Progress made on international initiatives to promote clean energy

www.cleanenergyministerial.org

Energy ministers and high-level representatives from more than 20 governments met in early April to announce renewed support for 11 international clean energy initiatives at the second Clean Energy Ministerial in Abu Dhabi, United Arab Emirates (UAE). These initiatives are helping to accelerate the global transition to a clean energy future, with the goal of eliminating the need to build more than 500 mid-size power plants worldwide in the next 20 years, among other goals. At the conclusion of the meeting, India offered to host the fourth Clean Energy Ministerial in 2013 and South Korea offered to host the fifth in 2014, demonstrating continued commitment to the initiatives and the Clean Energy Ministerial process. The Ministerial will be held in London in 2012.

"In just nine months since the United States hosted the first Clean Energy Ministerial, we have laid the groundwork for global progress in areas such as appliance efficiency, smart grids, and electric vehicle deployment. Working together, we can move faster to save money, create jobs, and accelerate the transition to a clean energy future," said U.S. Energy Secretary Steven Chu.

First launched in Washington, DC, in July 2010, Clean Energy Ministerial (CEM) initiatives promote economic growth while reducing greenhouse gas emissions and other pollutants, supporting renewable energy markets, expanding access to clean energy resources and jobs, and working to promote women's leadership in clean energy careers.

The countries participating account for 80% of global greenhouse gas emissions and more than 70% of global gross domestic product. They also fund the vast majority of public research and development in clean energy technologies.

Since the last Clean Energy Ministerial, the United States has helped lead progress in several initiatives as part of the Global Energy Efficiency Challenge. These projects will cut energy waste around the world by helping to deploy super-efficient appliances, improving industrial and buildings efficiency, implementing smart grid technologies, and helping to put 20 million electric vehicles on the roads by 2020.

For example, the Super-Efficient Equipment and Appliance Deployment (SEAD) initiative expands global markets for efficient products in CEM countries both by incentivizing the deployment of super-efficient equipment and appliances and by facilitating stronger, more effective minimum standards. The initiative will help to strengthen and expand governments' domestic actions through technical exchange and international coordination.

SEAD partners have identified six product categories (commercial refrigeration, computers, distribution transformers, solid-state lighting, motors, and televisions) and one energy-use mode (network standby) as areas for expanded technical exchanges to improve efficiency. Such measures have the potential to avoid the need for 500 mid-size power plants in the next 20 years in countries already participating in SEAD. During the meeting, the UAE and Brazil announced that they will join SEAD, further bolstering SEAD's global market impact.

Ministers also launched superefficient.org (www.superefficient.org), a web portal to facilitate international information exchange and serve as a resource for policymakers seeking to advance appliance and equipment efficiency.

To help grow the global market for efficient appliances, SEAD partners announced the first international competition for the most efficient appliances and equipment in the world. Starting with televisions, which are responsible for about 6–8% of global residential electricity consumption, the awards will help consumers find the best-performing products and motivate manufacturers to invest in super-efficient technologies.

Participation in Clean Energy Ministerial Initiatives
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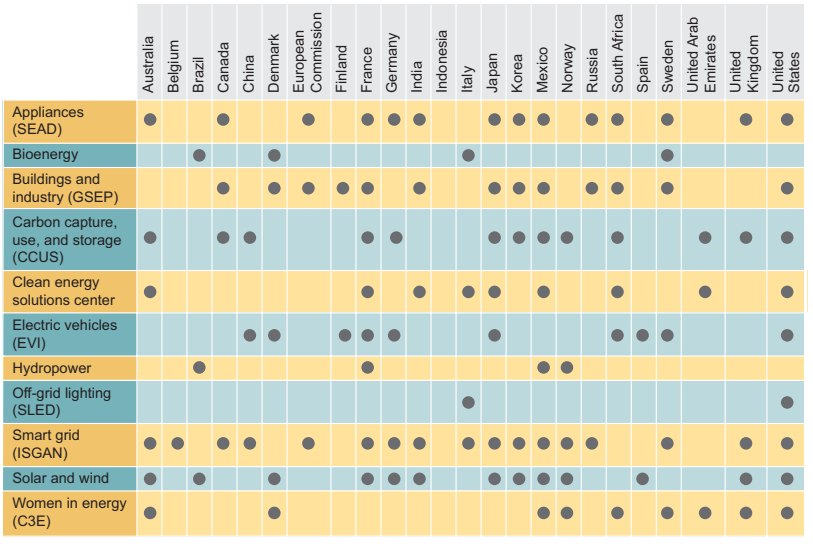

Source: Clean Energy Ministerial, www.cleanenergyministerial.org

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Contest rules, a timeline, entry procedures, and other details related to the television awards competition will be available at superefficient.org.

The International Smart Grid Action Network (ISGAN), a coalition of 20 governments, will help accelerate the development of smarter electricity grids around the world, which will improve the reliability of electrical systems, promote the growth of renewable energy, expand the use of electric vehicles, and help consumers and businesses better measure and lower their energy use. During the Ministerial, ISGAN partners announced the initiative's formal establishment as an implementing agreement under the umbrella of the International Energy Agency Framework for International Technology Co-Operation.

To accelerate the deployment of transformational low-carbon technologies, nine of the ministers launched the Clean Energy Solutions Center (www.cleanenergysolutions.org) to help countries strengthen clean energy policies and program development. The Solutions Center will provide information on emerging policy trends and identify opportunities for international policy coordination, supplemented by peer-to-peer learning, remote expert assistance, and online training.

Chu also announced the United States will join two other countries in a new Cool Roofs Working Group to help reduce energy use in buildings worldwide and to mitigate the warming effects of climate change. The group will work together to promote the expansion of cool roofs through pilot projects, best practices, and updated building codes. Also, the United States will join the Sustainable Development of Hydropower initiative.

As part of the Clean Energy Education & Empowerment (C3E) initiative, nine partner governments held a high-level public forum on "The Role of Women in the Clean Energy Revolution" in conjunction with the Ministerial. Three female ministers and eight distinguished panelists from clean energy-related fields participated in conversations about policies and programs to enhance women's leadership on clean energy around the world.

Other previously launched initiatives will continue to support the growing global market for renewable energy, while others will work to address policy and regulatory issues associated with carbon capture and storage, and support the development of markets for affordable, quality-assured solar light-emitting diode lanterns with a goal of facilitating improved lighting for more than 10 million of the world's poorest citizens by 2015.

USA, Qatar sign agreement to strengthen cooperation on clean energy

The U.S. Department of Energy (DOE) and the Qatar Science & Technology Park (QSTP) have signed a Memorandum of Understanding (MOU) in early April to promote collaboration on the development and deployment of cost-effective and sustainable clean energy technologies, building on the historically strong ties between the United States and Qatar. Under the expanded partnership, the countries will exchange scientific and technical information and undertake joint research, development, and deployment initiatives that will help spur energy innovation, create new markets for clean energy, and support economic growth. The MOU was signed by U.S. Deputy Secretary of Energy Daniel Poneman and Tidu Maini, the Executive Chair of QSTP.

"This partnership adds a new and exciting dimension to the already strong relationship between our two nations," said Poneman. "By bringing our scientists and engineers together to pursue joint research, we'll be able to develop the next generation of clean energy technologies more quickly. These innovations will help us to grow our economies and to build a more secure, prosperous, and sustainable clean energy future."

Maini said, "We are pleased to have this MOU which is part our mission to build up strong partnerships with reputable agencies like ARPA-E [Advanced Research Projects Agency-Energy]. This will offer a great opportunity to QSTP and its partners to collaborate with leading international laboratories in the United States, in technology areas that are a priority for QSTP's future development. In turn QSTP will make available opportunities for ARPA to collaborate on technologies that are under development in Qatar."

DOE, principally through ARPA-E, and QSTP will pursue cooperation in five key areas:

- **Advanced Cooling Technologies**, including next-generation cooling technologies, systems integration and building controls;
- **Renewable Power Generation**, for example, cost-effective integrated photovoltaic systems and coating technologies to reduce the effect of weather conditions;
- **Energy Storage**, including high energy density electric storage and thermal storage for combined heat and power systems;
- **Carbon Capture and Sequestration**, including improving the efficiency of existing and next-generation technologies and methods for the safe and efficient storage and transportation of high-pressure carbon dioxide; and
- **Water Treatment Systems**, including efficient desalination techniques and effective water purification.

Over the next decade, the partners will work together and with the private sector to foster scientific exchanges and research on cutting-edge technologies, including utilizing Qatari facilities as test-beds for large-scale demonstrations of U.S. and Qatari technologies. The data collected from these demonstrations will help further refine the development of these innovative technologies and could provide the partners with new capabilities to meet their respective energy goals for the future. □

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