

The SEAD Global Efficiency Medal Competition for Electric Motors



Accelerating Market Transformation by
Recognizing Energy-Efficient Motors

CLEAN ENERGY MINISTERIAL

The Clean Energy Ministerial (CEM) is a high-level global forum to share best practices and promote policies and programs that encourage and facilitate the transition to a global clean energy economy.

90% of Global Clean Energy Investment

80% of Global GHG Emissions



Australia



European Commission



Brazil



Canada



China



Denmark



Finland



France



Germany



India



Indonesia



Italy



Japan



Korea



Mexico



Norway



Russia



South Africa



Sweden



Spain



United Arab Emirates



United Kingdom



United States

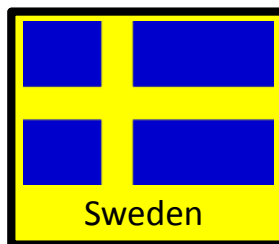
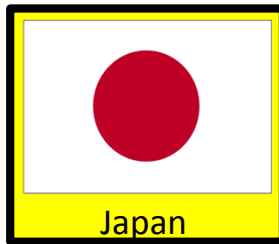
CEM Initiatives

CEM unites 23 [participating governments](#) in efforts to increase energy efficiency, expand clean energy supplies, and enhance clean energy access. Work is divided into three main activities:

- [Annual ministerial meetings](#) help advance international collaboration to accelerate the adoption of clean energy technologies.
- [Public-private engagement](#) builds the industry-government cooperation needed to scale up clean energy around the globe.
- Thirteen clean energy [initiatives](#) expand the deployment of clean energy technologies and policies.

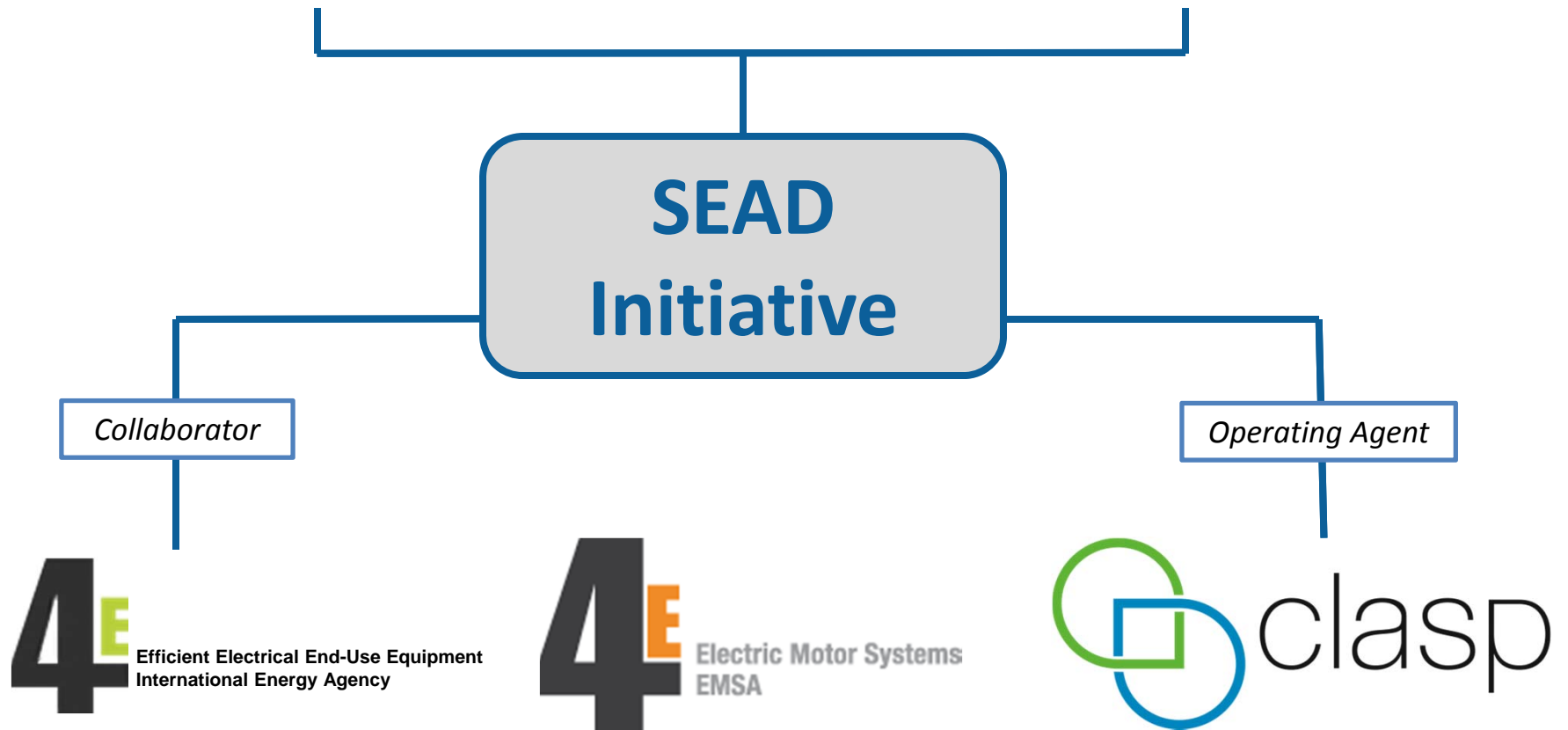


SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE (SEAD)

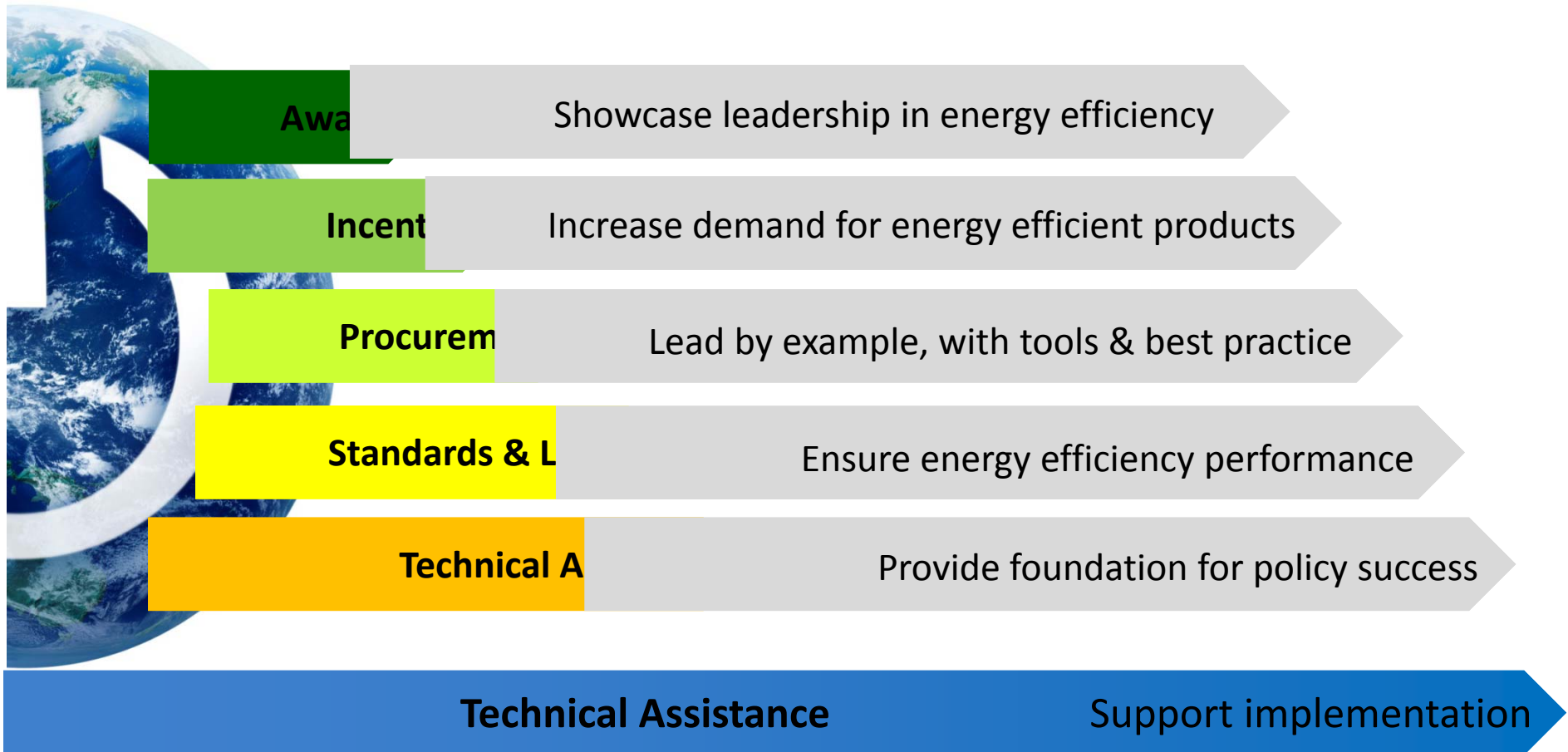


- *China is an observer to the SEAD Initiative*
- *Yellow highlighted countries participate in the SEAD Awards Working Group*

About SEAD



SEAD accelerates the pace of market transformation for energy efficient products



SEAD Global Efficiency Medal

Awards

Showcase leadership in energy efficiency

Realize greatest savings potential

Increase market share

Spur innovation

Support test method harmonization

Build test lab capacity

Complement Standards and Labeling policies





The Competitions

	TVs	Computer Monitors	Electric Motors	And beyond...
Status	Complete -Analysis	Complete - Marketing and analysis	Ongoing	??
Winners	Samsung, LG	Samsung, LG, Acer	??	??
Savings	33% - 44%	12% - 43%	??	??



- First-of-its-kind global competition launched in 2012 to encourage the production and sale of [super-efficient televisions](#) by size within four regions
- The competitions (and winners) received significant coverage (Times Square billboard on left)
- SEAD works with a marketing team to optimize media coverage (trade journals, press releases, efficiency advocacy groups, etc.)
- Award ceremony at the CEM meetings leads to high visibility to energy ministers from the 23 participating governments

SEAD Electric Motors Awards Competition

- Awards identify the single best product within a sub-category and region
- Recognize both established and emerging-technology products
- Compare regional winners to select the world's most efficient product for a global award (comparability of test results is important)
- Winners selected from manufacturer nominations, subject to verification testing

- Open to all motors manufacturers
- Eighteen (18) available awards
- Nomination period:
June 3 – Jan 31, 2014
- Winners to be announced in September 2014



Why participate?

- **Entry is confidential.** Only the awards organizers know who has entered.
- **Entry form is simple.** Will only take you a few minutes to complete.
- **No need to submit product now.** Only the presumed winners are asked to provide samples for testing.
- **Bragging rights.** The winners have the most efficient products in the world.
- **Free marketing.** SEAD will promote the winners and work with the winners to adopt the optimum marketing strategies.

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Awards ceremony at the 2014 Motor Summit in Zurich

[S · A · F · E]

 swissenergy

 4E Electric Motor Systems

 topmotors.ch
Effizienz im Antrieb

MOTOR SUMMIT

Induction Motor Awards Categories

Category	Size Class	Region				
		Australia	European Region	India	North America	Inter-national
IEC Induction Motor	3.7 kW			●	●	
	4 kW	●	●			●
	11 kW	●	●	●	●	●
NEMA Induction Motor	5 HP				●	
	15 HP				●	

- Total of 10 awards in the IEC Induction Motor Category
- Total of 2 awards in the NEMA Induction Motor Category

New Technology Motor Categories

Category	Region				
	Australia	European Region	India	North America	Inter-national
New Technology Motor (< 75 kW)	●	●	●	●	●
New Technology Motor (< 100 HP)				●	

- Total of 6 awards in the New Technology Category
- Recognizes innovative electric motors that:
 - Significantly reduce product energy consumption
 - Will be mass produced within two years of September 1, 2014
- Applicant must identify the design feature of the nominated product that improves its energy efficiency
 - SEAD will not disclose this information

Eligibility - 1

- To be eligible, nominated **NEMA Induction Motors** must satisfy the following definitions:
 - general-purpose alternating-current motor (NEMA MG-1 2011 § 1.6.1);
 - poly-phase squirrel-cage induction motor (MG-1 § 1.18.1.1);
 - constant speed motor (MG-1 § 1.30);
 - design B (MG-1 § 1.19.1.2);
 - totally enclosed fan-cooled machine (MG-1 § 1.26.2);
 - rated continuous duty (MG-1 § 1.40.1);
 - 4 poles;
 - rated or can be operated at voltage ratings between 230 and 600 VAC;
 - 60 Hz nominal rated frequency.

Eligibility - 2

- To be eligible, nominated **IEC Induction Motors** must satisfy the following definitions:
 - single-speed, three-phase, cage-induction motor (IEC 60034-1 Ed.12.0);
 - design N (IEC 60034-12 Ed.2.1 § 5.2);
 - IP54 rated enclosure;
 - rated for duty type S1 – continuous running duty (60034-1 § 4.2.1);
 - intended for direct-on-line operation;
 - 4 poles;
 - rated or can be operated at voltage ratings between 230 and 600 VAC;
 - 50 Hz nominal rated frequency.
- To be eligible, nominated **New Technology Motors** must satisfy the following definitions:
 - including permanent magnet synchronous motor, electronically commutated motors, or reluctance synchronous motor;
 - IP54 rated enclosure;
 - rated for continuous duty or duty type S1.

Test Methods

Category	Test Method
IEC Induction Motor	IEC 60034-2-1:2007, Summation of Losses Method
NEMA Induction Motor	U.S. Department of Energy test procedure for Electric Motors and Small Electric Motors, as specified in 10 CFR part 431
New Technology Motor (< 75 kW)	IEC 60034-2-1:2007, Direct Test Method: Out/Input
New Technology Motor (< 100 HP)	IEEE Standard 112, Test Procedure for Polyphase Induction Motors and Generators, Efficiency Test Method A, Input-Output

Induction Motor Shipment Thresholds

Applicants must ensure that they meet, or have plans to meet, the minimum number of product shipments for each product nominated within each region:

		Region			
Category	Size Class	Australia	European Region	India	North America
IEC Induction Motor	3.7 kW			1400	420
	4 kW	1400	1400		
	11 kW	500	500	500	150
NEMA Induction Motor	5 HP				980
	15 HP				350

Failure to meet minimum shipments will result in disqualification from future SEAD Global Efficiency Medal competitions.

Nomination Process

- All manufacturers who have products that meet the eligibility criteria are encouraged to nominate their products!
- To participate in this competition, complete and submit a Declaration of Performance form for each nominated model in a region via email to awards@superefficient.org
- The Declaration of Performance can be downloaded at: www.superefficient.org/MotorAwardEntry
- Additional information available at: www.superefficient.org/MotorAwards



Selection of Winners

- All nomination forms must be received by **January 31, 2014** in order to be valid for this competition
- CLASP, as the Awards Administrator, will then complete the following steps for all award categories:
 1. Review all nomination forms submitted for each award region and category
 2. Develop a list of products that have the best efficiency performance claims
 3. Submit a notice to applicants that meet this criteria to provide sample product for verification testing
- The applicant will have thirty (30) business days to provide CLASP with products for verification testing

Selection of Winners – Testing

Manufacturers are required to provide details of the location and serial number for at least ten (10) units of nominated Induction Motor products.

- Of those, CLASP will select 2 sample products for verification testing.

Manufacturers are required to provide two prototype samples of nominated New Technology Motor products.

Verification Testing Process:

1. One of the two samples will be randomly selected and used for testing.
2. The second sample may be used for verification testing upon occurrence of one of the following:
 - If the initial test sample is damaged;
 - If the first sample fails to verify the Applicant's claim.
3. If the product does not pass verification testing, CLASP will notify the applicant . CLASP will then consider the “potential winner” to be the next most energy efficient motor within the award category and region, and begin the verification testing process.



Announcement of Winners

(free marketing!)

- All winning products, as verified through verification testing, will be announced in September 2014.
- Guided by a comprehensive communications plan, SEAD will market the award winners of this competition globally to energy-efficiency advocates and industry stakeholders
- A global awards ceremony is tentatively planned for April 2015.



**GLOBAL
EFFICIENCY
MEDAL**

•
SEAD

- Chad Gallinat, DOE US
- Terry Brennan, NR Canada
- Peter Bennich, Swedish Energy Agency
- John Cockburn, NR Canada
- Naoko Doi, IEE Japan
- Saurabh Diddi, BEE India
- Anders Hallberg, Swedish Energy Agency
- Ross Hamilton, DCCEE Australia
- Shane Holt, DCCEE Australia
- Carlos Lopes, Swedish Energy Agency
- Stefan Nording, Swedish Energy Agency
- Renee Robinson, DCCEE Australia
- Patrick Roy, NR Canada
- Mike Walker, DEFRA UK
- Debbie Karpay Weyl, CLASP USA
- Steve Pantano, CLASP USA
- Gaurav Mehtani, CLASP India
- Sanaee Iyama, LBNL US

