

Fact Sheet: Super-efficient Equipment and Appliance Deployment (SEAD)

Overview

Worldwide electricity consumption is growing rapidly, in part because of the increasing use of equipment, appliances, lighting, and other devices. New products and technologies are expanding access to modern conveniences and increasing quality of life across the globe. However, the associated growth in energy demand poses a challenge for governments trying to satisfy existing demand while continuing to address air pollution and combat global climate change—many countries already face electric grid overloads, power outages, and declining air quality. **Increasing the efficiency of common equipment and appliances is an essential step in addressing these challenges, advancing the global transition to a clean energy economy by lowering energy costs for consumers, enhancing energy security, expanding access to energy services, enabling renewable energy integration, and reducing harmful emissions.**

SEAD works to harness the regulatory, market, and convening power of participating governments to accelerate global efficiency gains in internationally traded equipment and appliances. Employing cost-effective, best-practice appliance energy efficiency policies in SEAD economies can, by 2030, reduce annual electricity demand by over 2,000 terawatt hours (TWh), equivalent to the annual output of more than 650 mid-sized power plants, and decrease annual fuel energy demand by 30 million tonnes of oil equivalent (Mtoe). Collectively, these measures would decrease carbon dioxide (CO₂) emissions over the next two decades by 11 billion tonnes. Between 2010 and 2014, SEAD governments have implemented, announced, or proposed efficiency standards that are expected to yield annual savings of up to 734 TWh by 2030.

Key Activities

To fully realize potential energy savings, SEAD works to raise the ambition of appliance energy efficiency policies and programs worldwide by:

- **Expanding the scope of existing efficiency policies and programs** through **international collaboration** and **peer networking**.
- **Extracting maximum savings from existing programs** through **capacity-building**, **product prioritization**, and **non-regulatory program development**.
- **Establishing and strengthening efficiency programs in countries new to appliance energy efficiency** through **energy-savings-potential studies**, **technical support**, and **coordination with development agencies**.

SEAD activities encompass a range of regulatory and market-oriented policies and programs, including **standards & labeling (S&L)**, **procurement**, **incentives**, and **awards**, as well as underlying **technical analysis**.

Progress and Accomplishments

- **SEAD advances international collaboration to support the development of effective standards and labelling policies.**
 - SEAD has launched the Policy Exchange Forum, an informal, voluntary, government-to-government discussion forum in which policymakers and their delegated representatives share and learn from one another about cutting-edge and cost-effective approaches to specific appliance energy efficiency challenges.
 - SEAD is supporting the G20’s collaborative global effort to increase the energy efficiency of network-connected devices under the G20 Energy Efficiency Action Plan.
 - India, Korea, and South Africa have collectively adopted or proposed 14 standards or policies advancing the energy efficiency of lighting, televisions, ceiling fans, and water heaters as a direct result of SEAD recommendations.
 - SEAD is assessing the national energy and cost savings realized to date by Mexico’s appliance standards program.
 - SEAD governments are advancing the principle of “test once, sell globally.”
 - SEAD provides technical assistance to support standards development worldwide, including in Brunei, Kenya, the Philippines, Southeast Asia, and West Africa. Cultivating closer linkages with development agencies could further enhance this work.
- **SEAD identifies best practices and opportunities to improve energy efficiency through financial incentives.**
 - Mexico is using SEAD analysis to show how giving away or subsidizing the purchase of super-efficient televisions as part of the country’s transition to a digital TV signal can save energy and reduce costs for consumers and the government.
- **Procurement of energy-efficient street lighting is a strong focus of the initiative.**
 - SEAD has seen an increasing number of municipalities in Canada, India, and Mexico that are interested in, and implementing, energy-efficient street lighting procurement programs. These programs are beginning to expand beyond “early adopter” municipalities, becoming more generally accepted as best practice. The SEAD Street Lighting tool provides interested local governments with a simple way to compare the efficiency, cost-effectiveness, and suitability for specific road conditions of different street lighting products.
- **SEAD’s awards program continues to serve as a high-level forum to showcase manufacturers’ ability to meet consumer demand for feature-rich, energy-efficient products that provide high-quality services while reducing energy costs.**
 - Over the last year, a Global Efficiency Medal competition recognized super-efficient, commercially available electric motors—a product which accounts for 46% of world electricity consumption—while another was launched to identify the world’s most efficient flat panel televisions.

Other Recommendations

Progress is being made, but more can be done. To date, SEAD has identified 111 minimum efficiency standards (MEPS) in 12 SEAD economies that have been implemented, announced, or proposed since 2010. These standards are expected to yield annual savings of up to 734 TWh by 2030. While encouraging, the savings from these policies are only one third of those possible through global adoption of cost-effective, best-practice policies, and only one tenth of the potential energy and emissions reductions in the industry and buildings sectors, as estimated by the International Energy Agency (IEA).¹

Progress could be accelerated through:

- Further development and enhancement of peer networks and collaborations by encouraging staff participation and the timely exchange of information on product-specific and cross-cutting topics.
- Increasing linkages between awards, procurement, and incentive policies and programs to magnify impact.
- Facilitating access to energy efficiency data by improving the compatibility of product registries and other data sources.
- Expanding the reach of SEAD technical assistance by making linkages with development agencies and agendas (e.g., the Department for International Development [DFID], Deutsche Gesellschaft für Internationale Zusammenarbeit [GIZ] GmbH, the Japan International Cooperation Agency [JICA], the United States Agency for International Development [USAID], etc.).

Current Participants and Partners

SEAD is a voluntary effort among the governments of Australia, Brazil, Canada, Chile, the European Commission, Germany, India, Indonesia, Japan, South Korea, Mexico, Russia, South Africa, Sweden, the United Arab Emirates, the United Kingdom, and the United States. The initiative is co-led by India and the United States. China is an official Observer.

The Collaborative Labeling and Appliance Standards Program (CLASP) is the operating agent for SEAD. Lawrence Berkeley National Laboratory provides technical support. SEAD has relationships with the IEA, the IEA Energy Efficient End-use Equipment (4E) Implementing Agreement and its annexes, the United Nations Secretary General's Sustainable Energy for All initiative (SE4All), and the Asia–Pacific Economic Cooperation (APEC) Expert Group on Energy Efficiency and Conservation. SEAD is also partnering with the UNEP en.lighten initiative.

For more information on the SEAD initiative, please visit the new SEAD website: www.superefficient.org.

¹ IEA (2013). [Redrawing the Climate Map](#). IEA's *4 for 2 Scenario* identifies short-term actions toward the 2012 World Energy Outlook's (WEO's) *450 ppm scenario*. There is slightly less emission mitigation by 2020 in the *4 for 2 Scenario* than in the WEO 450 case.