

Clean Energy Ministerial Senior Officials' Meeting and Mission Innovation Annual Gathering

9-11 APRIL 2025

SEOUL, REPUBLIC OF KOREA



Session

“CEM Work Programme Evolution”

10:45 - 12:15 KST



Opening Remarks by Session Chair

Laís de Souza Garcia

Head of the Renewable Energy Division

Ministry of Foreign Affairs Brazil



AGENDA

1. Opening Remarks by the Chair
2. Introduction and Session Objectives
3. Spotlight on recent CEM Workstreams: Achievements and Future Plans
4. Philanthropic Support to Augment CEM Strategic Efforts
5. Strengthening CEM's Work Programme through Partner Collaborations
6. Open Discussion
7. Next Steps & Closing



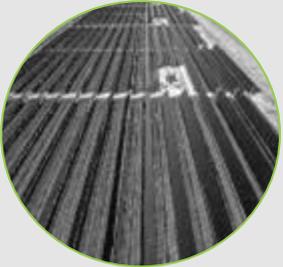
Introduction and Session Objectives

Dr Prasoon Agarwal

Deputy Head of CEM Secretariat



Current CEM Workstream Portfolio



POWER

- 21st Century Power Partnership
- Nuclear Innovation
- International Smart Grid Action Network
- Regional & Global Interconnection
- Transforming Solar
- Supercharging Battery Storage
- Empowering Regulators for Accelerated Decarbonisation Campaign



TRANSPORT

- Electric Vehicles Initiative
- Clean Energy Marine Hubs



INDUSTRY

- Carbon Capture, Utilization, & Storage
- Industrial Deep Decarbonisation
- Green Public Procurement Campaign
- Gigatonne by 2030 Campaign



BUILDINGS

- Super-Efficient Appliance & Equipment Deployment



CROSS-SECTORAL

- Hydrogen Initiative
- Biofuture Platform
- Carbon Free Energy



ENABLING ENVIRONMENT

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

Over the years, CEM’s flexible construct, focused on clean energy deployment, allows for a constant evolution of the CEM Work Programme

What Drives the CEM Work Programme?



CEM Members' domestic and international priorities



Commitments from political fora (G7/G20/COP etc)



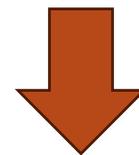
Advancements in Technology deployment



Evolution in partnership landscape

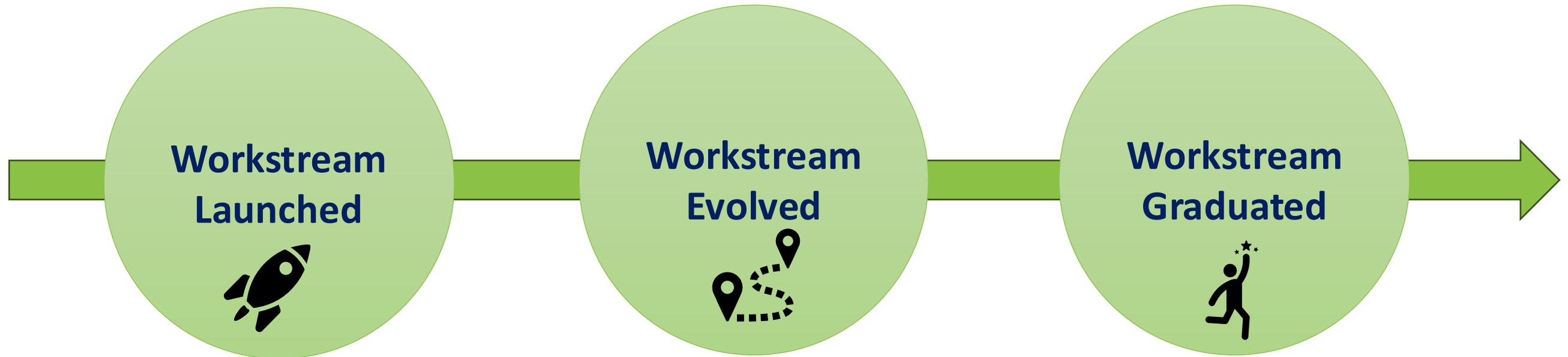


Resource contributions from CEM Members



Evolution at Workstream Level as well as Work Programme (Portfolio) level

Workstream Evolution (over its lifecycle)



Phase 1

- Deployment challenge
- Need to mobilize community

Phase 2

- New challenges/opportunities
- Landscape Changed

Phase 3

- Objective achieved
- Partners mobilized

Drivers

Work Programme (Portfolio) Evolution

Is the work programme equipped to deliver on CEM member Strategic Priorities?

Are there any gaps or “blind spots” that need to be addressed ?

Do we need to repurpose existing tools to address new challenges ?

What are the opportunities for collaboration amongst workstreams ?

How can we leverage external partnerships to amplify impact?

Examples of Work Programme Evolution

1. Collaboration amongst Workstreams: CEM15 Emblematic Deliverables

At CEM15, the CEM community & workstreams delivered **Emblematic Deliverables**, closely aligned with G20/G7/COP priorities, receiving strong endorsement from members



2. New Launches and Graduations



SUSTAINABLE LIFESTYLES, FAIRNESS
AND ACCESS TO CLEAN ENERGY TECHNOLOGIES

A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL



CARBON-FREE
ENERGY

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL



EMPOWERING REGULATORS
FOR ACCELERATED
DECARBONISATION

A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL



GIGATONNE
BY 2030

CAMPAIGN BY
CEM CCUS & MI CDR



biofuture campaign

KICKSTARTING A GLOBAL, ADVANCED BIOECONOMY

A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL



GLOBAL COMMERCIAL VEHICLE

DRIVE TO ZERO

A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL

3. Member Strategic Priorities: EMDE Engagement

CEM's value proposition:

INSIGHTS

Knowledge products, data analysis, and recommendations for policy makers



- ✓ Regular exchanges between CEM members, workstreams, partners and the Secretariat to **communicate specific member needs and regional challenges/opportunities**

IMPACT

On the ground implementation, by addressing barriers to deployment



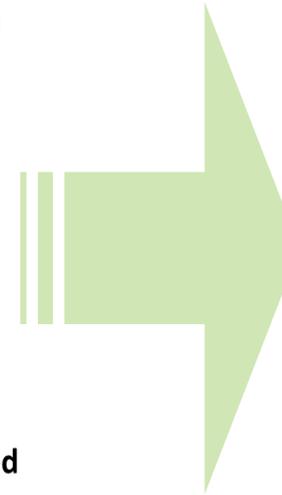
- ✓ Identify opportunities to **tailor CEM's work to a specific region in order to maximise impact**, e.g. through regional partnerships, special standalone projects

INSPIRATION

Exchange of best practice, lessons learned, global commitments and pledges



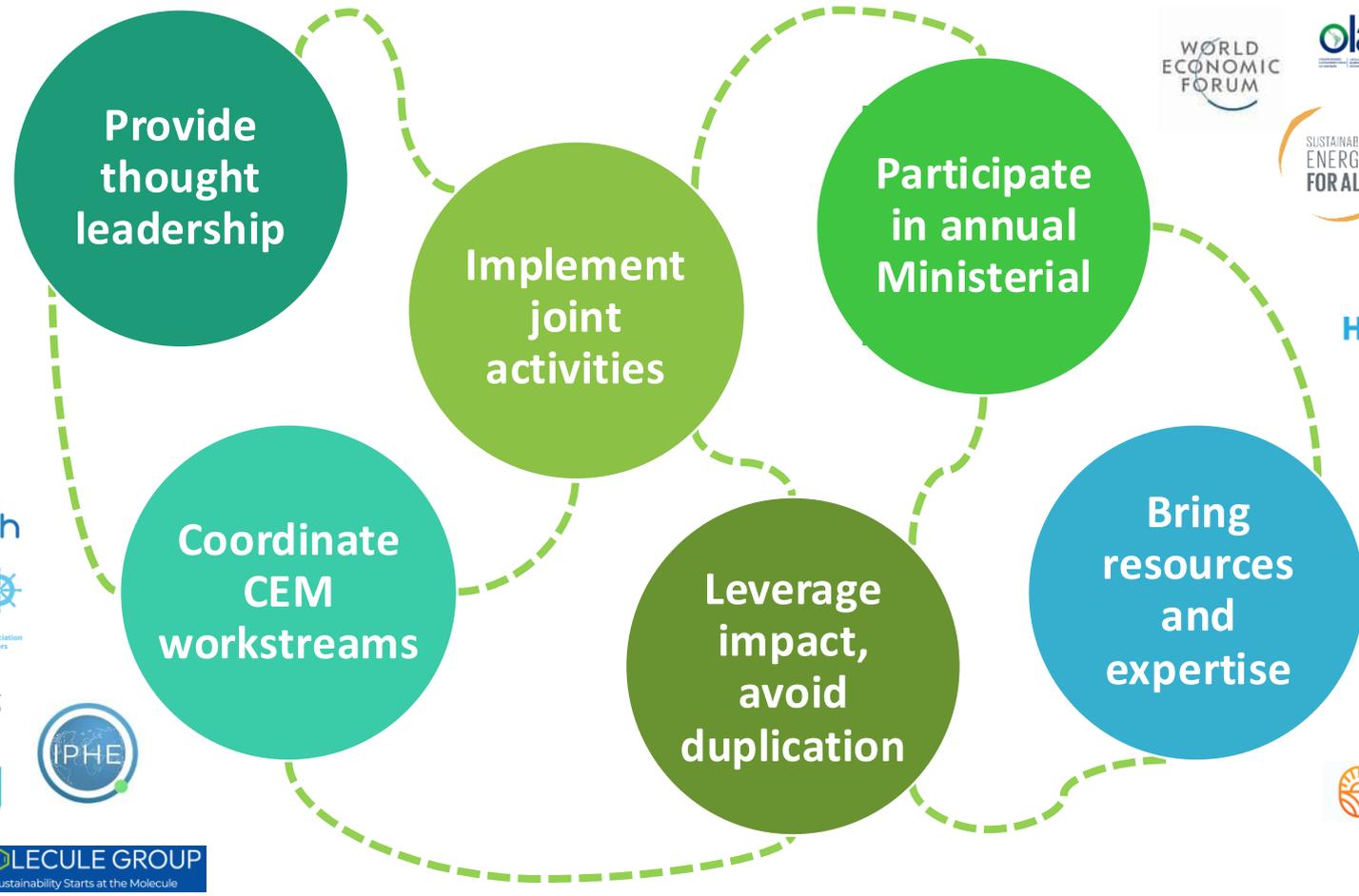
- ✓ Work with members and partners to **apply and emulate CEM's work in different regions**, e.g. at regional events; facilitate **participation of interested non-CEM members** in relevant workstreams



Leverage the expertise of CEM workstreams, increase the level of ambition and make CEM tools available to all members, particularly EMDEs



4. Member Strategic Priorities: Mobilizing Partners



New Launches and Graduations

Spotlight on Recent CEM Workstreams

- Campaign “Sustainable Lifestyles, Fairness and Access to Clean Energy Technologies”
- Campaign “Empowering Regulators for Accelerated Decarbonisation”
- Campaign “Gigatonne by 2030”
- Initiative “Carbon Free Energy (CFE)”



Campaign “Sustainable Lifestyles, Fairness and Access to Clean Energy Technologies”

Ms Barbara Kauffmann

Director for Employment and Social Governance,
DG EMPL, European Commission





SUSTAINABLE LIFESTYLES, FAIRNESS AND ACCESS TO CLEAN ENERGY TECHNOLOGIES

A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL

Objective:

- **Raise awareness** on potential to reduce emissions through more sustainable lifestyles
- **Exchange good practices between countries** on ways to **encourage and support behavioral change** in a fair way
- **Seek tangible commitment from CEM members** to develop, implement and monitor policies in this area

Deliverables:

- **Pledge** based on an initial set of **guiding principles** used for the **design & implementation of policies**
- **Organisation of workshops with experts** and regular exchanges with co-leads and partners
- **Awareness raising campaigns** supporting sustainable lifestyles
- **Evidence: IEA study on behavioural insights for reducing energy demand**
- **Sustainable Lifestyle Award**
- **Stock taking Report of the campaign** summarising progress and presenting **good practices**

Pledge & Principles



Leading by Acting

- ✓ Incentivise and enable **sustainable lifestyle changes & fairness**
- ✓ Share and report on **policies, good practices** and other initiatives
- ✓ **Communication and awareness** campaigns

Empowering People

- ✓ Encourage **educational programmes & cultural developments**
- ✓ Involve and empower **local communities**
- ✓ Actively involve **youth**
- ✓ Ensure **efficient use** of energy & materials

Transforming Systems

- ✓ Advance **clean building practices**
- ✓ Enhance accessibility to **low-emission mobility**
- ✓ Support a universal transition to affordable, reliable and sustainable **low emission technologies**
- ✓ Promote sustainable lifestyle & fairness in **other areas**

Campaign “Empowering Regulators for Accelerated Decarbonisation”

Dr Anna Stephenson

Deputy Director for Research, International and Decarbonisation Engineering, UK
Department for Energy Security and Net Zero



Empowering Regulators for Accelerated Decarbonisation



Elevating the Priority of Decarbonization in Energy Regulators' Decision Making

Issue:

Despite regulators already devising innovative methods to tackle the challenges posed by the energy transition, there are limitations in the tools available to them.

Solutions:

- Regulators can aid governments by removing regulatory barriers to accelerate the energy transition.*
- Sharing lessons learned and exploring new solutions between both policymakers and energy regulators to accelerate the clean energy transition at both speed and scale.*

Aims of the campaign:

In response to CEM/MI's Agenda for Action on Power Systems Solutions

The campaign aims to

- Spark dialogues that emphasise regulators' roles and inform governments of policy options for effective regulation.*
- Collaborating with governments, the campaign will release policy blueprints suggesting reforms like boosting regulators' resources, setting decarbonisation mandates, and considering long-term regulatory decisions.*



Empowering Regulators for Accelerated Decarbonisation

Achieved

March '24

- **Report:** Elevating the Priority of Decarbonization in Energy Regulators' Decision Making

CEM15

- Gathered momentum from Agenda for Action Power System Solutions

Nov '24

- COP29 launch at Canada Pavillion

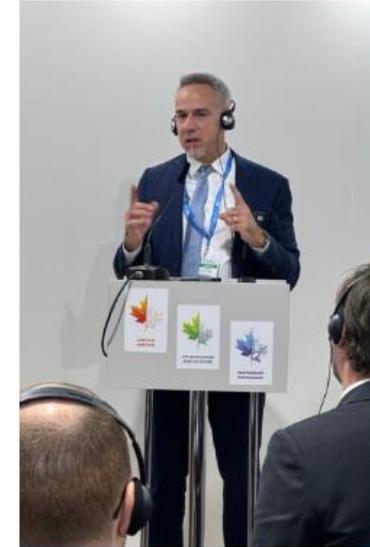
Future Activities

May '25

- Sub-Saharan Technical workshop: AFUR
- ASEAN Renewable Energy Sub-Sector Network Annual Meeting

CEM16

- Publish regulatory blueprints & impact report
- Present findings at 'Regulatory Forum' side event with ministry, industry and regulator focused panels



Campaign “Gigatonne by 2030”

Mr William Frank Christensen,

Deputy Director General, Norwegian Ministry of Energy



LONGSHIP

CO₂ capture

Capture from industrial plants.
Liquefaction and temporary storage.



NORTHERN LIGHTS SCOPE

Transport

Liquid CO₂
transported by ship.



Receiving terminal

Intermediate onshore storage.
Pipeline transport to offshore
storage location.



Permanent storage

CO₂ is injected into a saline aquifer.

100 km

2 600 m



Joint venture between
Equinor, Shell and
TotalEnergies

State support for first phase
(1,5 mtpa)

Pioneering the use of
dedicated CO₂ transport ships
to enable cross-border CCS.

Allows for gradual CCS
expansion by integrating new
industries and regions into the
value chain

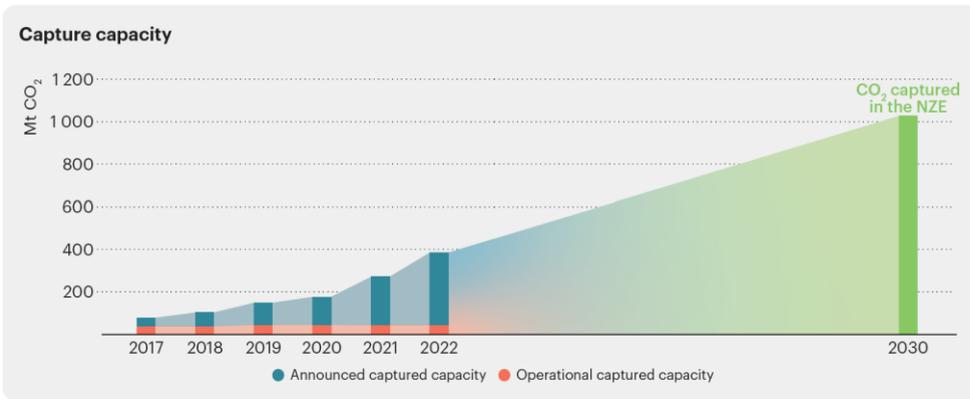
Enables capture facilities
across Europe to access
permanent storage without
the need for direct pipeline
connections

Commercial contracts with
Yara (Netherlands) and Ørsted
(Denmark) and Stockholm
Exergi (Sweden)

Phase 2 without state support
(5 mtpa)



A joint campaign between Clean Energy Ministerial and Mission Innovation, to accelerate the development and deployment of carbon management to reach gigatonne scale by 2030, including enabling 100Mt of permanent CO₂ removals per year.



Source:
IEA Net Zero Roadmap 2023

The campaign action plan is composed of **four different areas of work**.

- 1. Minister-level engagement:** proposal for a minister – CEO roundtable at CEM-16 in August, plus a side-event with key partners.
- 2. Carbon Management Project recognition:** A platform to recognize a small number of leading industrial-scale carbon management projects around the world and disseminate their real-life experience.
- 3. Strategy workshops:** to ensure that all CEM and MI countries have at their disposal the latest and best policy and strategy experience. The first workshop took place on 11 March and the next ones are in July and November.
- 4. Public-facing knowledge-sharing:** events and webinars to disseminate both the goal and the experience towards the wider clean energy, NGO and financing community.

Initiative “Carbon Free Energy (CFE)”

Mr Kihwan Kim,

Director, International Cooperation, Carbon Free Alliance (CFA)



Global consensus on carbon-free energy.

<COP 28(Outcome of the first GST: “UAE Consensus”) Article 28>

- 28.** Further recognizes the need for deep, rapid and sustained reductions in greenhouse gas emissions in line with 1.5 °C pathways and calls on Parties to contribute to the following global efforts, in a nationally determined manner, taking into account the Paris Agreement and their different national circumstances, pathways and approaches:
- (a) Tripling renewable energy capacity globally and doubling the global average annual rate of energy efficiency improvements by 2030;
 - (d) Transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science;
 - (e) **Accelerating zero- and low-emission technologies**, including, inter alia, **renewables, nuclear, abatement and removal technologies such as carbon capture and utilization and storage, particularly in hard-to-abate sectors, and low-carbon hydrogen production;**

Carbon Free Energy Initiative : Vision and Mission



Carbon Free Alliance is a global coalition of energy providers and industrial energy users for their joint efforts towards a carbon free economy

Vision

To align the global aspiration of mid-century carbon neutrality goal with local decentralized individual decisions resulting in self-sustaining emissions reductions

Mission

Expanding access to carbon free energy

Establishing globally harmonized carbon free energy standards

Contributing to decarbonizing the hard-to-abate industrial sectors

Reducing the divide between developed and developing countries in climate vulnerability and responses

Carbon Free Energy Initiative : Status and Progress



- **Official Launch of the CFEI-Workstream**
 - Clean Energy Ministerial (CEM) in Brazil (October 2024)
 - CFEI-Workstream Members: Japan, UAE, and Czech Republic, IEA
- **The 1st Global Working Group Session (February 2025)**
 - shared members' perspectives on the draft Carbon-Free Energy Technical Criteria on Scope 2.
- **The 2nd Global Working Group Session (10 April 2025, 17:45-18:45)**
 - To aim to refine the Technical Criteria, and enhance international collaboration towards a robust framework for use of carbon-free energy
 - UK delegate and IAEA will join in 2nd GWG session.
- **US Clean Energy Buyers Association(CEBA) has begun cooperating with CFE Initiative**
 - To bringing the perspective of global corporate energy buyers and reinforcing the initiative's alignment with market-driven approaches

Open Discussion / Interventions from the Floor



Work Programme Evolution : EMDE Engagement

Philanthropic Support to augment CEM Strategic Efforts



Clean Energy Ministerial Senior Officials' Meeting and Mission Innovation Annual Gathering



Tara Climate Foundation

Ms Isabelle de Lovinfosse, Head of Diplomacy



ClimateWorks Foundation

Mr Shoon So Oo, Associate Director, Global Energy Transition Initiative



Open Discussion / Interventions from the Floor



Work Programme Evolution : Mobilizing Partners

Strengthening CEM's Work Programme through Partner Collaborations



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UNESCAP

Dr Hongpeng Liu, Director Energy Division



ESCAP

Economic and Social Commission
for Asia and the Pacific



World Economic Forum

Mr Espen Mehlum, Head of Energy Transition Intelligence and Regional Acceleration,
Centre for Energy and Materials



Clean Energy Ministerial Senior Officials' Meeting and Mission Innovation Annual Gathering



SEforAll

Ms Jacqueline Lam, Regional Director, Asia Pacific



Breakthrough Agenda

Mr Paul Durrant, Joint Head, Breakthrough Agenda Secretariat



International Transport Forum

Mr Ho Jeong KWON, Policy Liaison Officer



Open Discussion / Interventions from the Floor



Final Reflections & Next Steps

Mr Jean-François Gagné, Head of CEM Secretariat



Closing Remarks by Session Chair

Laís de Souza Garcia

Head of the Renewable Energy Division

Ministry of Foreign Affairs Brazil

