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[CEM8 & MI-2] >>>



>>> CEM8 & MI-2 Convened in Beijing

The Eighth Clean Energy Ministerial (CEM8) and Second Mission Innovation Ministerial (MI-2) were held from June 6 to 8, 2017. In President Xi Jinping's congratulatory letter, it was stated that "Developing clean energy represents an important task to improve the energy mix, safeguard energy security and advance ecological progress. CEM8 & MI-2 demonstrate that the international community gives great prominence to the development and utilization of clean energy technologies, and embody the global aspiration for a clean and efficient energy system." Vice Premier Zhang Gaoli addressed the opening ceremony, highlighting the leading role of innovation and common action for efficient, smart and shared development of global clean energy.

The theme this year was "Tackling challenges through innovation, working together for a clean energy transition". Ministers of 25 member countries and the European Union, heads of important international organizations in the energy field, dozens of internationally renowned entrepreneurs, and more than 1,500 Chinese and foreign guests gathered in Beijing to discuss matters of vital importance for global clean energy development. CEM and MI member countries emit 75% of the global greenhouse gases and contribute 90% of the global clean energy investment. The two mechanisms of CEM and MI have become important platforms for international cooperation in clean energy development and deployment. The event reached consensus on several important topics, including accelerating global clean energy innovation and transition, improving shared global leadership in clean energy, encouraging investment and knowledge sharing between public and private sectors worldwide, establishing public-private cooperation mechanisms, and pushing forward clean energy revolution together. During the Summit, various supporting events were also held, which featured 22 themed side events including Cutting-Edge New Energy Technology Exhibitions, the Innovation Theater which focused on clean energy innovation and entrepreneurship, International Forum on Electric Vehicle Pilot Cities and Industrial Development, Smart Grid Innovation Workshop, Clean Energy Economic Transition Forum, CCUS Ministerial Forum, as well as 5 roundtables attended by ministers, business leaders, technology developers, investors and academic experts.



[CEM8 & MI-2] >>>

At the press conference held on June 8, Minister Wan Gang of the Chinese Ministry of Science and Technology said that the Summit had accomplished remarkable results and is of great significance in several aspects. Firstly, the Summit further strengthened the important role of the 2 major mechanisms and marked a new step forward in improving a new global energy governance system and building a global energy governance structure characterized by green and low carbon. All member countries actively explored feasible pathways of energy technology development and application based on their own national situation of energy development. The 2 mechanisms provide countries with a platform for international cooperation, put forward the idea of global shared leadership, make their secretariats more multilateral, and support and promote member countries in taking national, regional, bilateral and multilateral actions. Secondly, the Summit actively spread a core message of innovation first, pushed forward influential concrete action plans, launched several initiatives and campaigns. Currently, CEM has 9 initiatives and 4 campaigns. At the current meeting, CEM kicked off 1 new initiative and 3 new campaigns, namely the Sustainable Cities/Bio Energy Towns Initiative, and EV30@30, Advanced Power Plant Flexibility and Zero-Emitting Buildings Commitment campaigns. Thirdly, the Summit actively called for public-private action and encouraged the public sector to support the R&D of clean energy, promoted the private sector to participate and invest in “innovation challenges”. It also actively built an international platform for public-private communication and exchanges between the government, enterprises and research institutes. MI launched 7 innovation challenges, namely smart grid innovation challenge, off-grid access to electricity innovation challenge, carbon capture innovation challenge, sustainable biofuels innovation challenge, converting sunlight innovation challenge, clean energy materials innovation challenge, and affordable heating & cooling of buildings innovation challenge. China announced its participation in 6 of them, including two innovation challenges in which China acting as a lead country.

The Summit also released CEM8 Chair Summary and MI-2 Chair Summary and an *MI Action Plan*, focusing on cooperation between national activities and members, as well as cooperation between enterprises, industries and investors in the next 5 years.

The Summit also adopted a decision that the 2018 CEM-MI Summit be jointly held by Nordic countries (Denmark, Finland, Norway and Sweden) and the European Union and that the 2019 Summit be staged in Canada.

(Source: Ministry of Science and Technology, June 8, 2017)

>>> Innovation Theater Held during CEM8

As highlight event of the Eighth Clean Energy Ministerial and the Second Mission Innovation Ministerial, the Innovation Theater was opened at the China National Convention Center in Beijing on June 7, 2017. Vice Minister Li Meng of the Ministry of Science and Technology attended and addressed the opening ceremony. Featuring a style of TED talks, the Innovation Theater showcased emerging and potential clean energy innovations, inspirations, new results and new products from China and around the world. Entrepreneurs, scientists, R&D leaders and other organizations engaged in active and creative interactions on the theme of clean energy.

Guest speakers at the Innovation Theater focused on the five core fields of electricity, transportation, manufacturing, buildings and agriculture, specifically involving such innovation themes as energy interconnectivity, integration between agriculture and renewable energy, PV technology innovation, digital energy solutions, solar energy utilization & innovation, electrified highway freight, electric transport & logistics, offshore wind power, tidal energy utilization, financial innovation & green development, plasma gasification, and geothermal energy technology. All these are cutting-edge innovation technologies in their respective field, offering extremely promising investment and development prospects.

(Source: Website for China International Science and Technology Cooperation, June 14, 2017)

>>> 2017 International forum on EV Pilot Cities and Industrial Development Held

On June 6, 2017, the 2017 International Forum on Electric Vehicle Pilot Cities and Industrial Development was held in Beijing. As one important side events of the Eighth Clean Energy Ministerial and the Second Mission Innovation Ministerial, the Forum carried the theme “Deepen Multilateral Global Cooperation, Enable E-mobility Transformation”. Over 300 guests from government departments, enterprises, universities, research institutions and industry organizations from 13 countries and regions including China, the United States, Britain, France, Germany, Norway, the Netherlands, Switzerland, South Korea and Japan attended the meeting. Wan Gang, Minister of the Ministry of Science and Technology, IEA Executive Director Fatih Birol, Governor of California Jerry Brown, and Shanghai Executive Vice-Mayor Zhou Bo addressed the Forum.

In his address, Minister Wan Gang pointed out that major progress has been made in new energy vehicles in the country. As of the end of 2016, China’s new energy vehicle output topped 500,000, with the new energy vehicle population exceeding 1 million, accounting for 50% of the world’s total. China has also made rapid progress in key components and power cell industrialization. Since playing a leading role in the large-scale development of EVs in 2010, China has increased EV cell energy density by 100% and reduced cost by around 50% every 4 years. Currently, EVs are gradually developing towards ideal products with full market competitiveness in the future. Policy research and formulation are also changing as a result. In his speech, Minister Wan Gang reviewed the course of development of Shanghai as an EV pilot city, saying that China will actively work on charging infrastructure construction, vehicle safety, emission reduction effect and EV recycling and reuse.

(Source: Ministry of Science and Technology, June 6, 2017)

>>> Clean Energy Economic Transition Forum Opened

As an important side event of CEM8 and MI-2, the Clean Energy Economic Transition Forum was held in Beijing on June 6. The Forum attracted entrepreneurs, economists and energy experts from around the world to engage in in-depth discussions on green growth, green employment, green finance, continuous prosperity through innovation and other topics. Vice Minister Wang Zhigang of the Chinese Ministry of Science and Technology, Executive Director Fatih Birol of the International Energy Agency, Director-General Adnan Z. Amin of the International Renewable Energy Agency and other senior officials attended and addressed the Forum.

In his opening address, Vice Minister Wang Zhigang of the Ministry of Science and Technology pointed out that pushing forward economic transition through clean energy development is an inevitable choice of China's economic development and a specific action for China to cope with global climate change as a responsible power. China will unswervingly put the new development thinking into practice and push forward the energy revolution through innovative and green development. Executive Director Fatih Birol said that the International Energy Agency would work closely with China and that such cooperation would benefit not only the Agency but also China and the world as a whole. Director-General Adnan Z. Amin remarked that China is now the center of global transformation and hoped that the International Renewable Energy Agency could continue to collaborate with China and 150 other members and further expand the global deployment of renewable energy.

(Source: Ministry of Science and Technology, June 6, 2017)

>>> 1st Smart Grid Innovation Workshop Held

On June 6, 2017, the 1st Smart Grid Innovation Workshop was held at the China National Convention Center in Beijing. The meeting was an important side event of the Eighth Clean Energy Ministerial and the Second Mission Innovation Ministerial. Vice Minister Li Meng of the Ministry of Science and Technology, Vice President Zhang Jie of the Chinese Academy of Sciences and other officials attended the meeting and made their speeches. Indian Minister of Science & Technology and Earth Sciences Harsh Vardhan, Italian Vice Minister of Economic Development Ivan Scalfarotto, and Patrick Child, Deputy Director General of DG Research and Innovation of the European Commission and Chairman of the MI Steering Committee also attended the meeting. More than 150 delegates from 20 national and international organizations, universities, research institutions and enterprises took part in the workshop.

As one of the 7 innovation challenges within the MI Framework, the Smart Grid Innovation Challenge is committed to the development and demonstration of the smart grid technology under different conditions and form a total technical solution that can accommodate 100% renewable energy-based power generation by 2030. China, India and Italy are the joint lead countries for the Challenge, with the participation of 19 countries and one regional organization, including Australia, Brazil, Canada, China, Denmark, Finland, France, Germany, India, Indonesia, Italy, Mexico, Norway, Saudi Arabia, South Korea, Sweden, the Netherlands, the United Kingdom, the United States and the European Union.

At the Smart Grid Innovation Challenge Workshop, Vice Minister Li Meng pointed out that smart grid has become a grand trend of global grid development and an important frontier of science and technology innovation. Smart grids will develop in the direction of widely interconnected, highly intelligent, open, interactive, secure and efficient global energy interconnected grids, and this new trend calls on all countries to work together, pursue development through innovation and achieve win-win outcomes through cooperation, and speed up the global development of smart grids and the green transition of the world economy. Vice Minister Li Meng remarked that the purpose of the “Smart Grid Innovation Challenge” within the MI framework is to achieve 100% renewable energy grid integration, jointly explore the technology realization pathways for smart grids and discuss collaborative development models with participation from all parties. All these will have a great significance for promoting strategic cooperation in the global smart grid field.

(Source: Ministry of Science and Technology, June 6, 2017)



Overview from CEM1 to CEM7



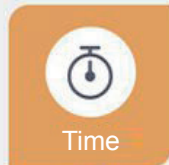
Introduction



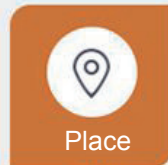
In June 2016, President Xi Jinping announced that China hold CEM8 in June 2017. Started in 2010, the international meeting of CEM aims to promote transformation to low-carbon and climate-friendly technologies and accelerate global deployment of clean energy technologies. Initiated by US Department of Energy, CEM1 was convened in Washington in July 2010 and attended by ministerial delegates from 23 parties including China, Australia, Brazil, Canada, Germany, India, Italy, Japan, ROK, Mexico, Russia, South Africa, the UK, the US and the UAE, as well as EU and IEA.

[History of CEM] >>>

CEM1



July 19-20, 2010



Washington, US



Minister of Science and
Technology Wan Gang

Content

Minister Wan gave a snapshot of our efforts and achievements in R&D, demonstration and promotion of clean energy technologies, major research directions in clean energy and priority areas for international cooperation; moreover, he offered suggestions for cooperation. China and the US exchanged views on strengthening clean energy S&T cooperation and China-US Innovation Dialogue.



Achievements

11 cooperation initiatives were announced at the meeting, including EV, energy-saving electronic devices and equipment, smart grid, energy saving in industry and construction, solar and wind energy, off-grid solar power and semiconductor lighting, CCUS, bio-energy and hydropower. China and the US co-led in **launching the Electric Vehicle Initiative (EVI)**, and got actively involved in implementing the initiatives of smart grid and CCUS.



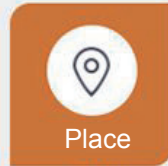
As an important component of the EVI, MOST worked with Shanghai Municipal Government to build the China (Shanghai) Electric Vehicle International Pilot City, and with IEA to convene the **International Forum on Electric Vehicle Pilot Cities and Industrial Development** on April 22, 2011.

[History of CEM] >>>

CEM2



April 6-7, 2011



Abu Dhabi



Minister of Science and
Technology Wan Gang

Content

CEM2 focused on **clean energy supply, energy efficiency and public funding for clean energy innovation and promotion**. Progress of each initiative since CEM1 was announced.



Minister Wan reviewed China's policy actions and achievements in energy saving and emission reduction as well as renewable energy during the **11th Five-year Plan period**. Delegates from all sides spoke highly of China's progress in clean energy technology R&D and promotion, while many countries expressed their **willingness to strengthen cooperation with China in clean energy**.

[History of CEM] >>>



Achievements

Ministers believed that countries should set clean energy goals and formulate development plans, and ensure policy continuity; develop clean energy in light of respective situations, and focus on fitting into existing energy system and integration of various technologies like power grid and heat supply system; highlight business model innovation, get financial capital involved in clean energy industry development; facilitate industry-academia-research synergy and encourage involvement of enterprises and the general public.



CEM2 approved the [Chair Summary](#), announced launch of [Sustainable City Network Initiative](#), and decided to hold CEM3, CEM4 and CEM5 respectively in the UK, India and ROK.

[History of CEM] >>>

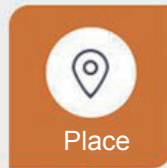


CEM3



Time

April 25-26, 2012



Place

London, UK



Chinese Delegate

the then Vice Minister of Science and Technology Cao Jianlin

Content

While centering on the progress of the 11 initiatives launched in CEM1, CEM3 discussed the policies, programs and innovation strategies for greater energy efficiency and clean energy supply, as well as the role and future actions of CEM. During the meeting, the then UN Secretary General Ban Ki-moon sent a video message on SE4ALL. Eight public-private roundtables were held, concerning large-scale energy efficiency programs, EV, comprehensive use of multiple renewable energies, renewable energy financing, ultra-high energy efficiency device, CCUS, solar PV and energy efficiency financing.

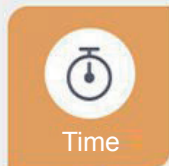
Outcomes

CEM3 approved the [Chair Summary](#), announced launch of new initiatives such as [Global Sustainable City Network Initiative \(GSCN\)](#).



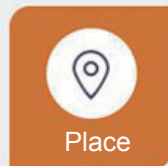
[History of CEM] >>>

CEM4



Time

April 17-18, 2013



Place

New Delhi, India



Chinese Delegate

Minister of Science and Technology Wan Gang

Content

CEM4 listened to the report of clean energy progress, reviewed the progress of 13 initiatives, and discussed how to improve energy efficiency, ensure clean energy supply and further innovation cooperation on clean energy technologies. The then [Indian Prime Minister Singh](#) addressed the opening ceremony, and [UN Secretary General Ban Ki-moon](#) and World Bank President Jim Yong Kim both delivered video speeches. [Minister Wan](#) introduced the development plan and technical progress of clean energy, as well as the cooperation progress of 6 initiatives China has been involved (EV, international smart grid action network, CCUS and global sustainable city network).



Achievements

CEM4 [reached consensus on future actions of coordinating related initiatives, completing clean energy financing report and setting up hi-level consultation group.](#)



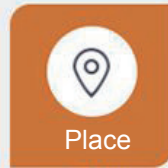
To facilitate bilateral S&T cooperation with India, [Minister Wan met with Shri Sudini Jaipal Reddy](#), Indian Minister of Science & Technology & Earth Sciences, reaching consensus on earthquake, response to climate change, telescope and digital library etc.

[History of CEM] >>>

CEM5



May 12-13, 2014



Seoul, ROK



the then Vice Minister of Science and Technology Cao Jianlin

Content

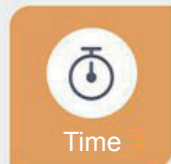
CEM5 discussed clean energy progress, global trend of clean energy investment and CEM strategy, listened to progress of 13 CEM initiatives, key information and policy suggestions, explored on how to improve energy efficiency and clean energy supply and accessibility through policies, projects and innovative strategies.



The then **Vice Minister Cao Jianlin** gave a snapshot about China's latest development of clean energy technology development, and major actions in low-carbon tech R&D and demonstration. He supported ROK's idea on the initiative of the market accessibility of clean energy products, and illustrated the realistic significance of removing trade barriers and improving clean energy product market by giving examples of wind, solar and LED products in China; stressed the successful cases and commercial feasibility of carbon use in terms of choosing CCS or CCUS and the approaches; introduced the China's experience in typical energy saving industries and challenges in energy consuming industries.

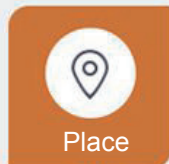
[History of CEM] >>>

CEM6



Time

May 27-28, 2015



Place

Merida, Mexico



Chinese Delegate

Minister of Science and Technology
Wan Gang and representatives from
NEA and NDRC

Content

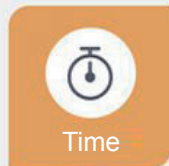
CEM6 discussed issues on CEM initiatives, new opportunities, progress of world clean & renewable energy, and clean energy financing. [Six public-private roundtables](#) were held during the event.



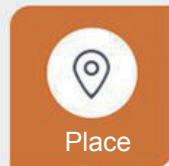
Minister Wan made four observations in [terms of developing clean energy through international cooperation, tackling climate change and realizing sustainable development](#): first, a firm shared political will and clear national goals are required for clean energy transition; second, formulate incentive policies in an effective manner; third, develop clean energy technologies for more options for the people; Fourth, develop revolutionary clean energy technologies and refine technologies for efficient and clean use of conventional fossil fuel. Minister Wan said that China gives great prominence to the distinct role of CEM, hoping that members further cooperation and taking pragmatic actions. At the awarding ceremony for clean energy product, Minister Wan granted [the award of outstanding achievement in highly-efficient motors](#) to Nanyang Explosion Protection Group.

[History of CEM] >>>

CEM7



June 1-2, 2016



San Francisco, US



the then Vice Minister of Science and Technology Yin Hejun and representatives from NDRC and NEA

Content

President Xi Jinping sent a letter of congratulations, announcing that China will hold CEM8. Minister Wan delivered a video speech, congratulating on the closing of the event. The delegates reached consensus after in-depth discussions on S&T progress and cooperation outcomes, recent cooperation initiatives and future public-private mechanisms.



Outcomes

CEM7 discussed and approved the framework document of CEM, confirming that CEM Secretariat be transferred from US DOE to IEA. Three new campaigns were launched, namely Energy Management: A Drive to 50,001 Energy-saving Partners, Advanced Cooling and Corporate Sourcing of Renewables. Yin announced that China would participate in all the three campaigns.



At MI, the 20 initiating countries welcome European Commission's participation as the 21st member on behalf of the EU. Members announced the baseline of R&D input in clean energy, doubling program and priority areas. At present, the 21 MI members invested an annual total of 15 billion dollars in clean energy R&D, while the participating members would seek to double that amount around 2020.