



**CLEAN ENERGY**  
MINISTERIAL

**Update on SEAD Initiative**  
*Superefficient Equipment and Appliance Deployment*

**11 March 2011**  
**New Delhi, India**

# CEM Overview

- In July 2010, Secretary Chu convened ministers and other high-level representatives from 24 governments in Washington, D.C. for the first Clean Energy Ministerial. The goal: To accelerate the transition to clean energy technologies.
- UAE is hosting second meeting on April 6<sup>th</sup> and 7<sup>th</sup> and UK is hosting third meeting in 2012.

- “Deliverables” are concrete and transformative clean energy initiatives led by like-minded and willing governments
- No expectation that each government participates in all initiatives
- No communiqué or other negotiated text
- Distributed leadership model
- Meetings are opportunities to assess and publicly communicate progress, as well as guide and strengthen the work of the CEM



# SEAD Principles and Goals

## Principles

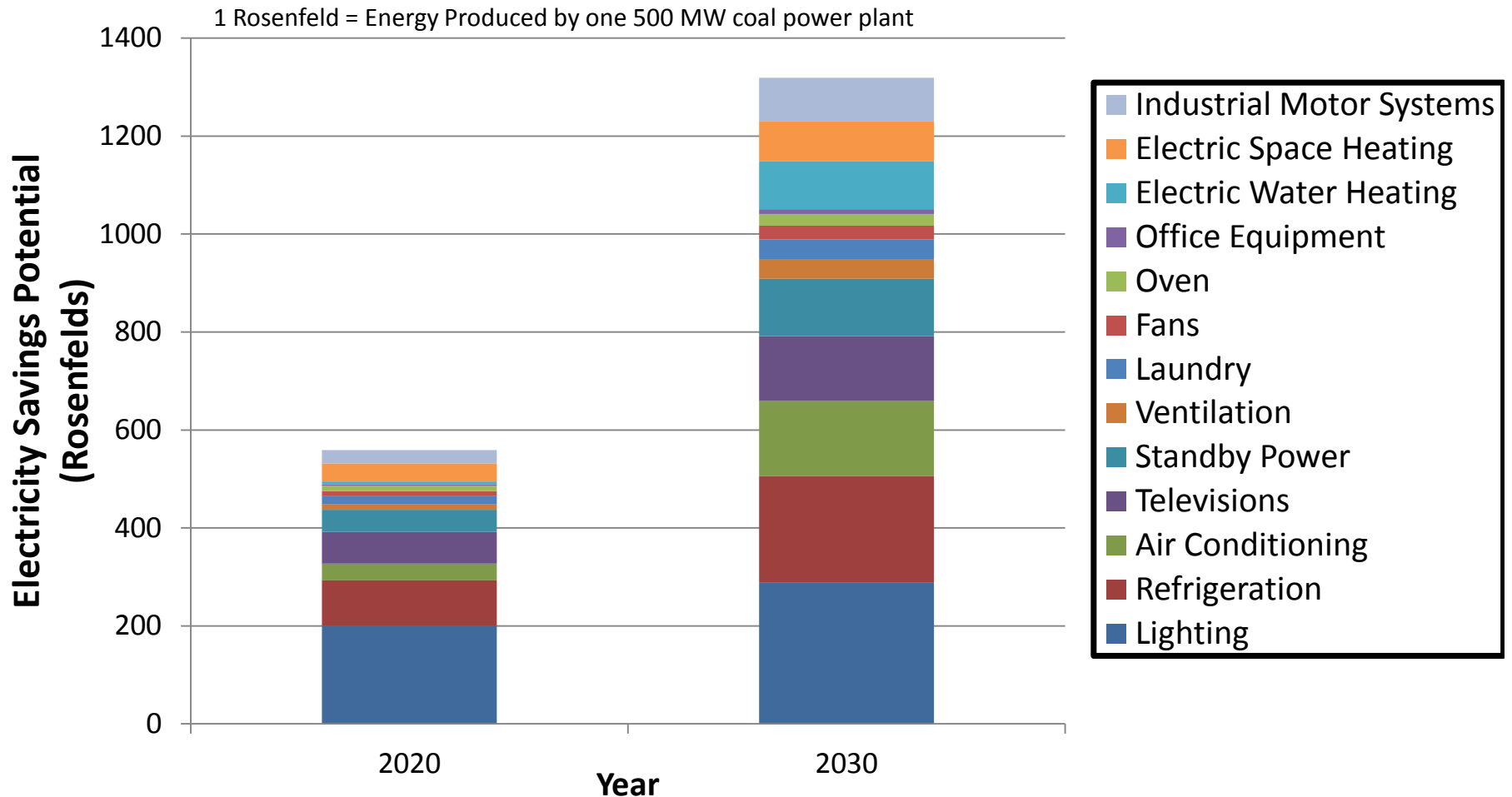
- SEAD is a *global market transformation initiative* for deploying super-efficient equipment and appliances.
- It is a *Government initiative* that will *engage the private sector* to tap the large global energy savings potential available through *improved appliance and equipment efficiency*.

## Goals

- Raise the efficiency ceiling  
Pull super-efficient appliances and equipment into the market through cooperation on measures like incentives, procurement, awards, and R&D investments
- Raise the efficiency floor  
Work together to bolster national or regional policies like minimum efficiency standards
- Strengthen the foundations of efficiency programs  
Coordinate technical work to support these activities



# Cost-Effective Appliance/Equipment EE Potential



Based on McNeil et al. (2008)



# SEAD Partners



Australia



Canada



European  
Commission



France



Germany



India



Japan



Korea



Mexico



Russia



South Africa



Sweden



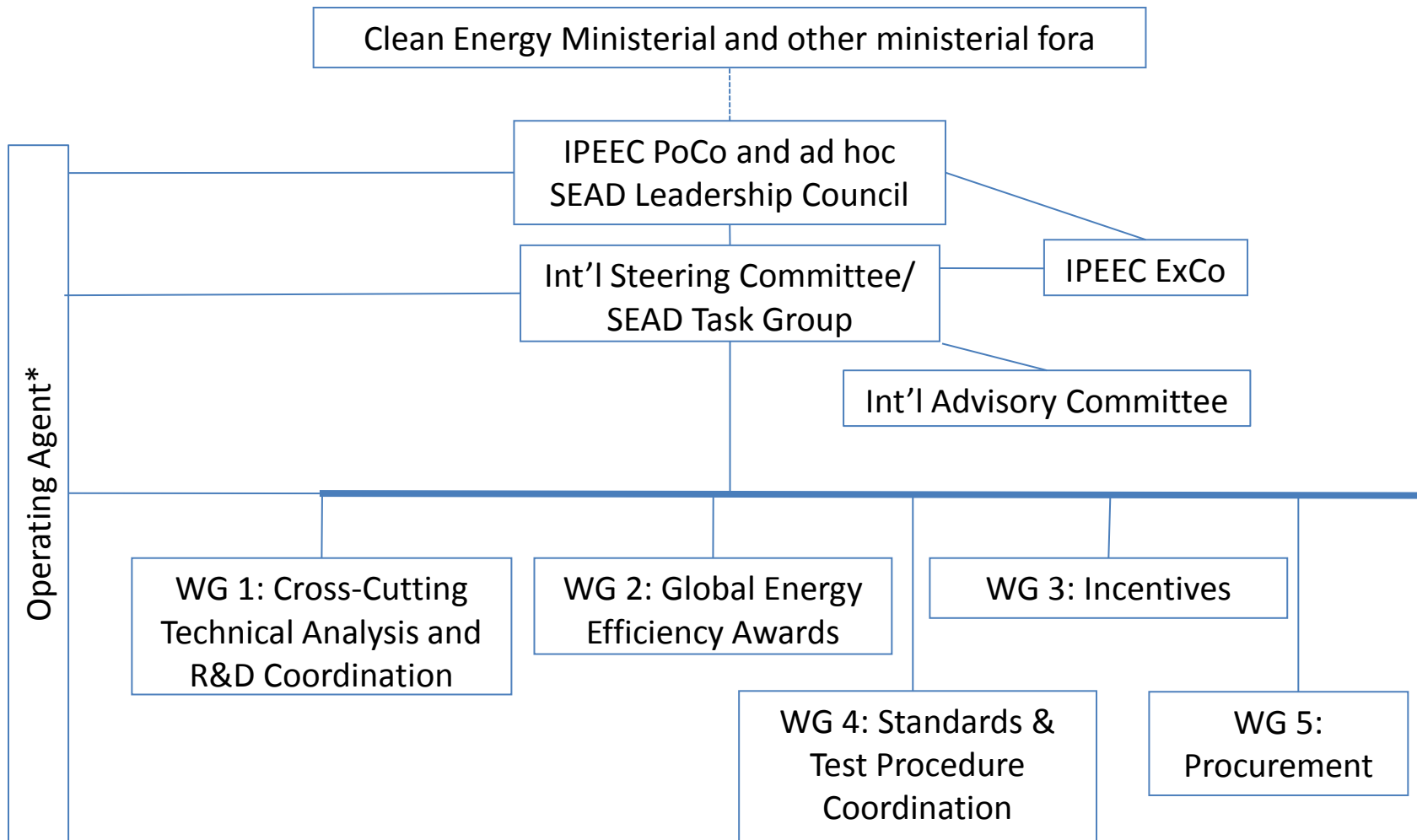
United Kingdom



United States



# SEAD Structure



\*US DOE has pledged five years of support for the Operating Agent and is evaluating a proposal from CLASP.



# SEAD Working Group I: Cross-Cutting Technical Analysis and R&D Coordination

- **Key CEM2 announcement:**

Beta public release of  
**Superefficient.org**

- **Additional deliverables:**

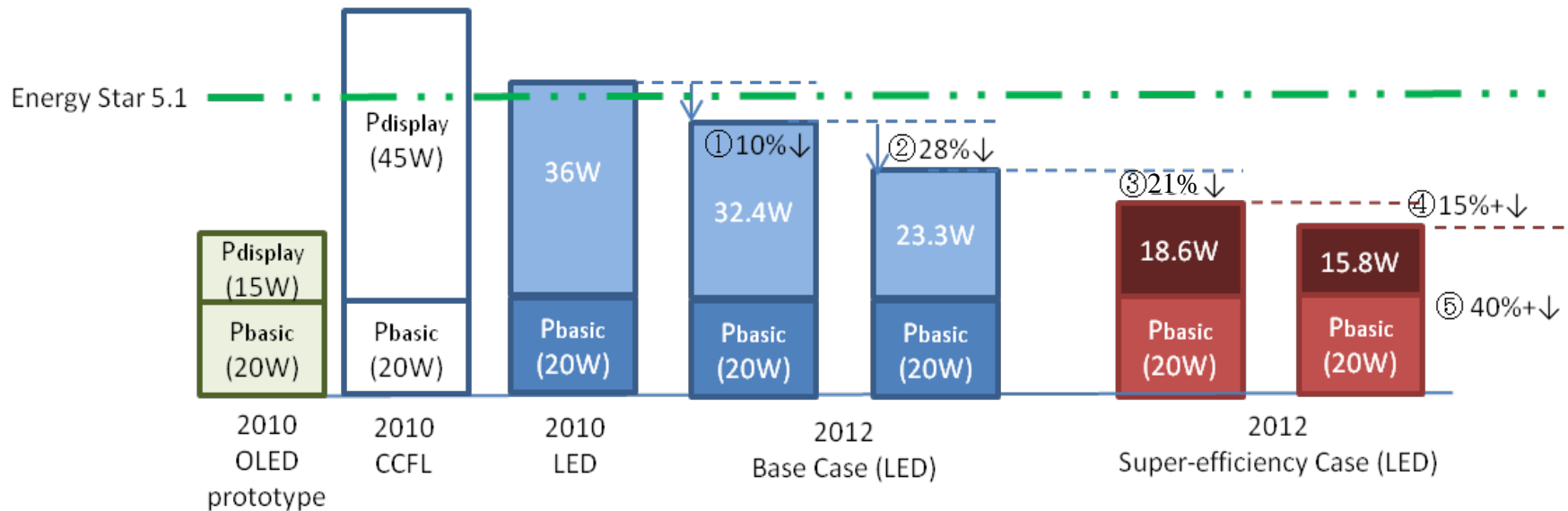
- Cross-cutting analysis of appliance/equipment efficiency potential across SEAD countries
- Assessments of EE potential for televisions (with room A/C and ceiling fans to follow)

The screenshot shows the homepage of Superefficient.org. The header includes the site name 'SUPEREFFICIENT.ORG' and the tagline 'THE WEBSITE OF THE SUPER-EFFICIENT EQUIPMENT + APPLIANCE DEPLOYMENT (SEAD) INITIATIVE'. A navigation menu contains 'Standards + Labels', 'Awards', 'Incentives', 'Procurement', and 'Technical Analysis'. The main content area features a 'GET CLEAN' banner with the text 'Transforming the global market with super-efficient appliances'. Below this is a 'HIGHLIGHTS' section with a 'Coming May 2011' announcement and a 'FUSCE SED LIBERO ENIM' section. A 'OUR WORK' section lists 'Technical Analysis', 'Awards', 'Incentives', 'Standards + Test Procedures', and 'Procurement'. A green 'ASK AN EXPERT' button is located on the right. The footer includes logos for 'CLEAN ENERGY MINISTERIAL' and 'ee', along with the text 'SEAD is an initiative of the Clean Energy Ministerial - a task within the International Partnership for Energy Efficiency Co-operation'. Navigation links and a copyright notice for 2011 are also present.



# Example Analysis: Efficiency Trends and Improvement Opportunities in LCD TVs

Average rated-power of 32inch LCD TVs: 87W (range 60-130W)



- ① Improvement in LED efficacy (60→80lm/W)
- ② Improvement in panel transmittance (5→7%)
- ③ DBEF or other film stack (Δ\$5)  
annualized cost \$0.68, \$0.066/kWh
- ④ Dimming (Δ\$3.2)  
annualized cost \$0.43, \$0.071/kWh

- ⑤
  - Higher efficiency LED (90-100lm/W)
  - Light guide panel combined with prism film
  - Higher panel transmittance (8-10%)
  - Improvement in system LSI
  - Higher efficiency power supply unit

- LCD TV on-mode power is based on US Energy Star list posted on Nov 1, 2010. [n=32(CCFL), n=12(LED-edge)]
- Rated-power is based on the TV list provided by Japan Energy Conservation Center. (n=51)





# SEAD Working Group II: Global EE Awards

- **Key announcement for CEM 2:**  
Announcement of plans for **Television awards**  
(Subsequent award categories to follow later.)
- **Status**
  - Hosting organization for awards identified (CLASP)
  - Outreach to industry partners underway
  - Marketing and branding strategy being developed



# SEAD Working Group III: Incentives

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- **Key related activity at CEM 2:**
  - Public-private roundtable on utility-scale energy efficiency
- **Additional activities under exploration:**
  - Technical support for the development of new appliance efficiency DSM programs
  - Exchanges between utility executives and regulators in countries developing new appliance efficiency DSM programs and North American counterparts with experience in this area



# SEAD Working Group IV: Standards and Test Procedure Coordination

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- **Key announcements for CEM 2:**
  - Estimate of global energy savings potential of appliance efficiency rules put in development since January 2010
  - SEAD-facilitated technical-level exchanges between rulemaking teams for specific products
- **Supporting deliverables:**
  - Database of standards & labeling program schedules for new rule makings



# Example Analysis: Draft Timeline for Motor Rulemakings

Product: Televisions

Timeline developed by CLASP with data from Templates

Economy Country	Existing Policy Measure	2011				2012				2013				2014				2015				Notes
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	
Australia	M	[Timeline bar from Q1 2011 to Q4 2012]																Possible change to test method to better harmonise with international practice.				
Canada	M, V	[Timeline bar from Q1 2011 to Q4 2014]																				
EU	M	[Timeline bar from Q1 2011 to Q2 2012]																				
Japan	M, V	[Timeline bar from Q1 2011 to Q4 2011]																				
Korea																		Standby power				
Mexico																						
Russia																						
South Africa																		MEPS for standby power				
United States	M, V	[Timeline bar from Q1 2011 to Q4 2015]																MEPS Test Procedure Energy Star Energy Guide				



# SEAD Working Group V: Procurement

- **Key CEM2 announcement and deliverables:**
  - Public-private dialogue on promoting the production and sale of highly efficient products
    - Exemplar: U.S.-based effort focused on high-efficiency A/C units with advanced control and diagnostic systems
    - Roundtable at CEM will kickoff a series of more detailed follow-on interactions
  - Draft best practice policy guide for government procurement
  - Beta version of first product-specific toolkit for procurement officials (municipal street lighting)

