CEM8 CHAIR'S SUMMARY: Shared Global Leadership in Clean Energy

1. Ministers and high-level representatives of Australia, Brazil, Canada, People's Republic of China, Chile, Denmark, Finland, France, Germany, India, Indonesia, Italy, Japan, Mexico, Norway, Republic of Korea, Russia, Saudi Arabia, South Africa, Sweden, the United Arab Emirates, the United Kingdom, the United States, and the European Commission on behalf of the European Union of the Clean Energy Ministerial (CEM), met in Beijing, People's Republic of China on 6-8 June 2017, brought together by the recognition that clean energy is a driver of economic growth, energy security, energy access, and environmental sustainability and the ambition to strengthen clean energy efforts. Mr Xi Jinping, President of China sent his congratulation on the opening of the meeting. In his opening remarks, Mr Zhang Gaoli, Vice Premier of the State Council of China stressed the need for the efficient, intelligent and shared development of clean energy with determination and concrete actions.

2. Also in attendance at the meeting were Ministers from a new observer country, the Netherlands, as well as representatives from several international organisations, including the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA), the International Partnership for Energy Efficiency Cooperation (IPEEC), Sustainable Energy for All (SE4ALL), the United Nations Environment Programme (UNEP), the United Nations Industrial Development Organisation (UNIDO) and the World Energy Council, and a broad range of private sector leaders and entrepreneurs.

3. CEM Members thanked Minister Wan Gang and Minister Nur Bekri for the excellent organisation of this meeting and for the warm welcome to Beijing. It was noted that the meeting was particularly timely given the tremendous uptake in clean energy technology experienced by China, which is currently one of the leading investors in clean energy globally and is an active participant in the CEM.

CEM8 has taken place in China at a unique moment in time

4. The CEM8 meeting in Beijing has taken place at a historic moment. For the first time since 1970, there has been a stabilisation in global energy-related CO_2 emissions for three consecutive years and this has been coupled with global economic growth. Significant progress in emissions reduction and technology advancement including through the use of clean energy technologies has been made by CEM Members.

5. Clean energy continues to underpin a wide range of policy goals for CEM Members, varying from achieving emission reduction goals under the Paris Agreement to reducing air pollution, increasing energy security, driving economic growth and increasing access to energy.

6. As the global energy transition has gained momentum, CEM Members encouraged the continued exploration of cleaner energy production and consumption models appropriate to the diverse energy realities of each country. CEM Members recognised the full range of energy sources which they opt to use and encouraged the exchange of best practice in the development and application of the different energy technologies available.

7. The IEA presented its 2017 *Tracking Clean Energy Progress* report which provides an annual status report on the development and deployment of key clean energy technologies. As well as highlighting recent trends, it also highlighted barriers to

progress and some of the opportunities and possible areas of focus for different technologies and sectors going forward.

8. In this respect, CEM Members noted that the CEM is well placed to contribute to the advancement of clean energy goals through its ongoing technical work in the form of CEM initiatives and campaigns. These cooperative activities are a core strength of the CEM and provide a tangible way for each CEM Member to achieve its own domestic clean energy goals while also contributing to a global, collaborative platform.

The clean energy challenge demands shared global leadership

9. Following the request of Ministers at CEM7 in San Francisco, CEM Members were pleased to note that the CEM will be supported in its efforts by a new, multilateral Secretariat that has recently been established at the IEA. CEM Members looked forward to the new CEM Secretariat supporting them in their activities and facilitating their long-term engagement in the work of the CEM.

10. CEM Members recognised that this new multilateral phase of the CEM will create a greater sense of responsibility for CEM Members. To succeed, CEM Members will need to play a leadership role in realising their ambitions for the CEM. Indeed, the time has come to put this shared leadership model of the CEM into practice, with CEM Members leading in areas which align with their priorities.

11. It was highlighted that CEM Members can each make a unique contribution to the work that we are undertaking together, whether it be through the leadership of CEM initiatives and campaigns, through the provision of financial resources, or through the provision of in-kind contributions and expertise to certain work streams. Further information regarding the announcements made at CEM8 is provided in Annex A.

The Beijing meeting has given further direction to the work of the CEM

12. CEM Members took note of the progress reported by CEM initiatives across the energy spectrum, covering efficient electric appliances and lighting, 21st Century Power Partnership activities on power system transformation, and corporate sourcing of renewables. CEM Members also noted the desire to use the initiatives and campaigns to strengthen the CEM's contribution in areas such as electric vehicles, buildings efficiency, urban energy systems, and power plant flexibility.

13. The broad range of topics discussed by stakeholders from government, the private sector, international organisations and civil society in the side events at CEM8 was also noted. These generated interest in issues across the energy mix, with countries prioritising different topics depending on their respective priorities. Topics of interest including bio-fuels, regional integration of electricity markets, carbon capture utilisation and storage (CCUS), nuclear energy, investment and financing of clean energy technologies, further decarbonisation of end-use sectors and increased electrification of vehicles, which may feed in to the development of new work streams for the CEM in the future.

14. As foreseen in the Framework document for the CEM, CEM Members recognised the need for the work of the CEM to be as streamlined and as efficient as possible. They encouraged the CEM Secretariat to organise a review of existing CEM initiatives and campaigns before CEM9. The aim should be to maximise their effectiveness, and impact, to reflect the priorities of CEM Members in a balanced and sustainable

portfolio of activities, and to leverage the particular strengths and characteristics of the CEM.

15. It was also suggested that CEM Members, and the CEM Secretariat on their behalf target diverse sourcing of resources for enhancing the work of the CEM. This could include, where appropriate, financing provided by bilateral programmes, official development aid, climate financing, support from foundations, multilateral development banks, the private sector, and other funding entities. Similarly, it was noted that the CEM Secretariat and CEM Members should consider how best to use the CEM platform as a complement to bilaterally-anchored collaboration, alongside other platforms.

Looking towards CEM9

16. Finally, CEM Members expressed gratitude to the European Commission, Denmark, Finland, Norway and Sweden for their offer to jointly host the CEM9 meeting in 2018 in the cities of Copenhagen and Malmö, with assistance from the Nordic Council of Ministers. CEM Members also expressed gratitude to Canada for offering to host the CEM10 meeting in 2019.

ANNEX A: ANNOUNCEMENTS MADE AT CEM8

Launch of new CEM Campaigns and Initiatives

CEM8 resulted in thirty-one announcements related to leadership of or participation in new CEM initiatives and campaigns, in areas related to energy demand and energy systems and integration. These announcements included:

A new CEM campaign on electric vehicles

- China will lead a new EV30@30 campaign, designed to increase the sales of electric vehicles to 30% of new vehicle sales by 2030, in close collaboration with the IEA as the Electric Vehicle Initiative coordinator.

- This campaign builds on the significant progress that has been made in the transport sector recently. Deployment of electric cars has kept increasing, reaching 2 million in 2016. The CEM's Electric Vehicles Initiative (EVI) has played an important role in highlighting the potential of electric vehicles.

- The new EV30@30 campaign will be carried out in close conjunction with governments, companies, international organisations and other stakeholder groups, including other CEM initiatives where appropriate.

- Nine CEM Members announced that they would join the EV campaign (Canada, China, Finland, France, India, Japan, Mexico, Norway and Sweden).

A new CEM campaign on advanced power plant flexibility

- China, Denmark and Germany will lead the new CEM campaign on Advanced Power Plant Flexibility (APPF) which is designed to enhance the operational flexibility of power plants so that they can better integrate the increasing share of electricity generated by renewable energy technologies. The APPF participants will work closely with the International Energy Agency.

- This campaign responds to the advances that have been made in the domain of renewable energy technologies and is intended to address some of the challenges that this creates for energy and power systems.

- The APPF campaign is expected to play a pivotal role in defining international best practices, will support ambitious domestic efforts in this domain and will allow stakeholders to share experience on how to enhance operational flexibility. It will build upon the work of the CEM's Multilateral Solar and Wind Working Group and the CEM's 21st Century Power Partnership.

- Fourteen CEM Members announced that they would join the APPF campaign (Brazil, Canada, China, Denmark, the European Commission, Germany, India, Indonesia, Japan, Mexico, Saudi Arabia, South Africa, Spain and United Arab Emirates).

A new CEM initiative on sustainable cities and eco-towns

- Korea and Russia will lead a new CEM initiative on Sustainable Cities and Eco-Towns, recognising that 75% of energy is consumed in cities and that the urban

population is projected to undergo a significant increase over the coming decades.

- This initiative is intended to strengthen cooperation at the national and local levels. It will encourage governments and cities to engage in joint actions which could help to save 700 million tons of oil equivalent by 2025. It will focus, among other areas, on international benchmarking and providing opportunities to demonstrate new clean energy technologies as well as the integration of technologies.

- This initiative will also seek to improve environmental and energy problems such as improving energy access in remote or rural areas in order to contribute to a sustainable and secure energy future.

- Five CEM Members announced that they would join this initiative (China, Korea, Mexico, Russia and the United Arab Emirates.)

A new CEM campaign on the role of buildings in urban energy systems

- The European Commission and France will lead a new CEM campaign, 'Nearly Zero Energy Buildings', in partnership with the Global Alliance for Buildings and Construction (GABC) with input expected from UN Environment, the UNEP-Finance initiative, the International Energy Agency, the International Partnership for Energy Efficiency Cooperation (IPEEC), and the World Resources Institute (WRI).

- This campaign has been launched because buildings are already the largest energy-consuming sector in the world and energy consumption in this sector is set to grow 2-3 times by 2050 unless concrete and ambitious action is taken.

- This new campaign aims to advance energy efficiency policies, increase commitments by the public-private sector and create a network of experts in the transition to low-energy buildings.

- Three CEM Members announced that they would join this campaign (Canada, the European Commission and France).

Changes to leadership of and participation in CEM Initiatives and Campaigns under the new shared global leadership model

CEM8 resulted in twenty-one announcements related to leadership of or participation in existing CEM initiatives and campaigns. These announcements were made across all four thematic areas of the CEM's work: energy demand, energy supply, energy systems and integration and cross-cutting topics.

Energy Demand

- The Super-Efficient Equipment and Appliance Deployment (SEAD): the European Commission announced that it would co-lead the SEAD initiative. SEAD participants are working to create a common technical foundation to allow governments to more easily adopt cost-effective appliance efficiency policies and programmes, including through the use of incentives, awards, and procurement programmes.

- Electric Vehicles Initiative (EVI): Finland and Mexico announced their intention to join EVI, taking the total number of participants in this work stream to fourteen. EVI provides a forum for global cooperation on the development and deployment of electric vehicles, recognising the importance of reducing carbon emissions in the transportation sector and the importance of working towards energy efficiency and the mitigation of air pollution from transportation.

- Energy Management Working Group (EMWG): Canada announced that it will co-lead the work of EMWG to further strengthen national and international efforts that promote broader use of energy management systems, such as ISO 50001, around the globe. The European Commission also announced that it would begin participating in this initiative, taking the total number of participants to seventeen. UNIDO will serve as the new operating agent for EMWG.

- Energy Management Campaign: Italy announced its participation in the Energy Management Campaign. The aim of this campaign is to achieve 50,001 global ISO 50001 energy management certifications by 2020 in order to drive energy savings, cost savings and emissions reductions in the commercial and industrial sectors. Broad implementation of ISO 50001 across the commercial and industrial sectors globally could drive cumulative energy savings of approximately 62 exajoules by 2030 and avoid 6.5 Gt CO_2 – equivalent to removing 215 million passenger vehicles from the road.

- Advanced Cooling Challenge Campaign (AC Challenge): Mexico announced that it would participate in the AC Challenge, increasing the number of participants to seven. The goal of the AC Challenge is to encourage governments and industry to develop and deploy at scale super-efficient, smart, climate-friendly, and affordable cooling technologies to increase the prosperity and health of societies.

Energy Supply

- Multilateral Solar and Wind Working Group (Solar and Wind): Brazil and China announced that they would participate in the activities of the Solar and Wind initiative which now counts fifteen participants. The Solar and Wind initiative aims to promote the accelerated deployment of solar and wind technologies and to further reduce the incremental costs of providing wind and solar energy to all regions of the world, thereby creating jobs, reducing emissions, and promoting energy security.

- Corporate Sourcing of Renewables Campaign: Brazil announced that it would join the Corporate Sourcing of Renewables Campaign which aims to encourage more companies to commit to powering their operations with renewables and to deploy tools and resources to enable more companies, large and small, to do so.

Energy Systems and Integration

- 21st Century Power (21CPP): Brazil announced that it would join 21CPP, bringing the total number of participants to nine. 21CPP participants develop and share knowledge on key topics related to the transformation of the

electricity sector, increasing and applying expertise on the policies, programmes and practices required to transition toward a clean and efficient power sector.

- International Smart Grid Action Network (ISGAN): The United Arab Emirates announced their intention to join ISGAN, increasing the number of participants to twenty. ISGAN aims to improve the understanding and adoption of smart grid technologies, practices, and systems as well as providing a platform for governments to exchange experiences and best practice on smart grid polices. It is organised as an IEA Technology Collaboration Programme.

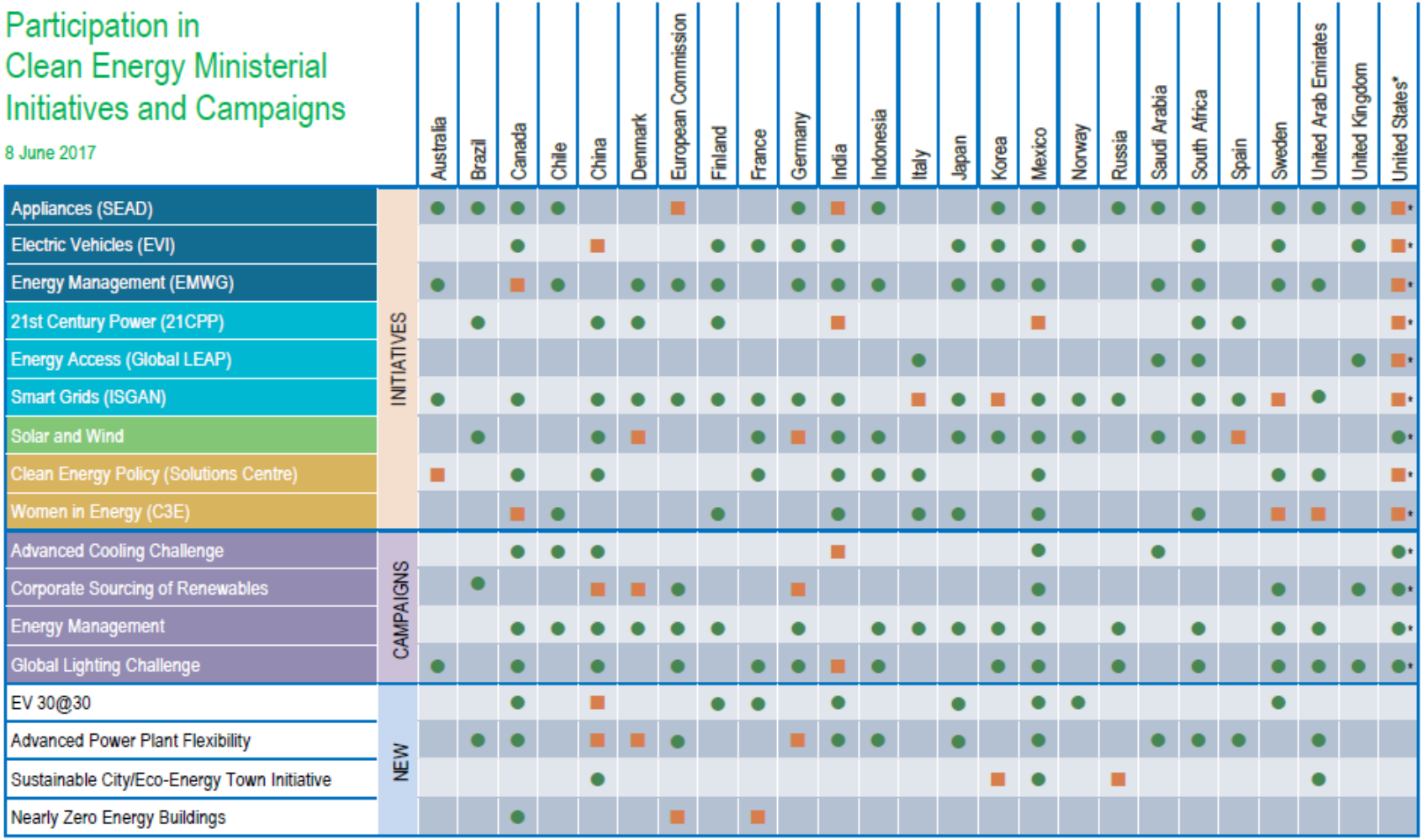
Cross-cutting issues

- Clean Energy Education & Empowerment (C3E): Canada and Sweden announced that they would co-lead a new phase of the C3E initiative focusing on the role of women in clean energy. Going forward these activities will be organised as an IEA Technology Programme known as the C3E TCP. The United Arab Emirates also indicated their intention to join and to take on a co-leadership role. Chile, Finland and Italy also indicated their intention to join the newly created C3E TCP.

- Clean Energy Solutions Centre (CESC): China and the United Arab Emirates announced that they would join the CESC. The CESC helps governments to design and adopt policies and programmes that support the deployment of transformational low-carbon technologies through a global network of experts, online training and webinars, and peer-to-peer learning. Sweden also announced that it would provide funding of SEK 2 000 000 to support the work of the CESC going forward.

Participation in Clean Energy Ministerial Initiatives and Campaigns

8 June 2017



■ Lead ● Participant

* US participation and leadership are under review

Non-CEM countries, non-governmental organisations, and private businesses also participate in selected activities and campaigns.