



Clean Energy Ministerial Highlights

IEA Conference on "Gaps and Opportunities in
International Collaboration on Low-Carbon Energy Technologies"

February 27, 2014



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BACKGROUND



- High-level global forum for major economies to work together to achieve goal of transitioning to a global clean energy economy
 - 23 economies
 - 80% of global CO₂ emissions
 - 90% of global clean energy investment
- Focused on 3 goals:
 - Improve energy efficiency
 - Enhance clean energy supply
 - Expand clean energy access
- Three part strategy:
 - High level dialogue
 - Technical cooperation
 - Engagement with private sector and other stakeholders



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- CEM Approach
 - Distributed leadership
 - Voluntary and collaborative
 - No negotiated text

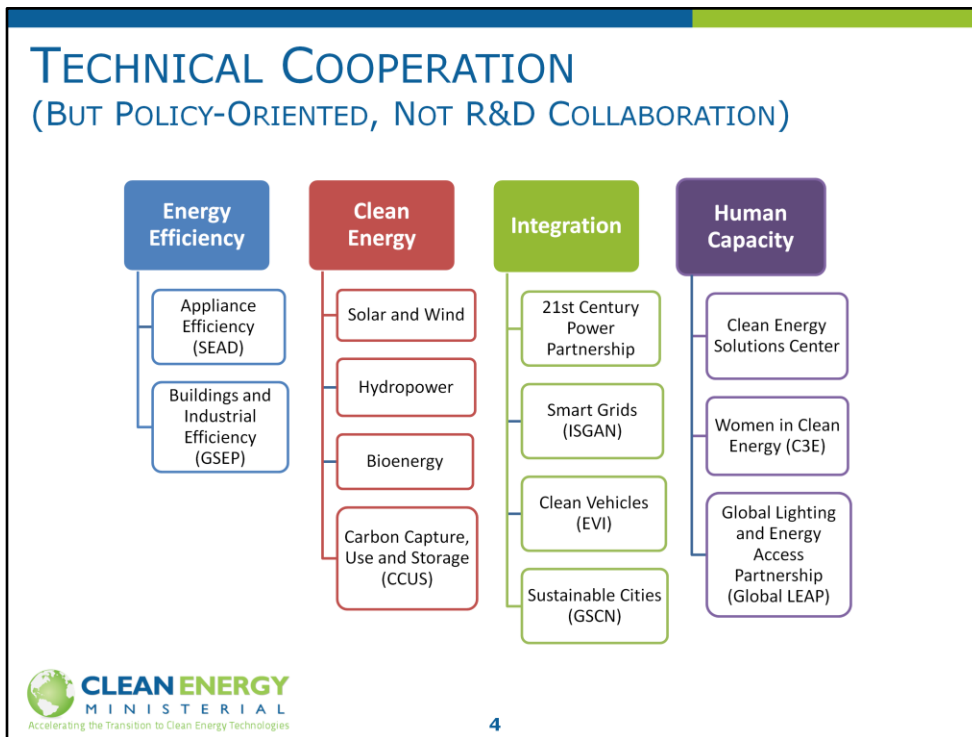
STRATEGY



www.cleanenergyministerial.org

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- The CEM has some unique characteristics:
- It's based on a distributed leadership approach where any government interested in pursuing a substantive idea on a clean energy technology or issue is encouraged to identify willing partners and go forward with it.
- There's no expectation that every government participates in every initiative.
- There's no communiqué or other negotiated text.
- This collaboration extends to multilateral institutions such as the IEA, IPEEC, IRENA and working to leverage the expertise, influence, and capital of the private sector.



- Technical cooperation takes place through 13 initiatives that are currently underway through the CEM.
- These initiatives can be broadly categorized under Energy Efficiency, Clean Energy, Integration and Human Capacity.
- Under Energy Efficiency we have SEAD and GSEP, the two initiatives I highlighted earlier;
- Under Clean Energy we have Solar and Wind, Hydropower, Bioenergy and Carbon Capture Use and Storage;
- Integration has the 21st Century Power Partnership, the International Smart Grid Action Network, the Electric Vehicle Initiative and the Global Sustainable Cities Network;
- and under Human Capacity we have the Clean Energy Solutions Center, Women in Clean Energy and Global LEAP.

VALUE PROPOSITION

- The CEM is positioned to identify and deliver on actions with significant climate change mitigation potential
 - It includes most significant emitters but avoids the difficult dynamics of the climate talks
- Collaborative technical work, supported at a high-level, serves to enhance and facilitate international cooperative efforts to address climate change
- The CEM leverages funding (>\$40M) and in-kind resources from participating governments and has attracted contributions from philanthropies (~\$10M).
- A few highlights follow

TECHNICAL COOPERATION

Participation in Clean Energy Ministerial Initiatives

February 2014

	AUSTRALIA	BRAZIL	CANADA	CHINA	DENMARK	EUROPEAN COMMISSION	FINLAND	FRANCE	GERMANY	INDIA	INDONESIA	ITALY	JAPAN	KOREA	MEXICO	NORWAY	RUSSIA	SOUTH AFRICA	SPAIN	SWEDEN	UNITED ARAB EMIRATES	UNITED KINGDOM	UNITED STATES
21ST CENTURY POWER	●				●		●	●	●	■				●	●	●	●	●	●	●	●	■	
APPLIANCES (SEAD)	●	●	●		●		●	●	●	■			●	●	●	●	●	●	●	●	●	■	
BIOENERGY		■			●							●								●			
BUILDINGS AND INDUSTRY (GSEP)			●	●	●		■		●				■	●	●	●	●	●	●			■	
CARBON CAPTURE (CCUS)	■		●	●				●	●				●	●	●	●	●	●	●	●	■	●	
CLEAN ENERGY POLICY	■				●			●	●			●	●	●	●		●	●	●	●		■	
ELECTRIC VEHICLES (EVI)		●	■	●	●		●	●	●	●		●	●				●	●	●	●	●	■	
ENERGY ACCESS (GLOBAL LEAP)											●	●									●	■	
HYDROPOWER		■					●							●	●						●		
SMART GRID (SGAN)	●	●	●		●		●	●	●	●		■	●	■	●	●	●	●	●	●	●	■	
SOLAR AND WIND	●			■	●		●	■	●				●	●	●	●	●	●	■	●	●	●	
SUSTAINABLE CITIES (GSCN)				●	●		●													●	■		
WOMEN IN CLEAN ENERGY (GSE)	●				●									●	●	●	●	●	●	●	●	■	

Non-CEM governments, nongovernmental organizations, and private businesses also participate in selected initiatives.

■ Lead ● Participant

-Each country has unique national circumstances and they come together to participate in those efforts in which they are most interested or most capable and that may have the highest impact for their citizens.

-This chart shows the breakout of which countries are involved in each of the initiatives with the yellow square designating the countries that lead each initiative.

MINISTERIAL MEETINGS

Meetings are opportunities to **assess progress, engage the private sector and the public, and guide work** under the initiatives.



CEM1 – Washington DC, July 2010

CEM2 – Abu Dhabi, April 2011

CEM3 – London, April 2012

CEM4 – Delhi, April 2013

CEM5 – Seoul, 2014

CEM6 – Mexico City, 2015

HAVING AN IMPACT

Energy Efficiency

- Based on recommendations from the **Super-Efficient Equipment and Appliance Deployment (SEAD)** initiative, **India** became the first country in the world to set **comprehensive quality and performance standards for LEDs**.



**PROJECTED CUMULATIVE SAVINGS THROUGH 2030:
277 TWh electricity, 254 million tonnes CO₂**

Clean Supply

- The **Solar and Wind** initiative launched the **Global Atlas for Solar and Wind**, a web-based repository for RE resource data and the **largest initiative ever undertaken to assess RE potentials** on a global scale.



OUTCOME: Provides energy professionals and policy planners with high quality, uniform data for project assessment, investment decisions and broader policy planning



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-Here are some highlights of what's been accomplished so far.

-India recently became the first country in the world to set comprehensive quality and performance standards for LEDs. Those standards are expected to save, cumulatively, **277 terawatt hours of electricity, from the time they go into effect through the year 2030**. And those savings translate into avoiding building over 90 coal fired power plants and 254 million tonnes of CO₂.

-These are tangible results based on real actions that have been taken.

-[By putting quality standards into place, we can avoid market spoiling that would otherwise slow adoption of LED technology.] [Assumes market spoiling in absence of quality standards would delay adoption by 5 years]

-For the solar and wind's Global Atlas, users range from private project developers to governments and other policy planners. A key value for all users is that its free to all, its uniform and its traceable. For project developers, it provides a first step in identifying potential renewable energy development sites that can in turn influence investment decisions. For policy planners, it the data can assist for conducting policy feasibility studies and in framing policies.

HAVING AN IMPACT

Integration

- The **21st Century Power Partnership** is supporting power sector transformation in India, South Africa and Mexico by bringing global experts together to engage with governments, utilities and regulators.



OUTCOME: Facilitating increased integration of renewables and deployment of efficiency and smart grid solutions

- **The International Smart Grid Action Network (ISGAN)** has catalogued nearly 100 smart grid projects from 17 countries.

OUTCOME: Contributing to wider application of best practice smart grid solutions world wide



-Need to clarify outcomes for 21CPP

-Need specific example of usage / influence of ISGAN catalogue of projects.

HAVING AN IMPACT

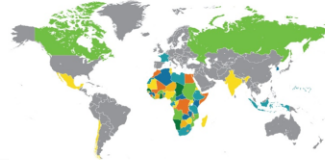
Human Capacity

- **Global LEAP's** work with IFC's Lighting Africa program helped enable the sale of **2.7 million quality-assured off-grid lighting systems** in **Africa** since program began in 2009.

BENEFITS: 1.3 million tonnes CO₂e reduction and health benefits for more than 10 million people



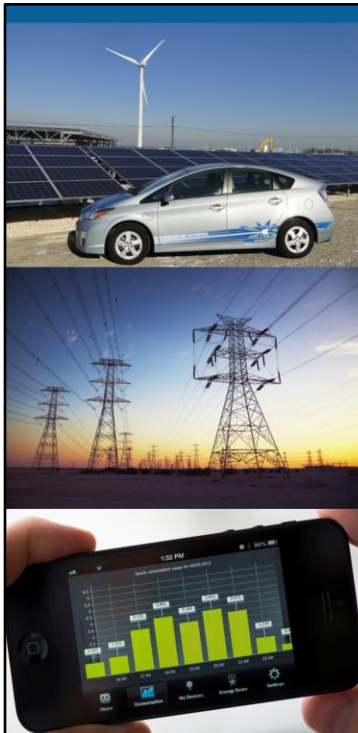
- The **Clean Energy Solutions Center** has responded to more than **100** requests for **policy assistance** from **45 countries** through Ask-An Expert service; hosted **75 webinars** with more than **3,500 participants** from around the world.



NOTABLE ACHIEVEMENT: Supported member states in setting renewable energy targets in CARICOM Energy Policy; 20% in 2017, 28% in 2022 and 47% in 2027

CARICOM approved the Energy Policy in march 2013 and it is going before individual countries for approval. Renewable energy targets included in the

policy are: **20% in 2017, 28% in 2022, 47% in 2027**



SUMMARY CEM BENEFITS

- Reduce greenhouse gas emissions
- Avoid the need to build 650 power plants in next 20 years
- Bring improved energy services to millions of people
- Promote rapid deployment of renewable energy, carbon capture use and storage, and electric vehicles
- Help support women pursuing careers in clean energy
- Facilitate widespread dissemination of best practices in clean energy sector

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- I've highlighted some of the results already realized through the CEM initiatives and the significant potential from energy efficiency.
- But there are a number of significant benefits that can be achieved through the CEM.
- I've already mentioned the emissions reduction potential and avoiding the need to build 650 coal-fired power plants.
- Work taking place through the CEM is also:
- Bringing improved energy services to millions of people
- Promoting the rapid development of renewable energy, carbon capture use and storage, the deployment of electric vehicles.
- It's helping support women pursuing careers in clean energy and bringing in more talented people to help address this challenge.
- And of course the CEM is facilitating the widespread dissemination of clean energy best practices.

While we can be very proud of what has been accomplished, there is much more work that needs to be done.