The Business Council for Sustainable Energy®

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Clean Energy Keeping Momentum at COP19

The Business Council for Sustainable Energy (BCSE)'s coalition of energy efficiency, natural gas and renewable energy industries are at COP19 in Warsaw to promote the economic and environmental benefits of a diverse, low-carbon energy portfolio. Technologies exist today that can help countries reduce emissions and enhance resilience, while also delivering clean, reliable and local power to communities. For over twenty years, BCSE members have constructively engaged the UNFCCC to ensure that policy decisions incorporate the real, on-the-ground experience of clean energy businesses.

The inter-governmental process has made steady progress working with countries to build new institutions that will accelerate technology deployment and climate finance.

Alongside these efforts, the global market for clean energy is also steadily growing. The levelized costs of electricity for renewable technologies have plummeted, nearing grid parity in some markets. Safe extraction and identification of new sources of natural gas are changing decisions about electricity generation. Supply-side and demand-side energy efficiency technologies are enabling households, businesses and cities to increase energy productivity and save money.

The Green Climate Fund and the Climate Technology Center & Network are key institutions that will accelerate deployment of existing clean energy technologies.

A 2015 international climate change agreement will incentivize additional national policies and leverage existing market forces to achieve critical greenhouse gas emissions reductions. In Warsaw, the BCSE calls for Parties to keep this momentum moving and to set a foundation that recognizes and includes private sector expertise, finance and technology solutions in the design of a new global framework.

Performance-based Policies Deliver Real Savings in Singapore

At Republic Plaza, **Trane/Ingersoll Rand** worked with building owner CDL to design a whole-building approach to deliver a high-performance, *Green Mark* building that is now one of the most efficient buildings in Singapore, with anticipated energy savings of four million kilowatt-hours or S$870,000. Customized energy conservation measures included a more efficient cooling system and a high accuracy monitoring system that delivers data at one-minute intervals on a web-based interface. Policy instruments, such as *Green Mark*, are effective tools for incentivizing measurable and verifiable energy efficiency changes that deliver real-world carbon emissions reductions.

New high efficiency centrifugal chillers at Republic Plaza have full load efficiency of 0.495kW/Rton, one of the lowest ratios globally.

Photo courtesy of Trane.

Rural Village Partners on Micro Hydropower Project in Liberia

The first independent electric cooperative in Liberia is taking root in the small farming town of Gbarnway. **Winrock International**, in partnership with USAID, is working with local community members to build a micro-hydropower project at Wayavah Falls. The cooperative is providing land, labor and local materials for the project, which includes building an access road. Winrock will train residents to run the operation maintenance and management of the power plant. Electricity generated by this project, to be completed by June 2014 will supply affordable electricity to over 1,000 people in 150 homes, two rice mills, a clinic and a church.

Location of the water intake structure of the Wayavah Falls Micro Hydropower Project.

Photo courtesy of Winrock International/USAID.

A Look at BCSE Members in China

Energy Savings Pay for Efficiency Improvements

Johnson Controls is pioneering energy performance contracting to finance and implement a bundle of energy efficiency technologies that will deliver greater energy savings at the five-star Shanghai Hongta St. Regis Hotel in China. The comprehensive retrofitting measures undertaken by Johnson Controls will help the hotel reduce energy consumption by 15% or a guaranteed savings of RMB 9 million in energy bills and reduce its carbon emissions by 10,200 tons over the next six years. The government of China has been promoting energy performance contracting, with an emphasis on the model of "shared savings," as a key way to realize the great potential of energy efficiency in helping to achieve the ambitious energy reduction goals outlined by the 12th five-year plan. Favorable local government policy, including incentives and tax rebates, enabled the kick-off of this pilot project, which is the first of its kind in Shanghai.

A Portfolio Approach Includes CCS

Carbon capture and storage (CCS), including carbon dioxide (CO_2) utilization, is a part of the low-carbon energy portfolio solution. **Jupiter Oxygen Corporation (JOC)** teamed up with Xinjiang Guanghui New Energy Co. Ltd, one of the leading energy companies of China, in May 2011 to showcase and market Jupiter's unique high flame temperature oxy-combustion technology and carbon capture system. Applying Jupiter Oxygen's cost effective carbon capture and air pollutant control technologies, which were developed jointly with the U.S. Department of Energy's National Energy Technology Laboratory, to existing and new coal power plants, as well as turning the CO_2 captured into a commodity, will be key for sustainable development and growth.

Host site for 170 MWe coal boiler conversion to JOC's oxy-combustion process with carbon capture, to produce salable CO_2 in Ha Mi, Xinjiang Province, China.

Innovation, Mobile Broadband Enables Emergency Preparedness

Qualcomm Wireless Reach is a strategic program that brings wireless technology to underserved communities globally. Wireless Reach projects demonstrate the positive social and economic impact of wireless technologies in the communities in which we live and work.

The project emphasizes the importance of knowing your name and address and having an emergency plan for children and their families.

Photo Courtesy of Qualcomm.

Possible outcomes of an increase in global temperatures include increased risk of drought and increased intensity of storms.[1] The "Let's Get Ready!" mobile safety project uses a 3G mobile website, mobile application and fun content featuring Sesame Street characters to create an interactive and engaging experience that empowers families in China with young children to learn about emergency preparedness.

[1] http://earthobservatory.nasa.gov/Features/RisingCost/rising_cost5.php

About the BCSE

The Business Council for Sustainable Energy (BCSE) represents a broad portfolio of existing clean energy business sectors, including renewable energy, supply-side and demand-side energy efficiency, and natural gas and electric utilities in North America. The BCSE has represented the views of clean energy industries in the United Nations Framework Convention on Climate Change (UNFCCC) since 1992. For more information, please visit http://www.bcse.org, download the *Sustainable Energy in America Factbook* for the latest market data, and follow on Twitter: @BCSECleanEnergy.