CLEAN ENERGY MINISTERIAL ADVANCING CLEAN ENERGY TOGETHER



CONTENTS

THE CLEAN ENERGY MINISTERIAL (CEM)

- CEM MISSION
- CEM VALUE PROPOSITION
- CEM MEMBERS
- HOW DOES THE CEM WORK?
- CEM MINISTERIAL
- INITIATIVES AND CAMPAIGNS
- CEM SECRETARIAT

CEM WORK PROGRAMME

- OVERVIEW
- POWER
- TRANSPORT
- INDUSTRY
- BUILDINGS
- CROSS-SECTORAL
- ENABLING ENVIRONMENT
- CEM AWARDS 2021
- GRADUATED WORKSTREAMS



CEM IN QUOTES

H.E. Joe Biden, President, United States "We will closely align our efforts with the work of forums like the CEM and the MI— both of which I am proud to say the United States will chair next year."





H.E. Wang Zhigang, Minister of Science and Technology, China

"We will deepen cooperation and exchanges with other CEM members in the fields of new energy vehicles, smart grids, hydrogen, etc. and draw on best practices to jointly promote global clean energy development and build a cleaner, better planet."

H.E. Dr Fatih Birol, Executive Director, International Energy Agency lea



H.E. Teresa Ribera Rodríguez, Deputy Prime Minister and Minister of **Ecological Transition, Spain** "This is a very important initiative that works on how far and fast we can improve our cooperation, the learning processes, and how we can achieve this very important goal with all

its challenges."

"The IEA is proud to both host and be a key partner of the CEM. The CEM is a proven and popular forum for

important practical work that accelerates our clean energy adoption and we work closely together to build impactful global coalitions of countries companies and our international experts to accelerate clean energy transitions around the world."

H.E. Kadri Simson, Commissioner for Energy, **European Commission, European Union**



"I welcome the decision to extend the mandate and raise the ambition of the CEM. I was pleased to take part in the launch of the Global Hydrogen Ports Coalition and to join and lead together with Canada and the US a new Initiative on Empowering People. These and other CEM workstreams will make a difference in this decade. We must all use the next more ambitious phase of CEM for turning our goals into real action and tangible results."



H.E. Alok Kumar, Secretary, Ministry of Power, India

"Our association with CEM has been very old. We have been CEM's founding member and we intend to strengthen the CEM furthermore. I am also pleased to announce that we will be hosting the CEM14 in India."

H.E. Anne-Marie Trevelyan, Former Minister for Business, Energy and Clean Growth, United Kingdom

"The CEM has long been a champion of the importance of sectors for the energy transition. That is why we launched the IDDI Initiative with India to help create markets for green industrial goods. I am also pleased to announce that the UK will become a full member of the CEM's Hydrogen Initiative."





CLEAN ENERGY MINISTERIAL (CEM)



THE CEM MISSION

The world is undertaking the fastest and most far-reaching energy transition in history.

The CEM brings together a powerful **COMMUNITY** of the world's largest and leading countries, companies, and international experts to achieve one mission – **ACCELERATE CLEAN ENERGY TRANSITIONS**.

CEM members have agreed that it should work to supercharge three crucial shifts this decade:

Scale

Clean energy adoption this decade must far outpace the last, moving from niche- to mass- to massive-scale deployment.

Sectors

Clean energy action must grow from the power sector to every sector, and from energy ministries to every ministry.

Society

An inclusive, whole-ofsociety approach must look from governments and companies to consumers and citizens.

THE CEM VALUE PROPOSITION



GLOBAL LEADERSHIP

CEM Members represent 90% of installed RE power generation capacity, 80% of global RE investments & the majority of public R&D.



SINGLE MISSION

Accelerate clean energy transitions around the world.



FLEXIBLE APPROACH

Members can form or join clean energy workstreams in line with their priorities.



OPEN PLATFORM

Many leading international organisations, companies, think tanks, foundations.



ACTION COALITIONS

Activities are in a state of constant renewal, with action coalitions coming together to design and deliver new workstreams.



CEM COMMUNITY

The CEM community consists of the world's best international organisations and most influential actors.

CEM'S 29 MEMBERS



18 PARTICIPANTS



KEY PARTNERS



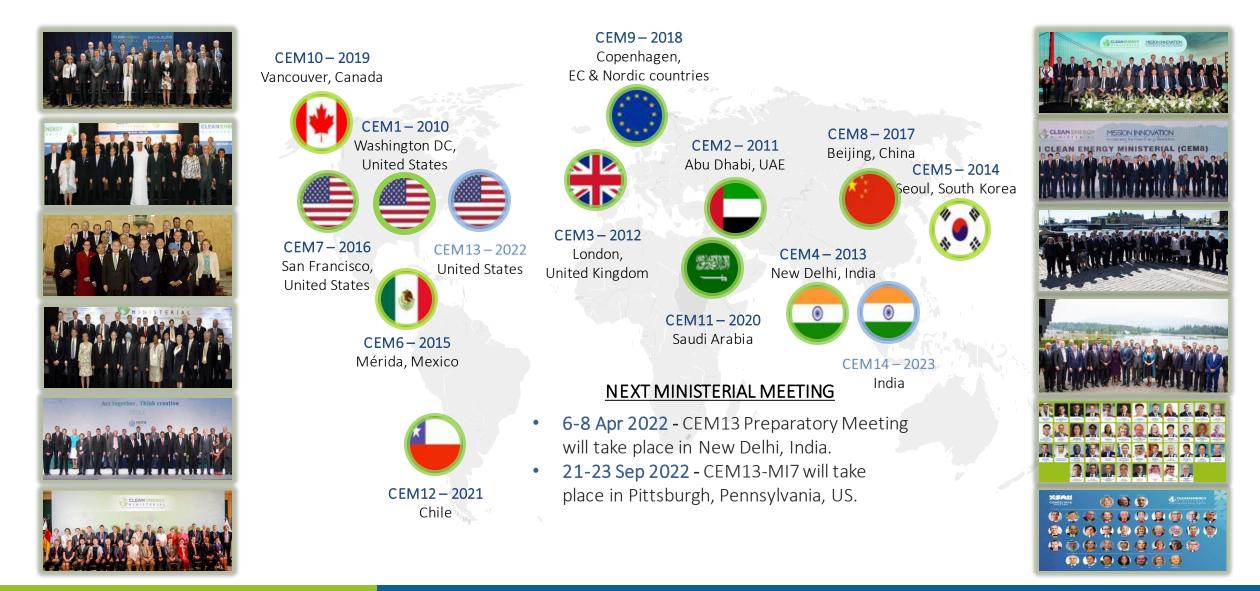


HOW DOES THE CEM WORK?

The CEM builds **global action coalitions** to achieve clean energy goals and advance their transitions. The CEM operates through **three key pillars**:

- **CEM Ministerial:** An annual meeting of its ministers, partners and community.
- **CEM Work Programme:** A combination of international campaigns and initiatives spanning the clean energy spectrum.
- CEM Secretariat: a small, flexible team that serves the ministerial, all workstreams and members.

CEM MINISTERIAL



CEM MINISTERIAL 2010-2015

CEM1 United States

- Launch of 11 Initiatives under three themes:
- Global Energy Efficiency Challenge

 Appliances, Buildings and Industry, Smart Grids, Electric Vehicles, and Capacity Building
- Clean Energy Supply

 Carbon Capture,
 Use and Storage,
 Solar and Wind,
 Hydropower,
 Bioenergy
- Clean Energy Access

 Off-Grid
 Appliances, Women
 in Energy

CEM2 United Arab Emirates

- Publication of CCUS Action Group Recommendations
- Forum on women's contribution to clean energy
- High-Level Public-Private Roundtables on
- Renewable Energy Scale-Up
- Sustainable Cities
- Technologies and Business Models for Energy Efficiency
- Utility-Scale Energy Efficiency

CEM3 United Kingdom

- Launch of Solar and Wind Resource Atlas
- Launch collaboration with Sustainable Energy for All (SE4All)

CEM4 India

- High-Level Public-Private Roundtables on solar PV, clean vehicle adoption, power systems in emerging economies, renewables policy and finance, energy management systems, and minigrid development
- Innovation showcase pavilion with 40+ industry booths
- 1st SEAD Global Efficiency Medal Competition for energy-efficient flatpanel televisions

CEM5 Korea

- 1st Global LEAP Appliance Awards
- 1st ISGAN Award of Excellence
- SEAD's Global Efficiency Medal for energy-efficient computer monitors
- High-level dialogues on clean energy finance
- Model CEM program with university students represent delegates from member governments
- Global LEAP host "PlugFest" for offgrid appliance and energy systems

CEM6 Mexico

- Launch of Global Lighting Challenge
- Launch of Power System Challenge
- Evolution of the Clean Energy Solutions Center
- SEAD Global Efficiency Medal Award
- ISGAN Award of Excellence for "Grid4EU"
- Launch of CEM 2.0 the CEM's 2nd phase

CEM MINISTERIAL 2016-2021

CEM7 United States

- Announcement of USD 1.5 billion in commitments to accelerate clean energy deployment and access
- Launch of: Corporate Sourcing of Renewables, Energy Management Campaign, Advanced Cooling Challenge
 Keynote address from US-President Obama
 Public-Private Action Summit
 Startups and Technology Showcase with 100+ companies
 - with 100+ companies from 6 continents 1st C3E Symposium on Women in Clean Energy

CEM8 China

- Technology and Innovation theater showcases innovators, scientists, and entrepreneurs
- Launch of: Investment and Finance Initiative; Long-term Energy Scenarios Campaign; Equal by 30 Campaign; CCUS Initiative; Power System Flexibility Campaign; Distributed Generation Campaign

EM9 EC, Denmark, Sweden, Norway, Finland, Nordic Council

- Major Technology Exhibition and Innovation Theater
 Corporate Sourcing of Renewables Report
- Canadian G7 Presidency sees all countries sign up to CEM's Equal by 30 Campaign
- Graduation of Global Lighting Challenge, which far surpasses USD 4 billion high efficiency, affordable lighting products with over USD 14 billion sold
 Launch of NICE Futures Initiative

CEM10 Canada

- Launch Hydrogen Initiative and Flexible Nuclear Campaign
- Equal by 30 Campaign exceeds 100 signatories and gender principles tabled
- First Youth Forum held at CEM
- Nearly 850 exhibitors at Innovation Showcase and participation from nearly 1,200 companies
- First CEM-MI joint event on accelerating market uptake of smart grids

CEM11 Saudi Arabia

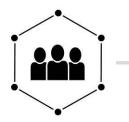
- Launch of Biofuture Platform Initiative and
- Drive to Zero Campaign
- Energy Management Campaign achieves the goal of 50,0001 ISO50001 certifications
- C3E international ambassador program
- 2nd LTES International forum convenes 700+ virtual participants from 83 countries
- 9 awards announced;
 4 major new reports launched
- 7,400 delegate registrations

CEM12 Chile

- CEM members reaffirm CEM's ambitious, next phase (CEM3.0)
- Launch of 4 new work streams: Industry Deep Decarbonisation Initiative, Ports Coalition, Empowering People
 - Initiative and Biofuture Campaign
- 40+ Clean Energy Side Events (featuring 250+ high-level speakers from 40+ nations)
- Launch of 10 major clean energy reports
- 150,000 participants from 100+ countries
- <u>CEM12 Outcomes</u> <u>Report / CEM12</u> <u>YouTube channel</u>

CEM WORKSTREAMS

INITIATIVE



- Convene a **Coalition to collaborate and accelerate** clean energy deployment.
- Focuses on Coalition, Collaboration, Change, Communication.
- Consists of Member leads (2-3), Coordinator, and CEM Secretariat.
- Engages with the **right Coalition** to best serve the goals.
- Last 3+ years.
- Success Metrics: Engagement/Activity metrics (active coalition participation.); Delivery metrics (delivery of work programme outputs to time, cost, quality); Output and Outcome metrics (expert meetings, analytical reports, project collaborations, regulatory alignment/coherence).

CAMPAIGN



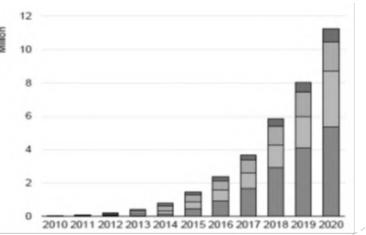
- Inspire Global Action towards a specific ambitious clean energy goal.
- Focuses on Communication, Community, Commitments.
- Consists of Member leads, Campaign Manager, and CEM Secretariat.
- Engages with a **broad audience** and seeks to grow a **powerful community** that can generate impactful commitments.
- Lasts 1-2 years.
- Success Metrics: Awareness metrics (events, viewers, participants); Engagement metrics (followers, subscribers, amplification); Impact metrics (signatories and commitments).

Example: CEM Transport Activities



OUTCOMES

- Government Fleet Declaration
- EV Pilot City Programme and Forum
- EVI Call to Action on Closing the Gap
- COP26 Global MoU on Zero
 Emission Trucks
- Support the GEF7 Global E-Mobility Programme
- Global EV sales are taking off...

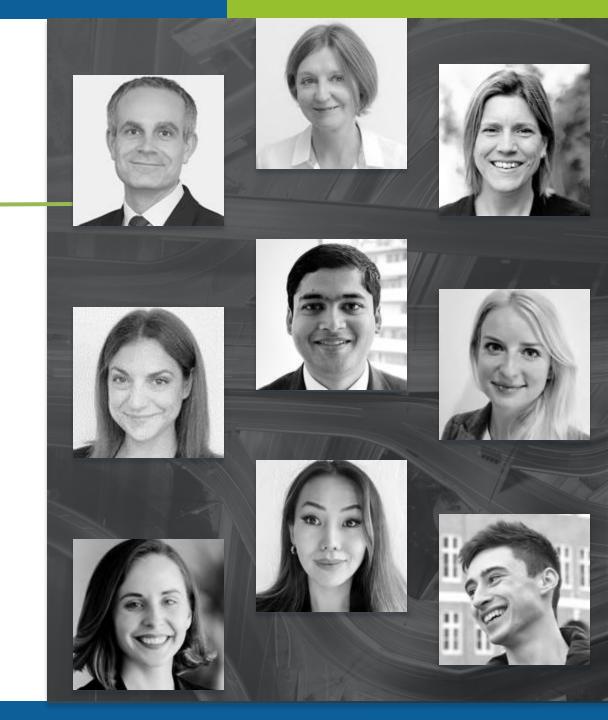


CEM SECRETARIAT

A small, flexible team whose key functions include:

- Support the delivery of Ministerial Meetings, CEM Initiatives and Campaigns, partnerships and engagement.
- Coordinate CEM work and connect the strategic direction.
- Respond to the priorities of Members.
- Facilitate CEM Steering Committee and sub-group meetings.
- Manage communications and disseminate CEM insights.
- Manage governance and funding mechanisms.

Website: <u>www.cleanenergyministerial.org</u> Email: <u>Secretariat@CEMSecretariat.org</u>



CEM IN QUOTES



H.E. Seamus O'Regan, Minister of Natural Resources, Canada "The world needs to get to net-zero. There is no other option. Bold action, international collaboration and energy innovation will get us there. As a valued member of the CEM and Mission Innovation communities, Canada is leading global efforts to build a low-emissions energy future that is prosperous, creates jobs and leaves no one behind."



of the CEM."



H.E. Bento Albuquerque, Minister of State for Mines and Energy, Brazil

"Even though another year goes by without us meeting person, we must recognize the amount of meaningful work we have done. This shows the power of the CEM in bringing ideas into action and highlights the centrality of the clean energy agenda for all of us. Brazil is glad to recommit to a strengthening of the CEM in its next phase."





H.E. Jennifer Granholm, Secretary of Energy, United States

H.E. Francesco La Camera, Director General,

"IRENA is the operating agent of the CEM's Long-Term

Energy Scenario Campaign, working with the co-leads

Denmark and Germany. We are leveraging our global

membership to create a network of experts to tackle

the challenges of the 1.5 degree pathway ahead of us."

International Renewable Energy Agency

"We believe CEM 3.0 is going to be this forum's most consequential era because not only are we working together to drive innovation forward, we are endeavouring to make this clean energy transition an inclusive one which benefits all communities."



Minister of Climate, Energy and Utilities, Denmark "Denmark wishes to confirm its strong commitment to the CEM. We welcome the increased level of ambition of the next phase."

H.E. Dan Jørgensen,



H.E. Anders Ygeman, Minister for Energy and Digital Development, Sweden

"Sweden remains fully committed to CEM3.0 and its mission to accelerate the clean energy transition. A year of ambition should turn into a decade of delivery."

H.E. Joan MacNaughton, CB HonFEI (Lady Jeffrey), Chair, Climate Group "Congratulations to CEM and the governments for the work they are doing on IDDI. The work of the CEM in actually providing the framework for companies to act is crucial."

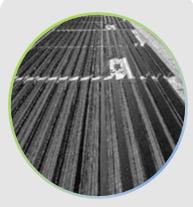


CLIMATE GROUP

CEM WORK PROGRAMME



CEM Workstreams



POWER

- 21st Century Power Partnership
- Power System
 Flexibility Campaign
- Nuclear Innovation
- Flexible Nuclear Campaign
- International Smart Grid Action Network
- Regional & Global
 Interconnection



TRANSPORT

- Electric Vehicles
- EV30@30
 Campaign
- Commercial Vehicles Drive to Zero Campaign



INDUSTRY

- Carbon Capture, Utilization, & Storage
- Industrial Deep Decarbonisation
- Green Public Procurement Campaign



BUILDINGS

 Super-Efficient Appliance & Equipment Deployment



CROSS-SECTORAL

- Hydrogen Initiative
- Global Ports
 - Hydrogen Coalition
- Biofuture Platform
- Biofuture Campaign



ENABLING ENVIRONMENT

- Empowering People
- Equality In Energy Transitions
- Equal by 30 Campaign
- Long-Term Energy
 Scenarios
- Investment & Finance
- Clean Energy Solutions
 Center

Buildings

POWER PARTNERSHIP

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

MISSION

Advance power system transformation by facilitating collaborative research, informationsharing, and capacity-building among power system practitioners. Promote integrated policy, regulatory, financial, and technical solutions for the deployment of clean energy in combination with large-scale energy efficiency and smart grid deployment.

GOALS

The 21st Century Power Partnership conducts activities in four focus areas, which each represent an opportunity to achieve better global coordination along the path to clean, reliable, cost-effective energy systems:

- Develop and share knowledge on key topics related to the transformation of the electricity sector
- Strengthen and disseminate technical tools to accelerate the transition to a more modern electricity sector
- Bolster the capacity of experts needed to advance the policies, programs, and practices required to transition toward a clean and efficient power sector
- Apply the knowledge, tools, and capacity developed through this effort to improve national and subnational policies and regulations



PARTICIPANTS

Argentina, China, Denmark, Finland, Mexico, South Africa, Spain

PARTNERS

CSIR (South Africa), Danish Energy Agency, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ GmbH), Edison Electric Institute, ENERGINET, International Energy Agency (IEA), International Renewable Energy Agency (IRENA), Regulatory Assistance Project, The Nature Conservancy, USAID, World Bank (WB), World Resources Institute (WRI)

21 CPP CEM Website

Contact: Secretariat@CEMSecretariat.org

y Buildings

A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL

MISSION

Build momentum among industry and governments to enhance power system flexibility through the coordinated deployment of advanced power plants, smart electricity grids, demand-side management, and storage.

GOALS

- Coordinate high-level policy forums that aim to deploy, harness and consolidate public-private momentum on strategies for system flexibility.
- Deepen understanding of available flexibility resources through deep-dive events and workshops on grids and storage; demand-side management and digitalisation; and power plants and future markets. These provide a platform for operational experts from industry, ministries, regulators, and utilities to exchange experiences and devise concrete actions. The findings are passed to policy-makers and wider audiences through policy briefs.
- Publish policy briefs that summarize deep dive events and maximise visibility throughout the campaign.

LEAD GOVERNMENTS



COORDINATOR

led

PARTICIPANTS

Brazil, Canada, Chile, Finland, Germany, India, Italy, Japan, Saudi Arabia, South Africa, United Arab Emirates

PARTNERS

Agora Energiewende, Chargepoint, COWI, EDF, EpexSpot, ENEL, Energinet, Envision, First Solar, Fraunhofer ISIT, Nord-Deutsche Energiewende, GE, GIZ, J-Power, Kyushu Electric Power, MHPS, Next Kraftwerke, Ørsted, Restore, RSE, Siemens, UK Power Networks, Vestas, VBG Powertech, World Bank ESMAP

PSF CEM Website

y Buildings



AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

MISSION

Foster new collaborations and assist policymakers in considering the roles that nuclear energy could play in their clean energy future. Understand available technology options, provide information on technical feasibility, economics, and financing, and share perspectives from those involved.

GOALS

- Bring nuclear energy from traditional, nuclear-only fora to broader multilateral discussions on clean energy at both the ministerial and working levels;
- Engage both nuclear and non-nuclear energy policy makers and stakeholders in a discussion on the role of nuclear energy in integrated clean energy systems of the future; and
- Ensure energy policy-makers are informed of the opportunities and challenges of the full range of options needed to meet global clean energy goals—covering areas of technology feasibility, economics and financing, and stakeholder perspectives.

LEAD GOVERNMENTS



COORDINATOR



PARTICIPANTS

Argentina, Brazil, France, Jordan, Kenya, Poland, Romania, Russia, United Arab Emirates, United Kingdom

PARTNERS

 American Nuclear Society, ClearPath, Électricité de France (EDF), Energy for Humanity, Energy Options Network, Generation IV International Forum, International Atomic Energy Agency (IAEA), IEA, International
 Framework for Nuclear Energy Cooperation (IFNEC), International Youth Nuclear Congress, Nuclear Energy Institute, Nuclear Industry Council, OECD Nuclear Energy Agency (NEA), Third Way, TerraPraxis, Women in Nuclear Global, World Nuclear Association

ry Buildings



A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL

MISSION

To provide an understanding of the economic benefits of advanced nuclear technologies to a wide spectrum of participating countries, including the qualitative and quantitative benefits of nuclear reactors with highly flexible power output. Model revenue opportunities for flexible nuclear power stations in various parts of the world and communicate the cost and technical performance requirements back to government stakeholders, as well as to design teams responsible for developing advanced generation IV reactors.

GOALS

LEAD GOVERNMENTS



COORDINATOR



PARTICIPANTS

Argentina, France, Jordan, Kenya, Russia, United Arab Emirates, United Kingdom

PARTNERS

 ClearPath, Energy Options Network, Électricité de France (EDF), Generation IV International Forum, International Atomic Energy Agency (IAEA), IEA, International Framework for Nuclear Energy Cooperation (IFNEC),
 International Youth Nuclear Congress, American Nuclear Society, Nuclear Energy Institute, Nuclear Industry Council, OECD Nuclear Energy Agency (NEA), Third Way, TerraPraxis, Energy for Humanity, Women in Nuclear Global, World Nuclear Association stry Buildings

INTERNATIONAL SMART GRID ACTION NETWORK

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

MISSION

Accelerate the development and deployment of smarter electricity grids worldwide, enabling increased demand response and energy efficiency. It focuses on five principal areas: policy standards and regulation, finance and business models, technology system development, workforce skills and knowledge, user and consumer engagement.

GOALS

ISGAN is an international platform for the development and exchange of knowledge and expertise on smarter, cleaner, and more flexible and resilient electricity grids ("Smart Grids"). ISGAN provides an important channel for the communication of experience, trends, lessons learned, and visions in support of global, national and regional clean energy objectives as well as new flexible and resilient solutions for Smart Grids.

LEAD GOVERNMENTS



PARTICIPANTS

Australia, Brazil, Canada, China, Denmark, European Commission, Finland, France, Germany, Israel, Japan, Netherlands, Norway, Russia, South Africa, South Korea, Spain, Sweden, United Kingdom

PARTNERS

European Technology and Innovation Platform Smart Networks for Energy Transition (ETIP SNET), Global Smart Energy Federation (GSEF), International Energy Agency (IEA), India Smart Grid Forum (ISGF), Mission Innovation (MI)



ISGAN IEA Website / ISGAN CEM Website / Youtube channel / Linkedin / ISGAN Awards of Excellence promotional video

Contact: Secretariat@CEMSecretariat.org

y Buildings

REGIONAL & GLOBAL ENERGY INTERCONNECTION

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

MISSION

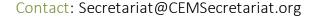
Accelerate the regional electricity grid and power market integration in order to maximise the use of cost-efficient clean energy sources available at the country level and regionally. Facilitate the development of sustainable, secure, and affordable regional electricity systems while contributing to economic growth, climate change mitigation, and decarbonisation of energy systems.

GOALS

- Facilitate the transition of energy systems to more interconnected, and electrified modern energy systems, and maximise the use of renewable energy. Facilitate policy discussions on the regulatory and market frameworks for electricity system integration.
- Support the development of sustainable, secure and affordable regional electricity systems to contribute to climate change mitigation and decarbonisation of energy systems.
- Increase the understanding of policy and regulatory issues regarding regional electricity interconnection. Address concerns on the security and reliability of large-scale interconnection.







Buildings

Cross-Sectoral Enabling Environment

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL





GOALS

- Strengthen the understanding of the opportunities offered by electric mobility to meet multiple policy goals.
- Improve awareness of the drivers of EV deployment, supporting country-level policy and regulatory implementation.
- Outline a vision for the future of electric mobility, building consensus on policy goals (e.g. EV30@30) and benchmarking success.
- Bolster policy action and improve the visibility of national policy efforts in publications, such as the Global EV Outlook
- Mobilize targeted policy action and strengthening the impact of specific measures.
- Accelerate the geographical coverage of policy deployment on electric mobility through capacity building and sharing knowledge and experiences, accelerating learning, and specific activities such as the EVI Global Pilot Cities Program.

LEAD GOVERNMENTS

MISSION

Accelerate the global

deployment of electric

vehicles worldwide through analytical reports, policy

recommendations,

technical workshops and

study tours, multilateral

dialogues and technical

assistance to regions or

member countries.



COORDINATOR

lea

PARTICIPANTS

Chile, Finland, France, Germany, India, Japan, Netherlands, New Zealand, Norway, Poland, Portugal, Sweden, UK, US

PARTNERS

C40 Cities, ChargePoint, E.On, Enel X, Energías do Portugal, FIA Foundation, Fortum, Global Fuel Economy Initiative (GFEI), Hewlett Foundation, Iberdrola, International Council on Clean Transportation, International Zero Emission Vehicles Alliance, Low-Carbon Transport, Natural Resource Defense Council, Renault-Nissan Mitsubishi Alliance, REN21, Schneider Electric, The Climate Group, Tokyo Electric Power Company, UN-Environment, UN-Habitat, Vattenfall, WRI, WBCSD

Buildings

EV30/30 INCREASING

A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL



MISSION

Raise ambition, build awareness, and garner commitments on electric vehicle deployment from member countries and public and private participants. Member countries pledge to increase their share of EVs to 30% by 2030, thereby promoting innovation, economic and industrial development, energy security, and reduction of local air pollution.

GOALS

- Lower GHG emissions and help to achieve climate goals by driving the global EV agenda.
- Reduce air pollution, especially in urban areas. Air pollution is a major public health issue in cities via efforts such as the EVI Global Pilot City Programme.
- Increase energy efficiency: an electric powertrain uses significantly less energy per kilometre travelled compared with conventional powertrains. Enhance energy security: a shift to using electricity as a fuel helps to reduce dependence on fossil fuels.
- Help bring together and enhance collaboration among public and private sector stakeholders working on EV deployment.
- Solicit commitments from both government and nongovernment stakeholders for EV deployment expanded membership to 11 member countries and 29 supporting companies and organisations

LEAD GOVERNMENTS

COORDINATOR

120

PARTICIPANTS

Chile, Finland, France, Germany, India, Japan, Netherlands, New Zealand, Norway, Poland, Portugal, Sweden, UK

PARTNERS

C40, FIA Foundation, Global Fuel Economy Initiative (GFEI), Hewlett, Natural Resources Defence Council (NRDC), REN21, Partnership on Sustainable, Low Carbon Transport (SLoCaT), the Climate Group, UN Environment, UN-Habitat, World Resources Institute, ZEV Alliance, Chargepoint, Chargeup Europe, Energias de Portugal, Enel X, E.On, Fastned, Fortum, Iberdrola, Renault-Nissan-Mitsubishi Alliance, TEPCO, Vattenfall

Buildings

GLOBAL COMMERCIAL VEHICLE DRIVETOZERO A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL

MISSION

Promote greater deployment of zeroor near-zero emission levels for commercial, medium and heavy-duty vehicles (MHDVs) – including mass global transit – and bring together governments and leading stakeholders to work collaboratively on requirements, policies, and programs that support the electrification of commercial vehicles.

GOALS

- By 2025, near- and zero-emission MHDVs are commercially viable and cost-competitive in first-success applications (also referred to as "beachhead" applications) in target global markets.
- By 2040, zero-emission MHDVs dominate in their segments.
- Gather commitments and pledges from EVI member and non-member governments, stakeholders and industry while encouraging, supporting and informing those that are undecided.
- Entities who take the pledge commit to taking actions that support achieving the aspirational target(s) within the identified timelines and sharing their experience and progress.
- Member and non-member countries would have an opportunity to work directly with CALSTART to build their own domestic Drive to Zero Programs.



PARTICIPANTS

Austria, Chile, Denmark, Finland, Germany, Japan, Luxembourg, Netherlands, New Zealand, Norway, Sweden, Switzerland, Turkey, United Kingdom, Uruguay





Drive to Zero Website / Drive to Zero CEM Website

y Buildings



AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

MISSION

To increase momentum on the deployment of CCUS as a viable CO2 mitigation option in a suite of clean energy technologies. It fosters strategic partnerships to accelerate both near and longer-term investment in CCUS and to advance deployment by making CCUS more competitive.

GOALS

- Expand the spectrum of clean energy technologies under CEM to include CCUS.
- Create a platform for governments, the private sector, and investment community to engage and accelerate CCUS deployment.
- Facilitate identification of both near and longer-term investment opportunities.
- Disseminate emerging best practice in CCUS policy, regulatory frameworks and project development

LEAD GOVERNMENTS



PARTICIPANTS

Australia, Canada, China, India, Japan, Mexico, Netherlands, South Africa, United Arab Emirates

PARTNERS

Asian Development Bank, Carbon Sequestration Leadership Forum, Global CCS Institute, International Energy Agency, Oil and Gas Climate Initiative, World Bank, IEAGHG (operating agent), Global Cement and Concrete Association

y Buildings



MISSION

A global coalition designed to stimulate global demand for low carbon industrial materials. In collaboration with national governments, IDDI works to standardise carbon assessments, establish ambitious public and private sector procurement targets, incentivise investment into low-carbon product development and design industry guidelines.

GOALS

- Encourage governments and private sector to buy low carbon steel and cement: IDDI advocates for governments to set procurement targets for the purchasing of decarbonised steel and cement.
- Source and share data for common standards and targets. Develop key definitions, tools, guidelines and publicly accessible data, enable industry to conduct rigorous reporting and industry benchmarking comparisons, define common methods and understandings of what constitutes decarbonised steel and cement products.

LEAD GOVERNMENTS



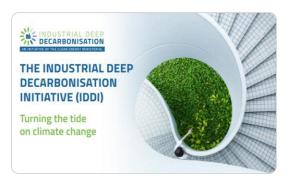
COORDINATOR

PARTICIPANTS

Canada, Germany, United Arab Emirates

PARTNERS

Mission Possible Platform, Steel Zero Campaign, The Climate Group, The Leadership Group for the Industry Transition (LeadIT), IRENA, The World Bank



Buildings



MISSION

The Green Public Procurement of steel and cement represent very high shares of domestic markets for such materials across most major economies. The Green Public Procurement Campaign is an effort by participating members to drive the global decarbonisation of heavy industries such as steel and concrete by creating a market demand for near-zero carbon concrete and steel through public procurement.

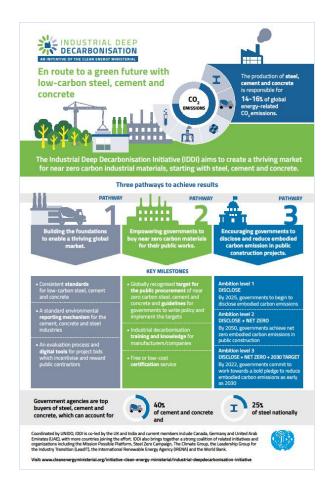
LEAD GOVERNMENTS



PARTNERS

The Green Public Procurement Campaign brings together a strong coalition of over 60 related initiatives and organizations across the private sector, civil society, intergovernmental organizations, trade associations, and leading experts from academia and think tanks to tackle carbon intensive construction materials such as steel and cement.

These organizations include the Mission Possible Partnership of the World Economic Forum, the Rocky Mountain Institute, the Climate Group, the Leadership Group for the Industry Transition (LeadIT), Building Transparency, and Agora Energiewende.



Industry Buildings

SEAD SUPER-EFFICIENT EQUIPMENT & APPLIANCE DEPLOYMENT

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

MISSION

To address urgent global energy challenges and promote the manufacture, purchase, and use of energy-efficient appliances, lighting, equipment and buildings worldwide. The SEAD Initiative fosters information exchange on policies and activities, allowing participants to take advantage of best practices and lessons learned by other countries, and identify opportunities for bilateral and multilateral cooperation.

GOALS

- Increase partner participation and engagement by providing the knowledge and tools needed to help impact standards and labelling, procurement, and incentives policy change
- Highlight the benefits and urgency of energy-efficient equipment and appliance policies among participating governments through technical analysis
- Increase awareness among manufacturers of the value of producing superefficient appliances and among retailers of the value of stocking such appliances through regional and global awards competitions

LEAD GOVERNMENTS



COORDINATOR



PARTICIPANTS

Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Denmark, Germany, Ghana, Indonesia, Japan, Mexico, Nigeria, Russia, Saudi Arabia, South Africa, South Korea

PARTNERS

Asia-Pacific Economic Cooperation, CLASP, ECOWAS Centre for Renewable Energy and Energy Efficiency, Kigali Cooling Efficiency Program, UN Environment Programme, IEA Technology Collaboration Programme on Energy Efficient End-Use Equipment (4E), Lawrence Berkeley National Laboratory, United For Efficiency



y Buildings



MISSION

Raise international ambition and advance commercial-scale clean hydrogen and fuel cellrelated deployment in the long-term globally, across all sectors. Achieve this via analysis, policies, programs, and projects that would make hydrogen a key enabler in the clean energy transition.

GOALS

- Help ensure successful deployment of hydrogen within current industrial applications.
- Enable deployment of hydrogen technologies in transport (e.g. freight, mass transit, light-rail, marine).
- Explore the role of hydrogen in meeting the energy needs of communities.



LEAD GOVERNMENTS



COORDINATOR

lea

PARTICIPANTS

Australia, Brazil, Chile, Finland, Germany, India, Italy, New Zealand, Norway, Portugal, Russia, Saudi Arabia, South Africa, South Korea, Spain, Sweden, United Arab Emirates, United Kingdom

PARTNERS

Advanced Fuel Cells Technology Collaboration Programme, Hydrogen Council, Hydrogen Technology Collaboration Programme, International Partnership for Hydrogen and Fuel Cells in the Economy, International Renewable Energy Agency, Mission Innovation, World Economic Forum Buildings



MISSION

The Hydrogen Ports Coalition gathers a global coalition of relevant actors to accelerate the scale-up of clean hydrogen production and demand in ports and coastal industrial clusters.

GOALS

- Raise awareness on the role of ports and coastal industrial clusters
- Share information on clean hydrogen production and demand; bunkering of ships with hydrogen and/or derivates; best practices etc.;
- Policy dialogue, with the aim to share policy challenges, opportunities and recommendations to H2I members, partners and other stakeholders for scaling up clean hydrogen production and demand in ports and coastal industrial clusters.

COALITION MEMBERS (as of 6 August 2021)

Ballard Power Systems, Brunsbüttel Ports, Dock Sud Port, Côtes-d'Armor Chamber of Commerce (Ports of Le Légué, St Quay Portrieux, Erquy), Ennshafen Port, European Sea Ports Organisation (ESPO), Haropa Ports (Le Havre, Rouen, Paris), International Association of Ports and Harbors (IAPH), Free Hanseatic City of Bremen, Fremantle Ports, Flam Port, Hydrogen Council, Neltume Ports, New Energy Coalition, North Queensland Bulk Ports, Pecém Port Complex, Port of Antwerp, Port of Auckland, Port Authority of Valencia, Port of Bahia Blanca, Port of Bécancour, Port of Berlevåg, Port of Bordeaux, Port of Brisbane, Port of Duqm, Port of Farsund, Ports of Finistere, Port of Grenland, Port of Gothenburg, Port of Hamburg, Port of Halifax, Port of Houston, Port of Mejillones, Port of Montreal, Port of Rotterdam Authority, Port of Saguenay, Port of Trois-Rivières, Port of Vienna, Ports Australia, Portuguese Ports Association, Southern Ports, Vancouver Fraser Port Authority, Woodside Energy Industry Buildings

Cross-Sectoral Enabling Environment



MISSION

To be an action-oriented mechanism for policy dialogue and collaboration to accelerate development and scale-up of modern sustainable low carbon alternatives to fossil-based solutions in transport, chemicals, plastics and other sectors. • Raise the awareness of policymakers about the benefits, opportunities and priorities to scale up sustainable bioenergy worldwide

GOALS

- Promote international collaboration and dialogue between member countries and their policymakers, industry, academia and other stakeholders
- Identify the main economic and non-economic barriers to modern bioenergy deployment and explore opportunities to overcome these barriers
- Formulate best practices towards effective evaluation, sharing and promotion of sustainable practices for the production of biomass and the entire value chain life cycle
- The initiative helps CEM member countries to realise their sustainable bioenergy potential, thus supporting transitions to a low-carbon energy system (and bioeconomy, more broadly) and contributing to reaching targets under the Paris Agreement.

LEAD GOVERNMENTS

PARTICIPANTS

China, Denmark, Finland, France, Indonesia, Portugal, South Africa, United Kingdom

PARTNERS

 ABBI – Brazilian Bioinnovation Association, ApexBrasil, Below50, CGEE, EU Joint Research Centre, IEA Bioenergy TCP, Food and
 Agriculture Organization, Global Bioenergy Partnership, International Renewable Energy Agency (IRENA), Sustainable Energy for All, UNCTAD, UNIDO, WBCSD, World Council on Industrial Biotechnology ry Buildings

Cross-Sectoral Enabling Environment



MISSION

Enable the reduction of GHG emissions and foster a circular economy by showcasing pathways by which countries, companies, and consumers can substitute sustainable bio- and waste-based Fuels, Chemicals, and Materials for their fossil equivalents.

SUBSTIUTION CHALLENGE

To foster ambition and catalyze action, the Biofuture Campaign will develop and implement the Bio-based Substitution Challenge, whose signatories aspire to substitute bio- and waste-based Fuels, Chemicals, and Materials for 10% of their fossil carbon equivalent in relevant sectors and products by 2030, relative to a 2019 baseline





MISSION

Convene the right people and partners – including those from underrepresented and marginalized voices – to bring forward the novel approaches and diverse perspectives needed to move the needle on achieving a just and equitable transition for a clean energy future.

GOALS

- Share lessons on needed and successful policies that support just clean energy transitions;
- Highlight different policy mixes to support workers and communities with models that meet the unique needs and circumstances of different member countries, industrial sectors and stakeholder communities;
- Advocate for diversity and inclusiveness in HR policies, working conditions and corporate governance; address the needs of youth, gender equality, including pay equity, retention of diverse staff, the promotion of inclusive culture, among other measures that would serve to marshal and develop all available talent to strengthen the global energy sector.



Buildings



AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

MISSION

Develop energy policies and regulatory frameworks that help mobilise investment and financing to the clean energy sector at scale, particularly from private sources. It aims to create a unique partnership, bringing together energy ministers, other government agencies, private companies, and financial institutions.

GOALS

- Create a forum for peer-to-peer exchange of lessons learned and best practice across the clean energy investment and finance value chain;
- Conduct robust analysis and monitoring that advance understanding of investment and financing trends in clean energy and provide a benchmark for policy development;
- Build and/or disseminate state-of-the-art analytical tools and resources that support policy design, and investment facilitation within and across countries;
- Synthesize international experiences and best practice for creating the enabling conditions to support investment and innovative solutions to stimulate financing;
- Respond to requests from CEM member countries on specific investment-related cooperation. Acting as an agent for country-level engagement, including by "connecting the dots" and brokering support provided by a range of partners for policy design, technical assistance and capacity building.

LEAD GOVERNMENTS COORDINATOR

PARTICIPANTS

Brazil, Canada, India, Netherlands, New Zealand, United Kingdom

PARTICIPANTS

World Bank Energy Sector Management Assistance Programme (ESMAP), Climate Investment Funds Technical Assistance Facility for Clean Energy Investment and Finance (CIF-TAF).



Clean Energy Investing: Global Comparison of Investment Returns



CEM IF Website

y Buildings



AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

MISSION

Promote wider adoption and improved use of energy planning models and scenarios to help countries accelerate their transition to clean energy. Long-term energy scenarios are important tools that can identify options, assess risks, evaluate the roles of different energy technologies in energy systems, and help governments adopt the best policies for a costeffective and sustainable transition.

GOALS

- Integrating scenarios into decision making: Demonstrating how governments can use energy planning scenarios to ensure better policy making. And exploring how scenarios can be made more relevant to private investors.
- Improving scenarios for the clean energy transition: Examining how long-term energy scenarios can be strengthened to better account for potentially transformational changes to the energy system.
- Identifying capacity building requirements: Analysing where long-term energy scenario development can be improved, and how "best practices" can be shared to enhance institutional scenario planning capacity.

LEAD GOVERNMENTS



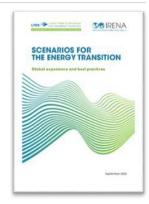


PARTICIPANTS

Brazil, Canada, Chile, Finland, Japan, Mexico, Netherlands, Saudi Arabia, United Arab Emirates, United Kingdom

PARTICIPANTS

China National Renewable Energy Centre, International Energy Agency, IEA Energy Technology Assistance Programme (IEA– ETSAP), Joint Institute for Strategic Energy Analysis, National Renewable Energy Laboratory, European Commission Joint Research Centre (JRC), State Grid Energy Research Institute, World Energy Council



Industry Buildings



AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

MISSION

Advance gender diversity in clean energy professions, recognizing that the transition to a clean energy future will only succeed if we harness all talent. The Equality In Energy Transitions Initiative is also an IEA Technology Collaboration Programme (TCP).

GOALS

The Equality In Energy Transitions Initiative (formerly C3E Initiative) aims to advance women's participation in clean energy by creating opportunities and closing the gender gap across four focus areas:

- Awards and recognition
- Gender Data and benchmarking
- Career development/mentorship, including the International Ambassadors Programme
- Dialogue and communications

LEAD GOVERNMENTS



COORDINATOR



PARTICIPANTS

Australia, Austria, Chile, European Commission, Czech Republic, Finland, Germany, Sweden, United Kingdom

PARTICIPANTS

International Energy Agency (IEA)

EQUAL®30 GENDER EQUALITY

A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL

MISSION

Close the gender gap in the energy sector by encouraging public and private sector organizations to work towards equal pay, equal leadership, and equal opportunities for women in the energy sector by 2030. It seeks to encourage governments, the private sector, and other organizations to sign up to a common set of high-level principles and to showcase how they intend to contribute to the Campaign's goals.

GOALS

Bring together leadership from across the energy sector to endorse overarching principles that galvanize action, and help all players – from private sector companies to governments at all levels – find common ground for action. Equal by 30 asks companies and governments to endorse principles, then take concrete action to increase the participation of women in the clean energy sector, and close the gender gap.

LEAD GOVERNMENTS

*

COORDINATOR

PARTICIPANTS

Australia, Austria, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Sweden, United Kingdom, United States

SIGNATORIES

International Energy Agency (IEA), Electricity Human Resources Canada, Energy Council of Canada, Women in Renewable Energy (WiRE) Canada, POWERful Women, The Global Women's Network for the Energy Transition (GWNET), Canadian Apprenticeship Forum, Canadian Coalition to Empower Women, Sustainable Energy for All, Women of Powerline Technicians, Global Wind Energy Council, StepUp



Equal by 30 Website

SOLUTIONS CENTER

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

MISSION

Provide policymakers with free resources and advisory support on clean energy policies, regulations, and financing mechanisms to help governments reach their clean energy and development objectives quickly and cost-effectively. A source of high-quality clean energy policy and deployment information, providing expert assistance, peer forums, and training, bringing together a network of policymakers to work on clean energy solutions.

GOALS

Serve as a clearinghouse of high-quality clean energy policy and deployment information and to provide in-depth expert assistance, peer forums, and trainings through a virtual platform, bringing a broad network of policy makers together remotely to work on clean energy solutions.

LEAD GOVERNMENTS



COORDINATOR



PARTICIPANTS

Canada, China, European Commission, Germany, India, Indonesia, Italy, Mexico, Sweden, United Arab Emirates

PARTICIPANTS

IRENA, REN21, GWNET, CTC-N, Clean Power Hub

CEM AWARD WINNERS 2021



Each year, in partnership with the Global Smart Energy Federation (GSEF), the International Smart Grid Action Network (ISGAN) presents the Annual ISGAN Award of Excellence (AoE) to recognize excellence in smart grid projects, policies, and programs around the world.



SMART ENERGY PROJECT Saint John Energy (Canada) Open Systems International, University of New Brunswick (Partner Organizations)





EU-SYSFLEX GERMAN DEMONSTRATION MITNETZ STROM (Germany) (Partner Organizations) E.ON, Fraunhofer IEE



2021 ENERGY MANAGEMENT LEADERSHIP AWARDS

Companies around the world use the ISO 50001 standard to achieve energy, economic, and sustainability benefits that boost competitiveness. The standard offers a business-friendly way to align corporate objectives with national climate and energy goals. To enter, organizations develop a structured case study showing how their energy management system delivers diverse benefits to their company, community, and country. Case studies will be shared online as an inspiration and resource for businesses, governments, and other organizations.

2021 Award of Excellence Winners are:

Abastible S.A. (Chile), Dubai Municipality (UAE), JW Marriott Washington D.C. (USA), Kuala Lumpur Golf & Country Club (Malaysia)

The <u>2022 Energy Management Leadership Awards</u> are now open! View the <u>Official Rules</u>.

The 8th Award Nomination is open. Learn more at: <u>www.iea-isgan.org/award2021/award2021-1/</u>

GRADUATED WORKSTREAMS

- 1. Advanced Cooling Challenge (ACC) Campaign (see <u>Website</u>)
- 2. Advanced Power Plant Flexibility (see Website)
- 3. Corporate Procurement Of Renewable Energy Sources (see Website)
- 4. Distributed Generation in Strategic Regions Campaign (see Website)
- 5. Energy Management Campaign (see Website)
- 6. Energy Management Working Group (see <u>Website</u>)
- 7. Global Lighting and Energy Access Partnership (LEAP) (see Website)
- 8. Global Lighting Campaign (see <u>Website</u>)
- 9. Multilateral Solar and Wind Working Group (see Website)
- 10. Nearly Zero Energy Buildings (see Website)
- 11. Sustainable Cities and Eco-Energy Towns (see Website)



AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

CEM IN QUOTES



H.E. Tina Bru, Minister of Petroleum and Energy, Norway

"Norway welcomes more cooperation between the CEM initiatives and, not least, the increasing involvement of the private sector. The private sector plays a key role as we move towards the next, cleaner, energy decade."

H.E. LI Yong, Director General, United Nations Industrial Development Organization

"UNIDO is proud to join forces with member countries of the CEM and the broad CEM community to launch the new IDDI under the co-leadership of India and the UK. The initiative will occupy a unique spot in the global arena – it will leverage the political will to take actions, and generate the knowledge and tools needed to make a step-change towards industrial decarbonisation"



H.E. Angus Taylor, Minister for Industry, Energy and Emissions Reduction, Australia

"Our ambition is to produce the cheapest clean hydrogen in the world at under \$2 Australian Dollar. That is why we will continue to work with the CEM Hydrogen Initiative as a key part of realizing this goal."

H.E. John Kerry, US Special Presidential Envoy for Climate, USA

"I am excited to kick off the launch of CEM 3.0 and MI 2.0 this week. They will be critical as we accelerate net zero. Limiting global warming to 1.5 degrees Celsius will be difficult, but international collaboration through the CEM Secretariat will help drive progress."

H.E. Andreas Feicht, State Secretary, Federal Ministry for Economic Affairs and Energy, Germany

"I am very pleased to be part of this global energy community with its diverse membership of countries that jointly account for the vast majority of global energy production and use. CEM is the right place to address these issues, given the urgency of the challenges we face and the scale of our ambitions. We need effective international cooperation and collaboration more than ever."

H.E. Michal Kurtyka, Minister of Climate and Environment, Poland "We are fully committed to the CEM and its mission to accelerate clean energy transitions. We are proud to participate in the Nuclear initiative for two years. We are pleased to announce that we have

joined the Electric Vehicles Initiative."





H.E. Michael Bloomberg, UN Special Envoy for Climate Ambition and Solutions. Founder and CEO of Bloomberg L.P

"The work CEM does is critical to driving the global transition to clean energy. That is why so many of the world's major economies are represented here. CEM has an opportunity to advance the fight against climate change while at the same time spurring economic growth and innovation."

H.E. Kiyoshi Ejima, State Minister of Economy, Trade and Industry, Japan

"Japan believes that the CEM will continue to play an important role towards the global promotion and diffusion of clean energy."



43

HOW TO CONTACT US:

CLEAN ENERGY MINISTERIAL (CEM)

International Energy Agency (IEA) 31-35, Rue de la Fédération F-75739 Paris Cedex 15, France

Write to us: Secretariat@cemsecretariat.org Visit our website: www.cleanenergyministerial.org Follow us on LinkedIn: Clean Energy Ministerial Follow us on Twitter: @CEMSecretariat