identified the challenge of extending successful initiatives to system-level solutions. Participants agreed with a suggestion to focus on regional efforts to harmonize regulations and share testing laboratories. One participant pointed to the cement industry as a model to create broad consensus internationally with recommendations that could be implemented in national settings.

Representatives exchanged ideas on the opportunities to convene partnerships, with business voicing the need and interest in further collaboration. One noted that regulations provide a platform for shared vision between government

and industry. Other approaches were also shared on: internal goal-setting; making public commitments; benchmarking and measuring; reporting; extending best practices throughout the supply chain; and raising awareness of customers.

#### **SUSTAINABLE URBAN ENERGY SYSTEMS:**



Andrew Steer, President and CEO, World Resources Institute

Andrew Steer, President and CEO, World Resources Institute, moderated the roundtable, inviting views from national and municipal leaders, financiers, and researchers.

Participants agreed that cities are critical to clean energy efforts and called for holistic energy planning that includes buildings, transportation, waste management and water. While observing that it is simpler to plan an efficient new city, participants also shared successes in retrofitting energy

generation, buildings, public transportation and lighting systems. They also discussed misalignments between local and national governments, citing examples of national subsidies for transportation fuel or decisions to block investments for political reasons.

Participants noted the dilemma of cities complaining of a lack of financial support for clean energy projects and financiers bemoaning a lack of credit-worthy projects. They suggested that the CEM should support better coordination among cities, financiers and ministers, as well as investment in capacity building for integrated planning.

Other discussion points included: empowering local mayors; coordinating among municipalities; providing support for project preparation and implementation; creating new financial coalitions and syndicates to match risk; building resilience in cities; and developing a sustainability index for housing developments.

Recommendations to the CEM from the roundtable included engaging with existing city programmes, holding joint meetings with the compact of mayors, and ensuring continued involvement of the financial and private sectors.

**ACHIEVING A SOCIAL LICENSE FOR CLEAN ENERGY DEPLOYMENT:** David Sandalow, Columbia University, moderated the roundtable. Participants considered what a social license entails, the context of local community acceptability and public attitudes towards clean energy.

There was agreement on the need for communication, local ownership and for benefits to flow to local communities. Participants discussed social and behavioral challenges relating



Sustainable Urban Energy Systems High-level Roundtable Discussions



Power System Transformation and Utilities of the Future High-level Roundtable Discussions

to clean energy. They highlighted the need to build trust with local communities to facilitate uptake of clean energy, noting that opposition often stems from environmental concerns.

Participants considered procedural and distributional justice in the context of a social license. The need for companies to embed sustainable principles and practices in their businesses was emphasized. Acknowledging that indigenous communities have a spiritual relationship with the environment, participants advocated participatory consultations with local communities, as well as social and environment impact assessments.

**POWER SYSTEM TRANSFORMATION AND UTILITIES OF THE FUTURE:** Christoph Frei moderated the roundtable. Participants considered dynamic changes in distribution services, information technology (IT), financial instruments, and policy and regulatory issues.

On infrastructure and the grid, participants emphasized the need for greater climate resilience, more integrated power systems, increased storage innovations, and transitions from traditional to regional power grids. Private sector participants described growing markets for smart systems, including bundled services and cloud-based services, and building micro-grids or off-grid power systems in developing countries.

On market design, participants debated the value of “capacity markets” over “energy only markets,” noting the importance of regional synchrony and security, tolerance for price volatility, and political will.

Regarding financing, participants emphasized markets in developing countries. Suggested actions from international financiers include: increasing standardization from project design to construction; de-risking investments by using guaranteeing instruments; working upstream with private investors; and developing risk-sharing instruments.

Private sector participants emphasized the importance of long-term commitments for scaling up. One participant stressed that regulations need to be strong, stable, and “orthodox” to provide stability for investment.



Rachel Kyte, Vice President and Special Envoy for Climate Change, World Bank

**FINANCE FOR CLEAN ENERGY ACCESS:** Rachel Kyte moderated the session. Participants were invited to address what has worked and what has not, and how financial instruments can be better operationalized.

Participants agreed on the need for an enabling policy framework, particularly to de-risk financing business models and attract investors and entrepreneurs. The difficulty of raising finance for energy access was noted, with participants suggesting ways to combine financial instruments and products. Participants agreed that the private sector, particularly small-and-medium sized enterprises (SMEs), has a vital role to play in financing energy access.

Participants also proposed investment risk reduction instruments to improve the rate of return. Several supported designating an entity, either public or private, to coordinate finance for energy access and harmonize policies on off-grid, mini-grid and grid enhancement.

Participants emphasized the need for tailored solutions to energy access and highlighted the challenge of scaling up different experiences, acknowledging that energy access strategies are often location or context specific. Many participants agreed that it was important to: understand what end users want in terms of energy access; establish market standards for products; and account for the size of the market and distribution issues.

It was emphasized that pre-financing development is the ultimate goal of energy access, enabling local communities to become entrepreneurs. Participants also noted the need for marketing to overcome the perceptions that energy access is unprofitable because clients cannot afford to pay for energy. Flexible payments were proposed as a means of overcoming the issue of irregular incomes, particularly for rural communities.

**PUBLIC-PRIVATE CONSORTIA FOR ADVANCED CLEAN ENERGY TECHNOLOGY RESEARCH:** This session was moderated by Ramamoorthy Ramesh, Lawrence Berkeley National Laboratory. Participants identified the clear role of science and technology in improving quality of life.

Participants agreed on the need to embrace: open innovative systematic thinking that is market oriented; and cooperation between universities and enterprises for non-competitive research and development, as well as regional cooperation through research centers.

Participants discussed the role of government in funding basic research with performance indicators and metrics, designating the private sector to provide support for the application of research and development.

One representative from industry shared a perspective that business is likely to be more engaged in the pre-commercial stage of research and development for fear of being excluded, seeking opportunities for further engagement in the commercialization phases. Participants acknowledged evidence demonstrating a move away from CCS, with some participants warning of significant setbacks to research and implementation.

Participants agreed to continue work to draft a statement to further engage countries in and outside of the CEM. They stressed the need for urgency regarding climate change, and called for articulating risks, including real costs to the economy, and initiating mobilization of deployment of clean energies and technologies.

### **2015 PRIORITIZED INITIATIVES FOR MINISTERIAL FOCUS AT CEM6**

**CEM GLOBAL LIGHTING CHALLENGE:** On Thursday morning, Ernest Moniz invited comments on the new CEM Global Lighting Challenge, a race to reach cumulative sales of 10 billion high-efficiency, high-quality and affordable lighting products. He noted that 11 governments have endorsed the challenge: Australia, China, France, Germany, India, Republic of Korea, Mexico, South Africa, Sweden, US, and the Directorate-General for Energy of the European Commission. Indonesia and the Russian Federation also added their endorsement.



Ernest Moniz, Secretary of Energy, US

Delegates expressed strong support for the initiative, highlighting the need for: minimum efficiency standards; increased public attention to the issue; affordable high-efficiency bulbs for low-income families; and further engagement of the private sector. One delegate described increased energy efficiency in his country through policy restrictions on conventional bulbs, and standards and requirements for public purchases of efficient lighting.

Maria van der Hoeven noted the IEA could contribute by tracking progress on clear objectives. John Christensen, UN Environment Programme endorsed the Challenge and shared

information on the UN Secretary-General's Sustainable Energy for All initiative, as well as the Global Environment Facility's en.lighten initiative which supports a transition to efficient lighting in more than 50 countries. He said success depends on building institutional capacity where needed.

Moniz said future work would focus on refining specifications and bringing key private sector partners to the table, and projected a broader launch of the Global Lighting Challenge before December 2015.

**CEM POWER SYSTEM CHALLENGE:** Delegates considered the CEM Power System Challenge, a shared global vision for future power systems. Through the power system challenge, endorsing CEM members will follow guiding principles for achieving clean, reliable, resilient, affordable and accessible power through facilitation of national roadmaps and strategies to increase energy efficiency, utilization of smart grid technologies and renewable energy sources.

Delegates underscored the significance of grid transformation as an enabler of clean energy both upstream and downstream. The endorsing countries were announced: Denmark, Finland, France, Germany, India, Japan, the Republic of Korea, Mexico, Norway, South Africa and the Directorate-General for Energy of the European Commission. Indonesia and the UAE also added their endorsement.

Delegates discussed the challenge of integrating varied sources of energy into the power system transformation in an efficient manner, and welcomed collaboration across sectors and regions. One delegate announced the launch of a new programme to support such integration through technical assistance to adapt grids on large and small scale. Another delegate highlighted opportunities in using natural gas to power clean energy as a pathway to transformation.

Delegates recognized the role of IT in the clean energy transformation, identifying the need for future work to value all of the services required. They referenced the abundance of business models that support the important need to stabilize power supply. A delegate proposed that countries provide a framework for renewable energy and allow the market to set the price.

Moniz concluded by inviting more countries to join the Challenge over the coming weeks.

**SCALED-UP CLEAN ENERGY SOLUTIONS CENTER WITH FINANCE PORTAL:** Delegates considered the need for an additional US\$2 million per year for a scaled-up Clean Energy Solutions Center, which helps governments design and adopt policies and programmes that support the deployment of clean energy technologies. It was noted that expansion would



Public-Private Consortia for Advanced Clean Energy Technology Research High-level Roundtable



Participants consulting during the break

finance expertise to government policy makers and help fill the gap in knowledge of clean energy finance. The need to broaden the roster of experts and to include a greater diversity of languages was highlighted. Australia and the US announced additional financial support for the Solutions Center. France, India, Italy and Indonesia agreed to nominate experts to the Clean Energy Solutions Center. Delegates welcomed the creation of the new financial services portal.

**NEW WORK STREAMS:** Delegates considered a proposal for an additional work stream on Global Sustainable Cities. Several members expressed their interest in joining the initiative. Participants agreed to establish a working group on energy efficiency and the sustainable development of cities to consider the proposed work. A working group was also established to explore the possibility of developing a CEM initiative on energy productivity and goals.

Delegates agreed to further elaborate work on the Clean Energy Education and Empowerment (C3E) Women's Initiative and ISO 50001. They also agreed that there had not been sufficient interest in the energy-water nexus proposed during CEM5 to move forward with a CEM initiative. They agreed that additional work on market accessibility of clean energy products is still needed and that the Steering Committee should further elaborate on this.

### **THE "CEM 2.0" OPPORTUNITY—DISCUSSION AND DECISIONS**

**CEM STEERING COMMITTEE:** Leonardo Beltrán Rodríguez, Undersecretary of Planning and Energy Transition, Ministry of Energy, Mexico invited comments on whether the CEM should establish a Steering Committee. Denmark presented the results of a background document prepared by an advisory group of CEM members.

On terms of reference, the proposed functions include: helping keep initiatives on track; allocating resources; conducting bi-annual reviews; proposing options to make decisions; and identifying opportunities to interact with the private sector and international agencies. The proposed form of the committee includes: representatives selected by ministers; two-year renewable terms; quarterly meetings by videoconference; and attendance by representatives at ministerial meetings.

of CEM projects and ensuring the initiative process does not miss critical issues. Other discussion points included the need for more guidance and transparent procedures. Delegates emphasized increased engagement with the private sector, including SMEs, with several delegates offering different opinions on whether the private sector and/or observers should be part of the Steering Committee. Other discussion points included the need for prioritization, benchmarks, timelines, and monitoring. CEM6 adopted the Steering Committee terms of reference as presented.

Beltrán announced the members of the inaugural CEM Steering Committee from China, Denmark, the European Commission, France, India, Mexico, the UAE and the US, clarifying that this Committee will have a rotation mechanism every two years.

Delegates adopted the decision to charge the Steering Committee with a specific list of prioritized tasks in the form of developing a Framework Document to be presented at CEM7. Delegates proposed considerations to strengthen CEM 2.0, including: strategies to strengthen work streams through resource efficiency and options for a functional Secretariat body to strengthen collaborative efforts.

**INCREASED ENGAGEMENT WITH INDUSTRY AND OTHER STAKEHOLDERS:** Delegates agreed on the formation of a Private Sector Advisory Council, underscoring the importance of the private sector in the clean energy revolution, and their role in advising the CEM Steering Committee and helping to disseminate CEM decisions and outputs on the ground. Delegates tasked the Steering Committee to consider: ensuring representation from a range of industries and/or associations within industries; linking to existing initiatives and workflows; focusing on specific projects on a topic basis; and selecting a representation from both large and SMEs, and ensuring geographical diversity.

**REGULAR REVIEW OF CEM INITIATIVES AND INDEPENDENT REVIEW PANEL:** Jonathan Elkind, US, presented elements of the initiative review process, which include assessments by an external review panel, with non-governmental panel members nominated by CEM. The CEM agreed to implement an independent review process every other year.



Participants listening to the announcement by President Obama

**TRACKING COLLECTIVE PROGRESS TO PRIORITIZE AREAS FOR COLLABORATION:** Beltrán noted that the work begun by the IEA offers options for objectives and metrics for measuring progress in the CEM's clean energy initiative. Delegates agreed to continue this discussion at the next CEM.

#### **CLOSING AND NEXT STEPS**

Moniz introduced a video of President Barack Obama, US, announcing that the US will host CEM7. This was followed by China announcing their intent to host CEM8.

Moniz applauded the accomplishments of CEM6. Looking to the future, he highlighted efforts to scale up the Clean Energy Solutions Center, a possible energy productivity initiative, and further development in market accessibility to clean energy.

Joaquín highlighted progress made at CEM6 on efficient lighting, low-carbon power systems, a clean energy finance portal, and including the private sector and international agencies in clean energy deployment. He closed CEM6 at 12:25pm.

#### **UPCOMING MEETINGS**

**42nd Sessions of the UNFCCC Subsidiary Bodies:** The 42nd sessions of the Subsidiary Bodies to the UNFCCC and the ninth part of the second session of the ADP (ADP 2-9) will take place in June 2015. **dates:** 1-11 June 2015 **location:** Bonn, Germany **contact:** UNFCCC Secretariat **phone:** +49-228-815-1000 **fax:** +49-228-815-1999 **email:** secretariat@unfccc.int **www:** <http://www.unfccc.int>

**34<sup>th</sup> International Energy Workshop:** Hosted by IRENA, the workshop will focus on *inter alia*: climate change mitigation and adaptation; the economics of renewable energy sources; linkages between climate, air pollution and energy security; energy and economic growth in emerging economies; and energy poverty alleviation. The workshop is aimed at researchers and practitioners in developed and developing countries. **dates:** 3-5 June 2015 **location:** Abu Dhabi, United Arab Emirates **contact:** Fondazione Eni Enrico Mattei (FEEM) **email:** [info@internationalenergyworkshop.org](mailto:info@internationalenergyworkshop.org) **www:** <http://www.internationalenergyworkshop.org/meetings-8.html>

**Validation Workshop for the Economic Community of West African States (ECOWAS) Policy for Gender Mainstreaming in Energy Access:** ECOWAS Department of Social Affairs and Gender and ECOWAS Centre for Renewable Energy and Efficiency (ECREEE) are organizing this event to review, improve and validate the ECOWAS Policy for Gender Mainstreaming in Energy Access in the context of the Sustainable Energy For All initiative and the Beijing Platform for Action. **dates:** 4-5 June 2015 **location:** Dakar, Senegal **contact:** Monica Maduekwe **email:** [mmaduekwe@ecreee.org](mailto:mmaduekwe@ecreee.org) **www:** <http://www.ecreee.org/event/validation-workshop-ecowas-policy-gender-mainstreaming-energy-access>

**Asia Clean Energy Forum (ACEF) 2015:** The ACEF seeks to provide a space for sharing best practices in policy, technology and finance to support climate and energy security in the region. The 2015 ACEF is being organized by the Asian Development Bank, the US Agency for International Development, the World Energy Council and the Korea Energy Management Corporation. **dates:** 15-19 June 2015 **location:** Manila, the Philippines **contact:** ADB **phone:** +63 2 632 4444 **fax:** +63 2 636 2444 **www:** <http://asialeds.org/events/asia-clean-energy-forum-2015>

**Vienna Energy Forum 2015:** The Forum will focus on 'Sustainable Energy for Inclusive Development', emphasizing the multiple benefits of the post-2015 development and climate agendas, and showcasing the best practices and actions on the ground that can contribute to both agendas. The event is organized by the UN Industrial Development Organization (UNIDO), International Institute for Applied Systems Analysis, Sustainable Energy for All, Austrian Federal Ministry for European and International Affairs and Austrian Development Agency. **dates:** 18-20 June 2015 **location:** Vienna, Austria **contact:** UNIDO **phone:** +43 (1) 26026-0 **fax:** +43 (1) 2692669 **email:** [vef2015@unido.org](mailto:vef2015@unido.org) **www:** <http://www.viennaenergyforum.org/registration>

**High-Level Event on Climate Change:** The President of the UN General Assembly will convene this high-level event, with the aim of giving momentum and adding impetus to efforts to reach a global agreement in 2015 under the





Winners of the Award for outstanding achievement in energy-efficient electric motors - presented as the SEAD Global Efficiency Medal

**UNFCCC.** **date:** 29 June 2015 **location:** UN Headquarters, New York **contact:** Office of the President of the UN General Assembly **www:** <http://www.un.org/pga/calendar/>

**Our Common Future Under Climate Change:** Organized by the UN Educational, Scientific and Cultural Organization (UNESCO), International Council for Science (ICSU) and Future Earth, in collaboration with a partnership of French organizations, this science-focused conference will examine the latest research around climate change. **dates:** 7-10 July 2015 **location:** Paris, France **contact:** Conference Secretariat **email:** [science@commonfuture-paris2015.org](mailto:science@commonfuture-paris2015.org) **www:** <http://www.commonfutureparis2015.org/>

**CEM Bangladesh Off-Grid Appliance and Clean Energy System Industry Networking Event:** The event will provide opportunities to meet and collaborate within the growing off-grid solar market. The event is being hosted by the Global Lighting and Energy Access Partnership of the CEM and the Bangladesh Solar and Renewable Energy Association. **dates:** 31 July – 1 August 2015 **location:** Dhaka, Bangladesh **contact:** Global LEAP **phone:** +1 202 662 7229 **email:** [GlobalLeap@hq.doe.gov](mailto:GlobalLeap@hq.doe.gov) **www:** <http://www.cleanenergyministerial.org/Events/bangladesh-off-grid-appliance-clean-energy-system-industry-networking-event-37056>

**South Africa International Renewable Energy Conference 2015 (SAIREC):** The Government of South Africa together with the South African National Energy Development Institute and the Renewable Energy Policy Network for the 21<sup>st</sup> Century are hosting the event to gather ministers, decision-makers, civil society, academia and the private sector to discuss experiences and strategies for accelerating the global deployment of renewable energy. The event is aimed particularly at giving the African renewable energy industry opportunities to showcase its work and gain insights from other participants. **dates:** 4-7 October 2015 **location:** Cape Town, South Africa **contact:** REN21 Secretariat **email:** [secretariat@ren21.net](mailto:secretariat@ren21.net) **www:** <http://www.ren21.net/Resources/EventCalendar/REN21NetworkEvents.aspx>

**IEA Bioenergy Conference 2015:** The conference will center on recent research and market development in bioenergy, including challenges across bioenergy value chains. The conference is supported by the German Ministry of Food and Agriculture. **dates:** 26- 29 October 2015 **location:** Berlin, Germany **contact:** Fachagentur Nachwachsende Rohstoffe e.V. (FNR) **phone:** +49 3843 6930 102 **email:** [v.pelikan@fnr.de](mailto:v.pelikan@fnr.de) **www:** <http://ieabioenergy2015.org/>

**IEA Ministerial Meeting:** The IEA Secretariat will present the outcomes of the meeting of the Governing Board, providing an opportunity for member countries to agree to undertake certain actions in the field of energy policy, domestically and/or collectively. **dates:** 17-18 November 2015 **location:** Paris, France **contact:** IEA Secretariat **email:** [info@iea.org](mailto:info@iea.org) **phone:** +33 1 40 57 65 00 **fax:** +33 1 40 57 65 09 **www:** <http://www.iea.org/newsroomandevents/events/event/name-139194-en.html>

**UNFCCC COP 21:** COP 21 and associated meetings will take place in Paris. **dates:** 30 November to 11 December 2015 **location:** Paris, France **contact:** UNFCCC Secretariat **phone:** +49-228-815-1000 **fax:** +49-228-815-1999 **email:** [secretariat@unfccc.int](mailto:secretariat@unfccc.int) **www:** <http://www.unfccc.int>

**Sixth Session of the IRENA Assembly:** The sixth session of the IRENA will consider the Agency's work programme for 2016-17 and review its medium-term strategy. **dates:** 16-17 January 2016 **location:** Abu Dhabi, United Arab Emirates **contact:** IRENA Secretariat **phone:** +971 2 417 9000 **email:** [info@irena.org](mailto:info@irena.org) **www:** <http://www.irena.org/menu/index.aspx?mnu=cat&PriMenuID=30&CatID=142>

**Astana Expo 2017:** This project aims to integrate Astana's energies to create multifunctional and hybrid spatial systems that work on different scales and that use infrastructure more efficiently. The Expo Event will last three months, with the Expo site remaining for decades to come. The Expo Event, covering 174 hectares of surface area, will upgrade the urban infrastructure of Astana and implement a prototype for long-term, sustainable and energy efficient urban development in Kazakhstan. **date:** 2017 **location:** Astana, Kazakhstan **email:** [office@tspa.eu](mailto:office@tspa.eu) **tel:** +49 (30) 577063492 **fax:** +49 (30) 577063499 **www:** <http://www.tspa.eu/portfolio/astana-expo-2017/>

## GLOSSARY

|       |  |
|-------|--|
| CCS   | carbon capture and storage             |
| CEM   | Clean Energy Ministerial               |
| C3E   | Clean Energy Education and Empowerment |
| COP   | Conference of the Parties              |
| GHG   | greenhouse gas                         |
| IEA   | International Energy Agency            |
| IRENA | International Renewable Energy Agency  |
| IT    | information technology                 |
| SMEs  | small and medium sized enterprises     |
| UAE   | United Arab Emirates                   |