

Energy Efficiency Hub

2024 Annual Report

Energy Efficiency Hub

The Energy Efficiency Hub is a government-to-government platform for global collaboration on energy efficiency.

HUB MEMBERS

Argentina
Australia
Brazil
Canada
People's Republic of China
Denmark
European Commission
France
Germany
India
Japan
Korea
Luxembourg
Russian Federation
Saudi Arabia
United Kingdom
United States

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Energy Efficiency Hub

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Abbreviations and acronyms

ENERGY EFFICIENCY HUB TASK GROUPS

DWG	Digitalisation Working Group
EEB	Energy Efficiency in Buildings
EMAK	Energy Management Action Network
SEAD	Super-efficient Equipment and Appliance Deployment
TOP TENs	Top Ten Energy Efficiency Best Available Technologies and Best Practices

TASK GROUP OPERATING AGENTS AND COORDINATORS

CQC	China Quality Certification Centre – TOP TENs
dena	German Energy Agency (Deutsche Energie-Agentur) – EEB
ECCJ	Energy Conservation Center Japan – EMAK
IEA	International Energy Agency – SEAD
CNIS	China National Institute for Standardization - DWG

OTHER ORGANISATIONS AND TERMS

3DEN	Digital Demand-Driven Electricity Networks
4E	Energy Efficient End-Use Equipment (IEA TCP)
AI	Artificial intelligence
AMT	Advanced Material for Transportation (IEA TCP)
APEC	Asia-Pacific Economic Cooperation
CEM	Clean Energy Ministerial
CLASP	Collaborative Labelling and Appliance Standards Program
EBC	Energy in Buildings and Communities (IEA TCP)
EDF	Electricity of France (Electricité de France)
EEIT	Office of Energy Efficiency and Inclusive Transitions (IEA)
EEWP	Energy Efficiency Working Party (IEA)
EGEEC	Expert Group on Energy Efficiency and Conservation
EOR	Energy Optimization and Recovery (IEA TCP)
ETSAP	Energy Technology Systems Analysis Program (IEA TCP)
EV	Electric Vehicle (IEA TCP)
GlobalABC	Global Alliance for Buildings and Construction
HPT	Heat Pumping Technologies (IEA TCP)
IEC	International Electrotechnical Commission
MI	Mission Innovation
PEEB	Partnership for Energy Efficiency in Buildings
SACREEE	Southern African Development Community Centre for Renewable Energy and Energy Efficiency
SEA	Swedish Energy Agency
TCP	Technology Collaboration Programme (IEA)
UNEP	United Nations Environment Programme

Message from the Hub Chair

As we reflect on yet another impactful year at the Energy Efficiency Hub, I am filled with gratitude for all that we have accomplished together in 2024. This year has truly demonstrated our unwavering commitment to enhancing energy efficiency on a global scale.

At the COP28 summit in 2023, nearly 200 countries all over the world reached a landmark agreement to work together to collectively double the global average annual rate of energy efficiency improvements by 2030. This agreement serves as a clear and powerful signal for our future pathway, emphasising the urgency and importance of our mission.

Doubling efficiency progress not only has the potential to cut energy bills by a third but also can contribute to achieving an impressive 50% of the necessary emissions reductions by 2030.

Throughout the past year, we have made significant strides towards this ambitious target. Nations across the globe have begun implementing more effective regulations, reinforcing their commitment to energy efficiency. Notably, advances in building design and renovation, the integration of smart grid developments, and the increase of energy efficiency in industry have all played pivotal roles in contributing to energy savings. As our contribution to these developments, the Hub has launched several initiatives to facilitate the implementation of best practices among Hub Members, fostering a culture of efficiency that extends beyond mere compliance. This report provides details of our activities over the past year.

Central to our efforts is the “energy efficiency first” principle, which ensures that we prioritise energy-saving solutions before considering alternative energy sources. I am encouraged to witness our community growing stronger, more engaged, and increasingly committed to our shared goals.

As we look ahead to 2025, we are genuinely excited to build on the achievements of this past year. We recognise that collaboration is key, and together, we can inspire even more individuals and organisations to join us in creating a more sustainable future.

Therefore, the Energy Efficiency Hub stands ready to support its Members, the Task Groups, and all other international organisations to come together and to advance energy efficiency at a global level.

Thank you for your hard work, passion, and unyielding dedication to our cause. I look forward to another year of progress, collaboration, and shared success as we continue our journey towards a more energy-efficient world.

DR TUDOR CONSTANTINESCU
Chair of the Energy Efficiency Hub,
Principal Adviser to the Director General for Energy, European Commission



The Hub in 2024

THE YEAR IN A NUTSHELL

The **Energy Efficiency in Buildings (EEB) Task Group** released its first public report, Deep Retrofit Models: A Global Perspective, which was discussed in several workshops and featured in a COP29 side-event in the Buildings and Cooling Pavilion in Baku, Azerbaijan.

The **Digitalisation Working Group (DWG)** was reauthorised under China's leadership. Task Group Members decided to focus on improving energy efficiency of digital technologies and using digital technologies to enable energy efficiency improvements and GHG reductions in end-use sectors.

The Top Ten Energy Efficiency Best-Available Technologies and Practices (TOP TENs) Task Group led by China, launched its third round of national lists of top technologies and practices in 2024, selecting technologies from industry, buildings, and public-service sectors.

Super-efficient Equipment and Appliances Deployment (SEAD) developed and launched a comprehensive online training course on Efficient Appliance Policies and led the Appliance stream of the regular International Energy Agency (IEA) training weeks. SEAD also organised several high-level international events, including one at COP29 on harmonisation of energy performance standards.

The Hub held a Special Event on buildings at the IEA 9th Annual Global Conference on Energy Efficiency in May 2023 in Nairobi, featuring Brazil, Canada, China, India, Kenya, and the IEA.

Six Policy Exchange Workshops were organised on industry, buildings, and digitalisation, bringing together over 100 attendees from Hub Members and Observers, and sparking numerous follow-up exchanges among them.

Two joint workshops were organised with the IEA Energy Efficiency Working Party, featuring discussions on energy retrofits of buildings and on improving efficiency of less energy-intensive industries.

Three Steering Committee meetings were held, featuring Task Group reports, policy updates from Members, and overviews on global development from the IEA.

The Hub expanded collaborations with international organisations, inviting representatives of the World Green Buildings Council, International Transport Forum, and United Nations Industrial Development Organisation (UNIDO) to join Steering Committee meetings. The Hub also held a joint event with the Climate Group, joined by Velux, Signify, and Siemens, among others.

The Energy Efficiency Hub is a great space for sharing information and staying connected with others. It helps us see what's happening globally in the field. We look forward to continuing our involvement next year."

Horacio Risso, Undersecretary of Transition and Energy Planning, Secretariat of Energy of Argentina

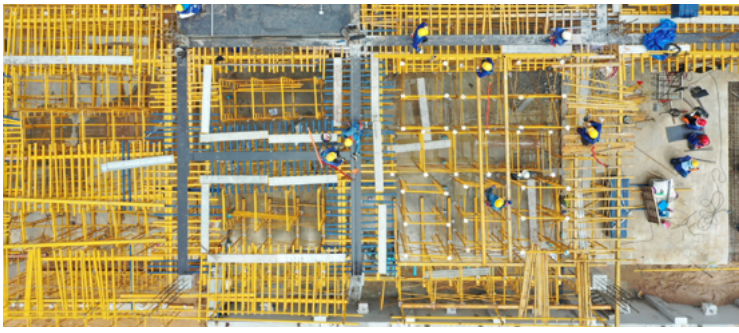
A global community of practice for governments

The Energy Efficiency Hub was established in 2019 as a voluntary collaboration among governments to broaden global dialogue on strengthening deployment of energy efficiency. The 17 current Members are Argentina, Australia, Brazil, Canada, China, Denmark, European Commission, France, Germany, India, Japan, Korea, Luxembourg, Russian Federation, Saudi Arabia, United Kingdom, and United States. They are served by a Secretariat hosted by the International Energy Agency (IEA) in Paris.



Enhancing collaboration between Members and the IEA and other international organisations, and with countries outside the Hub membership, is a pillar of the Hub's work. The Hub also strives to provide greater visibility for substantive outputs from its Task Groups.

Hub Members have strong energy efficiency agendas. Membership in the Hub offers them informal work processes, lively exchanges, and opportunities for dialogue among officials with wide ranges of experience who might not otherwise meet.



Hub discussions are topical and apolitical, with a focus on what works in practice, including both emerging good practice and examples of what has been less successful. Members from different parts of the world learn from each other and identify new ways to improve their pathways towards common objectives, taking advantage of their different stages in designing and carrying out policies.

"The IEA is delighted to host the Secretariat of the Energy Efficiency Hub, which has really enhanced opportunities for collaboration. At a time when faster action on efficiency is crucial, the kind of exchanges that the Hub provides are very much needed."

Brian Motherway , Head of the Office of Energy Efficiency and Inclusive Transitions, International Energy Agency

Helping each other find solutions

The Hub takes on issues important to its Members through thematic Task Groups. These are Member-led standing bodies in which any Member may participate. They coordinate their activities with other international organisations and private sector stakeholders working in the same field. Most Members belong to several Task Groups, including:

DWG
Digitalisation Working Group
Informs and and advances the digitalisation of energy-efficient technologies

EEB
Energy Efficiency in Buildings
A platform to exchange information and practices in selected policy areas

EMAK
Energy Management Action Network
Facilitates public-private exchanges on systems for raising energy efficiency in industry and buildings

SEAD
Super-efficient Equipment and Appliances Deployment
A collaboration among governments to promote the manufacture, purchase, and use of super-efficient appliances, lighting, and equipment worldwide

TOP TENs
Top Ten Energy Efficiency Best-Available Technologies and Practices
Prepares lists of both best available energy efficiency technologies and best practices that governments can promote

The Hub complements the work of the Task Groups by bringing Members together for online Policy Exchange Workshops on current issues. In 2024, most of the workshops addressed topics in industry, including networks through which firms collaborate on shared efficiency goals, heat pumps, demand response, and programmes to support investment. Members nominate officials with responsibilities in the topic areas to present and engage in discussion, addressing their practical concerns while building a community of practice.

The Energy Efficiency Hub with its Task Groups provides a valuable platform for countries to share practical experiences, learn from each other, and create visibility for energy efficiency at the international level."

Ron Lipka, Head of Division IIA6, Federal Ministry for Economic Affairs and Climate Action, Germany

Broadening the dialogue

The Hub's broad membership, with countries from all quarters of the globe, allows it to convene officials who might not have opportunities to meet otherwise. The Hub's Member-driven processes enable exchanges to focus on topics of greatest relevance to the day-to-day work of the officials responsible for implementation.

Members are ready to welcome new countries, and in 2024 engaged with India, Ireland, and South Africa. These countries observed several meetings and had the opportunity to contribute to the work of Task Groups. Following productive exchanges with the Hub, India's Union Cabinet, under Prime Minister Narendra Modi, announced its intent for India to join the Hub, doing so in January 2025.

Building links between government and industry is important to the Hub. At a webinar jointly organised with the Climate Group, officials from the European Commission, Germany, and Saudi Arabia discussed how to accelerate building energy renovations with speakers from Siemens, Signify, and Velux, identifying opportunities to align the regulatory environment with market offerings.

Members' interest in industry continued throughout the year. Several Policy Exchange Workshops addressed this sector, including a session dedicated to unlocking private investment where Canada, China, and the European Commission exchanged challenges and solutions in stimulating private sector investment in energy-efficient equipment and processes in industry.

As heat pump deployment was high on Members' priorities, the Hub held a Policy Exchange Workshop featuring the IEA report on The Future of Heat Pumps in China, a country which accounts for a quarter of global sales. Speakers from China, Korea, the United Kingdom, and the United States described a variety of approaches to accelerate industrial heat pump deployment.

At the Hub's second workshop on industrial efficiency networks, Brazil, Canada, and China were joined by Ireland, which shared its experience with the Large Industry Energy Network. Speakers also discussed the Sino-German Energy Efficiency and Climate Network and the Energy Efficiency and Energy Management Learning Network, which is jointly run by Brazil and the German Cooperation for Sustainable Development.

The Energy Efficient End-use Equipment (4E) Technology Collaboration Programme joined Australia, Brazil, and the United States during a Policy Exchange Workshop to discuss challenges and solutions in stimulating industrial demand response to reinforce power system flexibility. Participants described their approaches to overcoming common challenges in designing and implementing demand response programmes, such as regulatory barriers, technology integration, and effective incentives.



The Energy Efficiency Hub provides a valuable platform to exchange policy development knowledge with other countries, facilitating our collective ability to accelerate energy efficiency."

Clare McLaughlin, Head of the Energy Performance and Security Division, Department of Climate Change, Energy, the Environment and Water, Australia

Collaborating with international organisations

In 2024, the Hub enhanced its engagement with international organisations to promote the work of the Task Groups and share relevant materials with Members, including information about projects and initiatives developed by other organisations.

During the 14th meeting of the Steering Committee, representatives of the United National Industrial Development Organization, the International Transport Forum, and the World Green Buildings Council were invited to share their work with an aim to identify opportunities for collaboration.



Following these fruitful exchanges, Members expressed interest to continue discussions on industrial energy efficiency at the 15th meeting of the Steering Committee in 2025.

The Secretariat explored links with the Partnership for Energy Efficiency in Buildings (PEEB), which combines financing for energy efficiency in large-scale projects with technical assistance through policy advice. The initiative is jointly run by France and Germany.

The Secretariat remained in close coordination with the United Nations Environment Programme (UNEP) colleagues supporting the work of the Global Alliance for Buildings and Construction (GlobalABC). The COP29 side-event focused on deep energy retrofits was held in the Buildings and Cooling Pavilion coordinated by the GlobalABC.

To broaden the promotion of the EEB Deep Retrofit Models report, the Task Group worked together with Climate Alliance to hold a joint event. Given the synergies between the Climate Group's Renovation Revolution Handbook and the EEB report, the European Commission and Germany invited Climate Group to join the COP29 side-event.

Active exchanges with other international organisations help ensure Members stay abreast of developments across the energy efficiency sector.

The Hub Secretariat is well-integrated in the IEA Office of Energy Efficiency and Inclusive Transitions, and IEA analysts regularly contribute to Hub Policy Exchange Workshops by providing scene-setting presentations. The Secretariat relies on insights and analysis from the IEA to react to Members' inquiries and facilitate connections.

Two joint IEA-Hub workshops took place alongside the IEA Energy Efficiency Working Party (EEWP) meetings, attracting significant in-person attendance.

To foster connections between Hub Task Groups and IEA Technology Collaboration Programmes, the Secretariat and the IEA organised an informal exchange where Task Groups shared their recent activities with the Advanced Material for Transportation (AMT) TCP, the Electric Vehicle (EV) TCP, the Heat Pumping Technologies (HPT) TCP, the Energy in Buildings and Communities (EBC) TCP, the Energy Optimization and Recovery (EOR) TCP, and the Energy Technology Systems Analysis Program (ETSAP) TCP. A follow-up meeting is planned for the first quarter of 2025.

The DWG had several productive exchanges with the Energy Efficient End-Use Equipment (4E) TCP to inform the upcoming report on energy efficiency of digital technology.

A productive collaboration was established between TOP TENs colleagues and experts working on the Heat Pumping Technologies TCP, as the Task Group had selected heat pumps using low-grade heat among its featured technologies.

The Hub Secretariat had the opportunity to provide input, informed by exchanges among Hub Members, on several IEA reports. These included Energy Efficiency 2024, the Breakthrough Agenda Report 2024, and numerous shorter publications and commentaries.

The Secretariat continued to provide updates to the Asia-Pacific Economic Cooperation (APEC) Expert Group on Energy Efficiency and Conservation (EGEEC) on the work of Task Groups and Hub events.



We have really benefitted from the practical discussions among Hub Members about implementing energy efficiency policies, particularly on digitalisation, buildings, and industry."

Jérémie Zeitoun, Energy Attaché, Permanent representation of Luxembourg to the European Union

Sharing lessons from Members

The Hub holds and participates in selected public events to raise awareness of Task Group activities and to spotlight lessons emerging from Members' experience. In 2024, the Hub was involved in the following events:



MARCH

The joint **Hub-IEA Energy Efficiency Working Party Workshop** aimed to address key policy areas in the buildings sector related to achieving the doubling of the rate of annual energy efficiency improvements by 2030. Hub Members from China, European Commission, France, Germany, Japan, and Korea spoke about financing models underpinning retrofit initiatives, affordability, the role of energy efficiency in improving living standards, and how to develop building energy codes.

MAY

SEAD hosted a side-event at the CEM Senior Officials Meeting in Bali, Indonesia on accelerating the uptake of highly-efficient equipment and appliances for energy efficiency. Lessons were presented from the Product Efficiency Call to Action, which was signed by 14 countries at COP26, and from SEAD's work in Latin America to support implementation of their goals, particularly in electric motor systems and appliances. Speakers from Asia, Europe, Latin America, and the Middle East highlighted the uptake of affordable, efficient appliances and equipment.

The Hub brought together officials and experts to share experiences during a well-attended **Special Event at the IEA 9th Annual Global Conference on Energy Efficiency** in Nairobi, Kenya. After opening remarks from conference co-host Kenya, Hub Vice Chair China, and the IEA, speakers from Brazil, Canada, China, India, and Kenya discussed case studies of building energy renovation policies and programmes on the main stage. Livestream video is available on the Hub website.

SEPTEMBER

The joint **Hub-IEA Energy Efficiency Working Party Workshop** focused on accelerating implementation of energy efficiency in light industry. Participants exchanged perspectives on programmes targeting light industry, with an emphasis on digitalisation for real-time energy management. The Hub Chair, Dr Tudor Constantinescu, opened the workshop, and remarks were given by Canada, China, Germany, Japan, Korea, and Saudi Arabia.

OCTOBER

A SEAD side-event, **Tripling Investments to Double Energy Efficiency by 2030**, was held as part of the **15th Clean Energy Ministerial and 9th Mission Innovation meeting (CEM15/MI9)**. This high-level roundtable brought together policy makers from CEM and G20 countries, the Hub Chair, representatives of the SEAD Task Group, Collaborative Labelling and Appliance Standards Program (CLASP), and business leaders from the World Economic Forum's International Business Council. Participants discussed necessary actions to mobilise financing and investment to achieve the COP28 doubling energy efficiency goal.





OCTOBER

The Hub Secretariat held a webinar to introduce **three Hub Task Groups and several IEA Technology Collaboration Programmes (TCP)** operating in related fields to each other, aiming to identify shared interests and opportunities for collaboration. The operating agents of the DWG, EEB, and TOP TENs Task Groups presented their outputs and upcoming events.

NOVEMBER

The Hub collaborated with the Climate Group to hold a webinar, **Renovation Revolution: Driving progress through public-private collaboration**, focused on building energy renovation. Panellists shared insights from the Climate Group's Renovation Revolution Handbook and the recent EEB publication, Deep Retrofit Models. The European Commission, France, Germany, and Saudi Arabia joined as panellists in the session, which attracted over 100 attendees from 6 continents. The recording is available on the Hub website.

The COP29 EEB Task Group event, **Deep Retrofit Models: A Global Perspective**, focused on existing policies and practical solutions to accelerate deep energy retrofits, key to achieving the doubling of global progress on energy efficiency. Policy makers from the European Commission and Germany were joined by the Climate Group and Velux; the session was moderated by the UNEP. The video recording is available on the Hub website.

SEAD organised a side-event at COP29 in collaboration with the IEC and the IEA, **Harmonising standards to boost energy-efficient appliances and decarbonisation**, on the critical role of energy efficiency in climate action. It showcased successful regional standardisation and harmonisation experiences, intended to encourage similar actions in other regions. The session featured a dialogue between regulators and standardisation bodies to accelerate standards harmonisation.

The Secretariat provided updates on Hub activities and events at the 62nd and 63rd meetings of the **Asia-Pacific Economic Cooperation (APEC) Expert Group on Energy Efficiency & Conservation (EGEEC)**.

The Energy Efficiency Hub's Policy Exchange Workshops provide a unique window into energy efficiency policy in action, from design to implementation - directly from the policy maker's perspective. They foster frank discussion between countries on the successes and challenges of energy efficiency policy and provide an invaluable source of knowledge and inspiration for policy makers and advisors."

Dr Emma Mooney, Lead Industry Anaylst, Office of Energy Efficiency and Inclusive Transitions, International Energy Agency

TASK GROUPS

Digitalisation Working Group

Lead: China

Members: Canada, European Commission, France, Germany, and Saudi Arabia

Operating Agent: China National Institute of Standardization

The DWG informs and advances the digitalisation of energy efficiency technologies. The Task Group serves as a platform for Hub Members to coordinate, learn about each other's experiences with digitalisation, and work jointly to understand key gaps and priority areas to upscale the use of digital technologies.



The DWG is a multi-year undertaking to increase multilateral cooperation in the field of energy efficiency and demand flexibility. Participants:

- identify shared priorities and challenges to address the most pressing issues;
- share lessons from policy implementation with an aim to replicate successes;
- develop and improve instruments to raise the energy efficiency of digital technologies and accelerate the deployment of demand response and demand flexibility.

From 2021 to 2023, under the leadership from the United States, the Digitalisation Working Group focused on buildings, exploring the influence of energy management systems, smart controls, and connected appliances on improvements to occupants' comfort while saving energy.

In 2024, China took up the leadership of the Task Group, which shifted its attention to policy and regulatory measures to improve the efficiency of digital technologies, such as digital devices, networks, data centres, and artificial intelligence (AI). The DWG aims to explore how to:

- improve energy efficiency and the carbon footprint of digital technologies and
- harness digital technologies to enable energy efficiency improvements and GHG reductions in end-uses.

Since the launch of the DWG, its Task Group members have played active roles in its development and promotion, contributing to the work of policy makers and industry stakeholders from different energy-consuming sectors.

TASK GROUPS

Energy Efficiency in Buildings Task Group

Leads: European Commission, Germany

Members: Argentina, Brazil, China, Korea, Saudi Arabia

Observers: Canada, France, Ireland, United States

Operating Agent: German Energy Agency

EEB is a platform to exchange policy information about improving energy efficiency in buildings. The Task Group promotes best practices on energy efficiency in buildings and fosters cooperation with international partners. Established in late 2022, the Task Group started by gathering policies introduced by members in response to the energy crisis. In 2023 and 2024, the focus of members shifted to the topic of energy retrofits.

In March 2024, the Task Group held a hybrid workshop in Paris aimed to address retrofit models and barriers to their adoption. The European Commission, Germany, and China attended in person with Argentina, Brazil, Korea, and Saudi Arabia joining on line. External participants from the European Investment Bank and Basel Agency for Sustainable Energy also joined to present case studies of renovation initiatives.

Later in the year, EEB released **Deep Retrofit Models: A Global Perspective**, a report focused on the experiences of Argentina, Brazil, China, the European Commission, Germany, Korea, and Saudi Arabia. Insights from Belgium, Canada, France, Ireland, and the United States are also included.

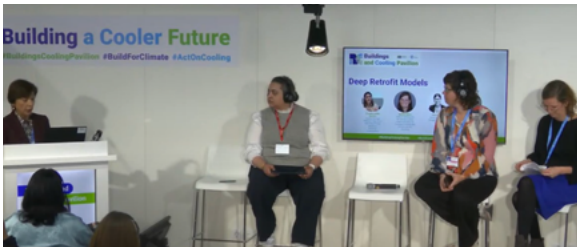
This report provides a framework to inform policy makers, industry stakeholders, and practitioners to implement deep energy retrofits more effectively, ultimately contributing to global decarbonisation goals.

The report was featured at several events, including:

Renovation Revolution:
Driving progress through public-private collaboration
A joint Hub-Climate Alliance webinar

The event focused on accelerating building renovation. Panellists shed light on insights from Climate Group's Renovation Revolution Handbook. The EEB showcased its recent publication, Deep Retrofit Models. The European Commission, France, Germany, and Saudi Arabia joined as panellists. The session attracted over 100 attendees from all 6 continents to engage with a panel of experts focused on uncovering practical strategies and fostering collaboration to significantly accelerate energy-efficient renovations worldwide. The video recording is available on the Hub website.





Deep Retrofit Models: A Global Perspective
COP29 side-event in the Buildings and Cooling Pavillion

This event focused on existing policies and practical solutions to accelerate deep energy retrofits, key to achieving the doubling of global progress on energy efficiency. Policy makers from the European Commission and Germany were joined by Climate Group and Velux; the session was moderated by the United Nations Environment Programme. The video recording is available on the Hub website.

Additionally, the report was shared with relevant audiences during the following events:

An informal meeting between IEA Technology Collaboration Programmes (TCPs) and Hub Task Groups in October 2024

A regular meeting of the Mission Efficiency's Narrative Taskforce in November 2024

To foster synergies with the IEA Energy in Buildings and Communities TCP, EEB operating agents participated in the TCP Executive Committee meeting.

Additionally, Task Group members and the Hub Secretariat participated in the Buildings and Climate Global Forum to connect with relevant stakeholders. The forum was organised by the GlobalABC in Paris in March 2024.



Being part of the Energy Efficiency Hub has been a great opportunity to share challenges, barriers, and best practices with peers. My experience with the EEB Task Group has been especially valuable, as I've applied many of the insights from our meetings and exchanges."

Paola Sandoval, Technical Consultant, Secretariat of Energy, Argentina

TASK GROUPS

Energy Management Action Network

Lead: Japan

Members: Argentina, Australia, Brazil, Canada, China, Germany, Russia

Operating Agent: Energy Conservation Center Japan

EMAK facilitated forums to share policies and best practices for energy management systems and energy efficiency in industry and building sectors. It supported Hub Members to share good practices developed by Members with each other and with emerging economies.

EMAK held 12 workshops focusing on energy management systems and energy efficiency since its inception. The workshops brought together relevant networks among policy makers and energy managers to share information and best practices, discuss and exchange opinions, and develop connections.

In March 2024, EMAK published the EMAK 12 Workshop Report following its most recent workshop that took place in Paris in December 2023, EMAK 12: Evolution of Energy Efficiency Policies into Demand-side Energy Policies.

The Task Group was active from 2009 until 2024. Its activities are currently suspended.



TASK GROUPS

Super-efficient Equipment & Appliances Deployment

Leads: European Commission, India, Sweden, United Kingdom

Energy Efficiency Hub Members: Argentina, Australia, Brazil, Canada, China, Denmark, Germany, Japan, Korea, Russia, Saudi Arabia, United States

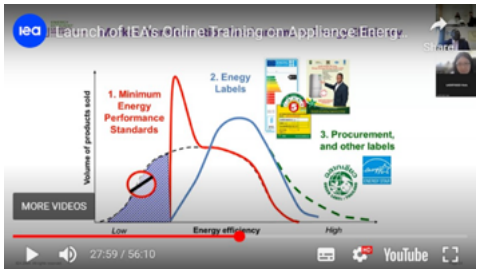
Non-Hub Task Group members: Chile, Colombia, Ghana, Indonesia, Mexico, Nigeria, Panama, South Africa, Türkiye

Coordinator: IEA

SEAD brings governments together to advance global market transformation for energy-efficient products. SEAD is both a Task Group of the Hub and an initiative of the Clean Energy Ministerial (CEM). SEAD's 25 participating governments collaborate to accelerate and strengthen the design and implementation of appliance energy efficiency policies and related measures.

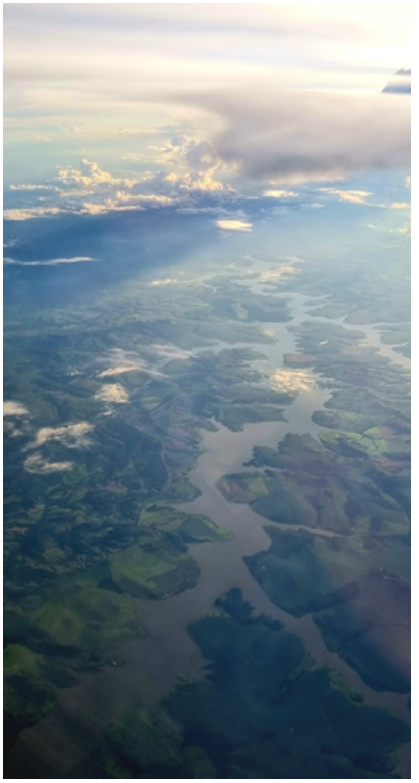
SEAD's Product Efficiency Call to Action aims to double the efficiency of four key products by 2030. Signatories of the Call to Action are Australia, Brazil, Chile, Colombia, Denmark, Germany, Ghana, India, Indonesia, Japan, Korea, Nigeria, Panama, Sweden, and the United Kingdom.

In 2024, SEAD actively supported the development of the IEA Energy Efficiency Appliance Policy online training with the release of a full course dedicated to appliances (7 modules in English that will be translated into Spanish and Portuguese in 2025). A specific webinar was organised for the training course launch with presentations from the European Commission, the China National Institute of Standardisation (CNIS), Southern African Development Community Centre for Renewable Energy and Energy Efficiency (SACREEE), and CLASP India.



SEAD also supported two successful training weeks on energy efficiency policies for appliances in Nairobi (Kenya) and São Paulo (Brazil), with participation from nearly 370 policy makers. The initiative facilitated policy exchange, such as during a workshop between Latin American members on the pathway to doubling product efficiency (supported by extensive research and stakeholders' interviews), and during a meeting between Chinese and European authorities on the future of sustainable product policies.

In addition to offering policy advice and knowledge-sharing to SEAD members, the Task Group organised various events. This included organising SEAD side-events at the CEM Senior Officials' Meeting on mobilising product efficiency to achieve COP28 targets, at CEM/MI on tripling investments to double energy efficiency by 2030, and at COP29 on harmonising standards to boost energy-efficient appliances and decarbonisation (with the IEC). SEAD also participated in a side-event organised by the United Kingdom on Sustainable Cooling in a Warming World.



SEAD achieves its objectives through sharing knowledge, generating research and policy support, and driving increased ambition and action. Apart from supporting SEAD members through policy advice and knowledge-sharing, the Task Group organised the following events in 2024:

DATE	EVENT	LOCATION
15 April	Launch of the IEA Online Training on Appliance Energy Efficiency Policy	Online
17 May	CEM Senior Officials' Meeting: Mobilising Product Efficiency to Achieve COP28 Targets (SEAD side-event)	Bali, Indonesia
1 Oct	15th Clean Energy Ministerial and the 9th Mission Innovation (CEM-15/MI-9): Tripling Investments to Double Energy Efficiency by 2030: Mobilising Finance Across Sectors with a Deep Dive on Efficient Equipment and Appliances (SEAD side-event)	Foz do Iguaçu, Brazil
15 Nov	COP29: Harmonising standards to boost energy-efficient appliances and decarbonisation (SEAD side-event in collaboration with the IEC and the IEA)	Baku, Azerbaijan

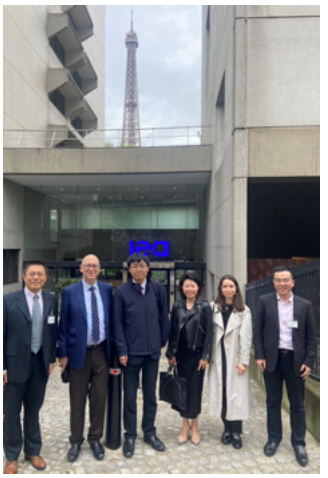
TASK GROUPS

Top Ten Energy Efficiency Best Available Technologies and Best Practices Task Group

Lead: China

Members: Brazil, Germany, Japan, Korea, Russia

Operating Agent: China Quality Certification Centre



TOP TENs evaluates energy-efficient technologies and best practices and produces lists of those that are the most outstanding. The lists include top-rated energy-efficient technologies and practices coming from key energy-consuming sectors and can be promoted by governments. The Top Ten Energy Efficiency Best Available Technologies and Best Practices Task Group aims to stimulate uptake of energy efficiency in key energy-consuming sectors.

In the past decade, TOP TENs has published two sets of international and national (for participating Members) lists of best available technologies and best practices featuring cutting-edge approaches and case studies. Best practices have previously covered 42 energy efficiency technologies and 30 energy efficiency practices across more than 10 key energy-consuming sectors, including coal, power, steel, and others. Case studies included university-wide efforts to build a smart campus, the application of passive house technology, energy management award programmes, and more.

TOP TENs regularly facilitates bilateral and multi-lateral exchanges and coordination on energy efficiency technologies. Previous exchanges have taken place during meetings of the China-United States Energy Efficiency Forum, the China-Japan Energy Conservation and Environmental Protection Forum, G20 side-events, and BRICS Energy Efficiency Task Group meetings.

TOP TENs has developed China's third national list of best available technologies and best practices, demonstrating the benefit of recognising enterprises at the forefront of energy efficiency technology. The government provides policy incentives and financial support to enterprises that adopt approved technologies. The prestige of TOP TENs lists is heightened through nationwide promotion during China's National Energy Conservation Week.

TOP TENs participates in major international conferences and meetings to promote technologies and practices, such as the IEA 8th Annual Global Conference on Energy Efficiency, the 11th Sino-German Forum on Economic and Technological Cooperation, the 17th China-Japan Comprehensive Forum on Energy Conservation and Environmental Protection, the International Forum on Energy Transition, and EMAK 11. Representatives cover subjects including technology transfer, capacity building, the industrial sector, energy-efficient technology promotion, and international cooperation.

Exchanging policy lessons in Member workshops

Hub Members regularly exchange experiences during internal Policy Exchange Workshops. These 90-minute sessions offer an opportunity for experts nominated by Hub Member representatives to explore in more detail specific topics related to energy efficiency in buildings, transport, or industry. These sessions feature overviews of national policies and discussions among officials responsible for policy making and implementation, with scene-setting presentations from IEA experts.





Hub Members participate in sessions aligned with their policy priorities; in some cases, experts from agencies and national labs are nominated to join the workshops. After each session, the Secretariat produces a written summary, complemented by a video recording. These summaries can be shared internally by Members in their respective ministries, departments, and offices.





In 2024, the Hub held 6 Policy Exchange Workshops on line. Each session was followed by a detailed summary circulated internally for Hub Members. Topics included energy performance standards in buildings, industrial heat pumps, and demand response. The session on reinforcing power system flexibility through industrial demand-response and efficiency, for example, featured a presentation by the IEA Energy Efficient End-Use Equipment (4E) TCP to highlight notable cases of industrial demand response globally and foster a connection with the work of the TCP.





To further facilitate collaboration with the IEA, the outputs from Policy Exchange Workshops are shared with colleagues from the Office of Energy Efficiency and Inclusive Transitions. The summaries were also used in 2024 to inform workshops on industrial energy efficiency.

TOPIC	DATE	SPEAKERS	GUEST SPEAKERS	MEMBERS PARTICIPATED
Buildings: Energy Performance Standards and Labels II	31 Jan 2024	Australia, Japan, Korea	IEA	Argentina, Australia, Brazil, France, Germany, Japan, Korea, Luxembourg, Saudi Arabia
Industry: Energy Efficiency Networks II	21 Feb 2024	Brazil, Canada, China, Ireland	IEA and Users TCP	Brazil, Canada, China, European Commission, France, Ireland, Korea, United States
Industry: Heat Pumps II	14 May 2024	China, Korea, United Kingdom, United States	IEA	Australia, Brazil, Canada, European Commission, France, India, Korea, Luxembourg, United States
Digitalisation: Reinforcing power system flexibility through industrial demand-response and efficiency	13 Jun 2024	Australia, Brazil, United States	IEA and external expert (Thore Stenfeldt)	Canada, China, European Commission, United States
Industry: Private Investment for energy transitions	12 Dec 2024	Canada, China, European Commission	IEA	Australia, Canada, China, European Commission, France, Germany, Luxembourg

The Energy Efficiency Hub's Policy Exchange Workshops have provided a fantastic opportunity for exchanges among experts on key emerging areas of energy efficiency policy, such as demand response and performance standards in buildings and industry, allowing us to learn from other countries' experiences to inform the design and implementation of our own initiatives."

Ben Copp, Director General, Office of Energy Efficiency, Natural Resources Canada

Communications

The Hub uses a variety of communication tools and activities to keep Members mutually informed and to build public awareness of Hub activities and accomplishments. The Secretariat reviews and revises its communications plan annually in addition to regularly updating the Hub's external and internal communications platforms.

In 2024, the Hub continued to prioritise internal communications while also taking steps to broaden the Hub's reach to a variety of audiences.

HUB WEBSITE TRAFFIC IN 2024

- Visitors: over 7 600+
- Countries with the most traffic: United States, India, France, Australia, Canada







A Members' Portal facilitates Member-to-Member collaboration. Members actively used the internal platform in 2024, taking advantage of it to access diverse documents, videos, and other resources only available to Hub Members.

The Hub's primary activity on social media in 2024 was promotion of its public events. The Hub utilises three social-media platforms: LinkedIn, YouTube, and X. Engagement on these platforms ensures online visibility through raising awareness of events, as well as diffusion of materials, reports, and videos.







THE HUB'S REACH IN 2024

- Attracted a total audience of 1 000 for external events
- Brought together 300 participants at 11 internal meetings and events
- Collaborated with 10 international organisations, drawing over 200 participants during joint events
- Received over 7 600 website visitors from 127 countries

Hub governance and operations

Hub Members oversee and direct the Hub through a Steering Committee, composed of one representative from each Member.

The Chair is appointed by the Steering Committee to set direction for the Hub and guide its substantive work. In 2024, the Hub was Chaired by the European Commission.

The Hub also has two Vice Chairs, which at the end of 2024 were China and the United States. Vice Chairs are appointed by the Steering Committee to advise and support the Chair between Steering Committee meetings.

A small Secretariat serves the Members and benefits from strong engagement and synergies with the IEA, where it is hosted.

Funds for Hub operations are provided by its Members on a voluntary basis.

Governments interested in joining the Hub are invited to direct inquiries to secretariat@energyefficiencyhub.org or to:

Website: www.energyefficiencyhub.org
Email: secretariat@energyefficiencyhub.org

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