13 CLIMATE ACTION

Energy Saving and Low Carbon Emission Contribute to Sustainable Development

SUMMARY REPORT

NCSC

全球南南发展中心项目
Global South-South Development Center Project

Content

Abstract

August 25th, 2021 is the ninth ‘National Low Carbon Day’. In order to promote all sectors of society to participate in energy conservation and low-carbon activities, the online forum ‘Energy Saving and Low Carbon Emission Contribute to Sustainable Development’ was jointly held by National Center for Climate Change Strategy and International Cooperation (hereinafter referred to as NCSC) and China International Center for Economic and Technical Exchanges (hereinafter referred to as CICETE) and supported by the Department of Climate Change of Ministry of Ecology and Environment (hereinafter referred to as MEE).

Dr. DU Xiangwan (former Vice President and academician of the Chinese Academy of Engineering, Honorary Director of National Committee of Experts on Climate Change) and Ms. WANG Ning (Deputy Director General of CICETE) attended the forum and delivered the opening speech. Mr. ZHOU Dadi (former superintendent of Energy Research Institute of National Development and Reform Commission), Mr. ZHAO Changying (Dean of Low Carbon College, Shanghai Jiao Tong University) and Mr. MENG Zaoming (General Manager of Beijing Peace Carbon Environmental Co., Ltd) were invited to make a keynote speech.

Dr. ZHU Liucai (Chief Expert of Foreign Environmental Cooperation Center, MEE), Ms. GUO Yuanyuan (General Manager and Managing Editor's assistant of China Environment Publishing Group and《Environmental Protection》periodical office's manager), Ms. MIAO Hong (Director of Sustainable Energy Project in World Resources Institute Beijing Office), Mr. LIU Qiang (Project Director of Children's Investment Fund Foundation in Beijing Office), Dr. WANG Ke (Associate Professor of School of Environment& Nature Resources, RENMIN University of China), Ms. WANG Xiangyi (Vice Chairperson & Secretary General of China Association for NGO

Cooperation) and Mr. CHEN Liangzhong (Principal of Operation Earth) attended this seminar and in the end Mr. SU Mingshan (Vice Director of NCSC) summarized it.

The forum was co-hosted by Ms. ZHANG Wei, Division Chief, Division II of UN Programmes, CICETE, and Mr. ZHANG Zhiqiang, Director of the Division of International Cooperation and Exchange of the NCSC.

Background

On September 22, 2020, at the general debate of the 75th Session of the United Nations General Assembly, President XI Jinping announced that China will scale up its Intended Nationally Determined Contributions by adopting more vigorous policies and measures to peak carbon dioxide emissions before 2030 and achieve carbon neutrality before 2060. “Carbon peak and carbon neutral” is a broad and profound systemic economic and social change that is vital to the sustainable development of China and the building of a community with a shared future for mankind.

Since 2013, the third day of China's National Energy Conservation Publicity Week has been designated as "National Low-carbon Day" in order to popularize climate change knowledge, publicize low-carbon development concepts and policies, encourage public participation, and promote the implementation of the task of controlling greenhouse gas emissions. With the approval of the State Council, the 2021 National Energy Conservation Publicity Week will run from August 23 to 29, with the theme of "Energy Conservation, Carbon Reduction, Green Development". The National Low-carbon Day is on August 25, with the theme of "Low-carbon Life, Green Future".

To support the "National Low-carbon Day", popularize

knowledge on climate change, promote the development concept of energy saving and carbon reduction, and encourage the whole society to actively participate in the “Carbon peak and carbon neutral” action, CICETE and NCSC jointly held the online Forum on “Energy Conservation and Low Carbon for Sustainable Development” during the National Low Carbon Day on August 25.

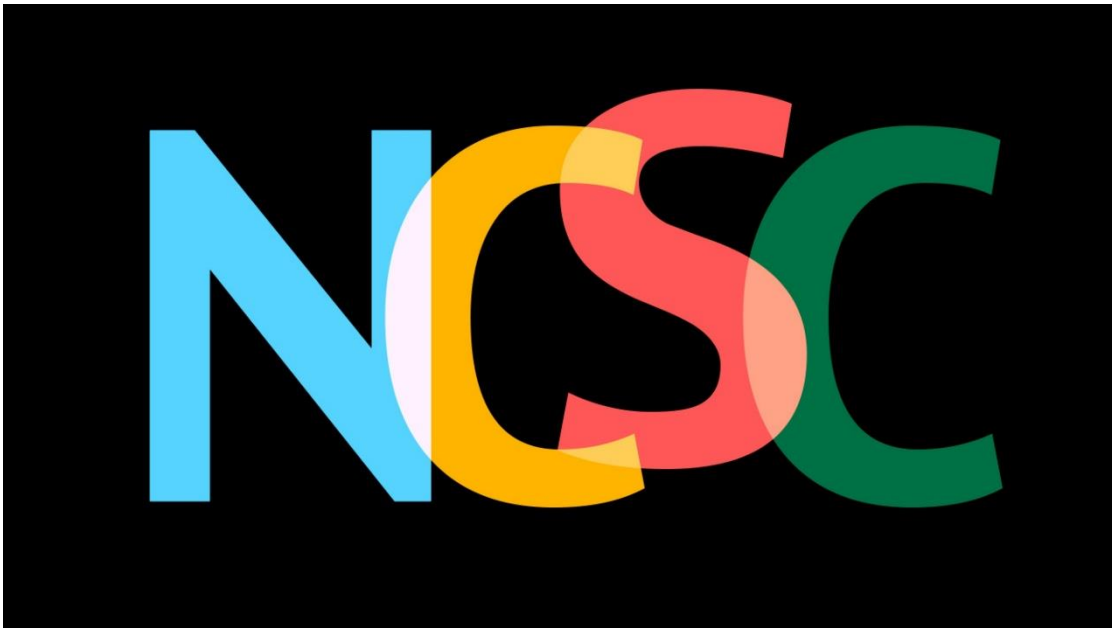
中国国际经济技术交流中心
China International Center For Economic And Technical Exchanges

Directly under the Ministry of Commerce, CICETE was founded in 1983 with the approval of the State Council. CICETE’s main function, delegated by the Ministry, is to coordinate the cooperation between China and UNDP, UNIDO including implementing their assisted programs to China, and to manage projects of general goods supply, South-South

Cooperation Assistance Fund projects, Human Resource Development Cooperation projects under the China-Aid programme with other developing countries. CICETE has also been actively organizing high-level conferences, exhibitions and professional trainings, invites international short-term and long-term experts, and provides project management service to international organizations, government agencies and enterprises. In addition, CICETE has also been cooperating actively with international non-governmental organizations and enterprises.

Mission Statement: CICETE is a specialized project management agency for promoting multilateral and bilateral economic and technical exchanges and international development cooperation, improving self-development capacity of assisted countries and building a community of shared future for mankind, to support China's economic and social development and the achievement of all-round Xiao Kang Society and UN Sustainable Development Goals.

Scan for more information：



The National Center for Strategic Research and International Cooperation on Climate Change (NCSC) is a state-level public institution directly under the MEE of the People's Republic of China. It is also a national strategic research institution and a window for international cooperation and exchange on climate change in China.

The main responsibilities include organizing and carrying out research on climate change policies, regulations, strategies and plans; undertaking technical support for domestic implementation, statistical accounting and assessment, carbon emission trading management, international negotiation, foreign cooperation and exchanges, etc. conducting dialogue, advocacy, capacity building and advisory services for think tanks on climate change; responsible for CDM (clean development mechanism) project

management; undertaking other assignments assigned by the MEE. NCSC officially joined the China South-South Cooperation Network in 2021.

全球南南发展中心项目
Global South-South Development Center Project

The Global SSDC Project was jointly initiated by United Nations Office for South-South Cooperation (UNOSSC) and CICETE. During its' ten-year journey, the China SSDC Project has achieved encouraging results in different areas, such as, integrating South-South cooperation resources, strengthening public-private partnerships and promoting economic and technical cooperation between China and other developing countries.

According to the Statement of Intent signed between the Ministry of Commerce of China and UNOSSC, the project has been upgraded as Global SSDC since June 2019.

The Global SSDC project will build on the achievements of the China SSDC project and reprofile itself as a global network of centres of excellence for South-South cooperation in advancing SDGs and aims to engage southern centers of excellences outside China, and build sub-centers of excellence in line with regional priorities in order to become a globally-focused platform to facilitate and implement South-South and triangular cooperation (SSTC).

Guest Introduction

Address Guests

DU Xiangwan: presided over major consulting and research projects such as “Research on scientific and technological issues to deal with climate change” of the Chinese Academy of Engineering, participated in the demonstration of the national strategic objectives of low-carbon development in 2020 and 2030, participated in many United Nations Climate Change Conferences as a senior consultant of the Chinese delegation, and served as the director of the second national climate change expert committee, honorary director of the third national climate change expert committee. He was elected

academician of Chinese Academy of Engineering in 1997, foreign academician of Russian National Academy of Engineering Sciences in 2006 and vice president of Chinese Academy of Engineering in 2002. He has won one national special prize for scientific and technological progress, one first prize, two second prizes, and more than ten first and second prizes at the ministerial level.

WANG Ning: Deputy Director General of CICETE, responsible for guiding the implementation and management of China's foreign aid general goods supply projects. She has been engaged in the United Nations talent exchange projects and the procurement management of foreign aid general goods supply projects for many years. She once served as the head of the United Nations Procurement Promotion Association and made great achievements in the field of human resource management of public institutions. She owns bachelor degrees in engineering and economics, and rich experience in international project management and general goods supply procurement management.

Keynote Speech Guests

ZHOU Dadi: He once served as director of the Energy Research Institute of the National Development and Reform Commission. He is currently the vice president of China Energy Research Association, the chairman of the energy economy professional committee, the director of China Sustainable Development Research Association, the chairman of Beijing Energy Association, the senior consultant of China National Offshore Oil Corporation, the member of the energy field expert committee of the national “863 Plan”, the member of the second science and Technology Committee of the United Nations Global Environment Facility, the director of the editorial board of China Energy magazine and the initiator of Beijing Energy Efficiency Center. He is engaged in energy economy, energy policy and energy system analysis and research, has in-depth research on China's energy import policy, energy price reform, high-quality energy structure and energy efficiency, and received high reputation in the energy research field at home and abroad in terms of sustainable energy development, global climate change and other issues.

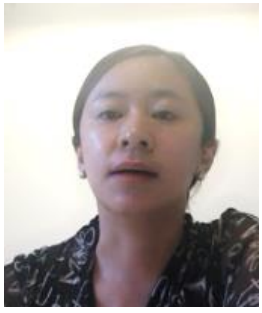
ZHAO Changying: Dean of the China-UK Low-Carbon College, Shanghai Jiao Tong University. After studying in the UK, he served as a professor at Shanghai Jiao Tong University and the dean of the China-UK Low-Carbon College and a national special expert after returning to China. At the same time, he served as the executive director of the Asian Thermal Sciences Federation and the director of the Chinese Engineering Thermophysics Society. He also served as the editor-in-chief of nature carbon neutrality and the editor-in-chief of many international journals. There are many research results and patents in the field of thermal energy and low carbon.

Meng Zaoming: General Manager of Beijing Peace Carbon Environmental Technology Co., Ltd. As a senior expert in carbon trading, he founded Beijing Peace Carbon Environmental Technology Co., Ltd. in 2010. It is a certification body approved by the National Certification and Accreditation Commission, providing quality services to more than 2,000 enterprises and more than 100 local governments across the country. Prior to the founding of Peace Carbon Environment, he served as the Chinese project manager of the Bill Gates Foundation Carbon Fund and managed dozens of clean mechanism projects. In 2016, “China’s

Carbon Emissions Trading Practical" was compiled.

Seminar Guests

ZHU Liucai: Chief expert of the Foreign Cooperation and Exchange Center of the MEE, expert of the special government allowance of the State Council. Responsible for a number of major social science fund projects, has many years of research experience in the field of environment and climate change, and has played a significant supporting role in international climate negotiations.



Guo Yuanyuan: Currently the assistant to the chief editor of China Environment Publishing Group Co., Ltd., and the executive director, general manager and chief editor of "Environmental Protection" Magazine Co., Ltd. she used to be the director of the Academic Book Publishing Center of China Environmental Publishing Co., Ltd., and the vice chair of Zhonghuan International Investment Holding Group Co., Ltd.

Miao Hong: Director of the Sustainable Energy Project of the Beijing Representative Office of the World Resources Institute. Served as Director of the Office of China's Renewable Energy Projects in the field of Renewable Energy, Global

Environment Facility and World Bank.

LIU Qiang: Project Director of the China Office of the British Children's Investment Fund. A number of achievements have won awards from the Energy Bureau of the National Development and Reform Commission, and many books on energy carbon emissions and low-carbon city development have been published. Consultant expert of International Energy Agency, used to serve as senior visiting scholar at International Institute of Applied Systems Analysis and Asian Institute of Technology.

WANG Ke: Associate Professor of School of Environment, Renmin University of China. Executive director of the Energy and Climate Project Group of Renmin University of China, deputy director of the Belt and Road Research Center of Renmin University, and member of the Energy System Engineering Committee of the Energy Research Society.

WANG Xiangyi: The vice chair and secretary-general of the China Association for the Promotion of International Non-governmental Organization Cooperation, who is fully responsible for the management of the organization. She has

extensive experience in the fields of climate change, corporate social responsibility, and environmental education. In 2007, she began to support Chinese non-governmental organizations to establish a non-governmental climate action network, through capacity-building training, follow-up UN climate negotiations, policy research, and local actions to contribute non-governmental forces to the response to climate change. In 2012, she began to promote the integration of climate change into the curriculum of primary and secondary schools. Prior to this, she worked as a forest project consultant in the WWF Beijing office.

CHEN Liangzhong: Co-founder of Operation Earth. In his early years, he served as a consultant for the U.S. Environmental Protection Agency's China-US Ozone Protection Project, a consultant for the World Bank China to protect ozone, and a consultant for the United Nations Environment Program's North Korea Protection Project. Served as the vice president of the US-China Environmental Fund and the China representative of the International Animal and Environmental Protection Association. He is also the coordinator of the US Gates Foundation and the Chinese Grotto Preservation Project.

Highlights

Guest Speech

Dr. DU Xiangwan: China has made great efforts in energy conservation and achieved remarkable outcomes, the amount of energy saved by China has accounted for about half of the global total in recent years. In spite of this, China still has great potential to improve efficiency, save energy and reduce carbon emission. Our current carbon emission intensity is 1.3 times than that of the world average, which means the energy consumption can be further reduced about 30% if we bring down the intensity to the world average level. Therefore, it is necessary to restrain the rapid development of the dual-high industry, adjust our energy structure, and improve energy efficiency to achieve the goal of peak carbon emissions and carbon neutrality, and also conducive to promoting the sustainable development of our country.

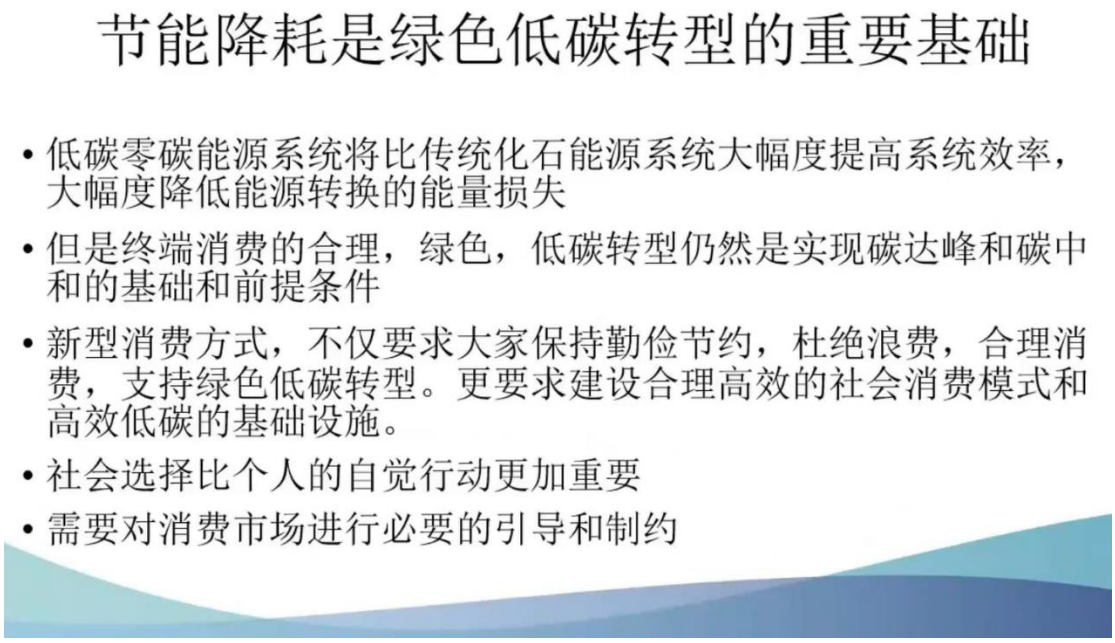
Ms. WANG Ning: Climate change is affecting every country and every person in the world, and tackling climate change has become the greatest challenge of our time. China has worked proactively to fulfill the Paris Agreement and protect the symbiotic earth by continuously optimizing the industrial energy structure and taking the path of green and low-carbon circular development. In 2020, the carbon intensity of China has dropped by 48.4% compared with 2005, and the proportion of clean energy has reached 24.3%, with the installed wind power and photovoltaic capacity accounting for more than 30% of the world, and the sales of renewable energy vehicles accounting for 55% of the global total. Although we have garnered remarkable achievements, the challenges are still arduous. In 2021,

China formally passed the Outline of the 14th Five-Year Plan for National Economic and Social Development and the Long-Range Objectives through the Year 2035, which clearly states the importance to promote green development and achieve the goal of peak carbon emissions and carbon neutrality. The green and sustainable development is not only a principle to be followed by all walks of life across the country, but also a norm for people's behavior.

Keynote Speech

ZHOU Dadi: The primary purpose for Paris Agreement is to steady global temperature rise within 2 degree Celsius by the end of this century, and strive to achieve the 1.5 degree target. This also indicates that the global carbon neutral goal should be achieved before 2050. To achieve the goal of peaking carbon, the increase in global greenhouse gas emissions must decline rapidly from 2020, otherwise the negative emissions after 2050 must be

used to neutralize the excess emissions before 2050. The reason why China proposes to reach the peak by 2030 and carbon neutrality by 2060 is to strive to achieve the 1.5 degree target. Achieving this dual carbon goal is an uphill battle, and only through the low-carbonization of the entire energy system can the total emissions be truly reduced. To achieve the goal of peaking before 2030, the growth rate and increment of energy consumption during the 14th Five-Year Plan period will need to decline year by year. Therefore, during the 14th Five-Year Plan period, we should focus on promoting the following aspects: first, we must effectively increase energy conservation and consumption reduction, and make full use of the energy-saving potential; second, we must accelerate the development of non-fossil energy; third, we must strengthen the necessary guidance and constraints to consumption market.



ZHAO Changying: China faces a series of challenges in achieving carbon neutral goal: First, China's current energy structure is a high-carbon system; second, China's total carbon emissions are large and still growing. Therefore, China would have to pay a huge price to achieve carbon neutrality; third, the time for China to achieve carbon neutrality is tight. Other developed countries have already reached the peak. The transition period from peaking to neutralization is around 50-80 years, while China has not yet reached the peak and the transition period is targeted to 30 years; fourth, it is difficult to decouple China's economic growth from carbon emissions. China is still in the industrialization stage, and energy demand will continue to rise.

There is a strong coupling relationship between economic development and carbon emissions. From 2016 to 2060 China's

overall energy consumption forecast, China's overall energy consumption demand growth rate is very small. However, future energy consumption will be more concentrated on electricity, from 30% of current electricity consumption to more than 70%. Therefore, the main energy storage methods in the future will also focus on electric energy storage.

MENG Zaoming: The government will guide companies to formulate enterprise-level carbon peaking action plans. For companies, energy-intensive industries will be included in the national carbon trading market, to accelerate industry reshuffle, eliminate outdated products and production capacity, and encourage the application of new equipment and new processes. From the perspective of enterprises participation in the realization of the dual-carbon goals, it mainly includes the following six aspects: first, how to optimize the industrial structure and layout under the current dual-carbon goals; second, actively promote the transformation of energy consumption structure ; The third is to prepare relevant plans for low-carbon development of enterprises; the fourth is to establish an enterprise-level carbon emission management system; the fifth is to carry out energy audits and energy-saving diagnosis; the sixth is to

actively participate in carbon trading and carbon markets.

Panel Discussion

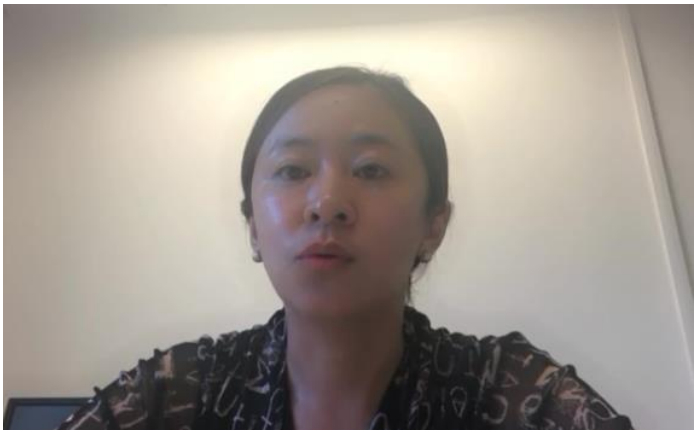
During the panel discussion session, the participating experts discussed how energy conservation and low carbon can contribute to sustainable development and how to achieve the dual-carbon goals from their respective professional fields, and expounded their respective views on top-level design, policy frameworks, public participation, and international cooperation.

Dr. ZHU Liucai: When tackling with the challenge of climate change, it is necessary to learn from General Secretary XI

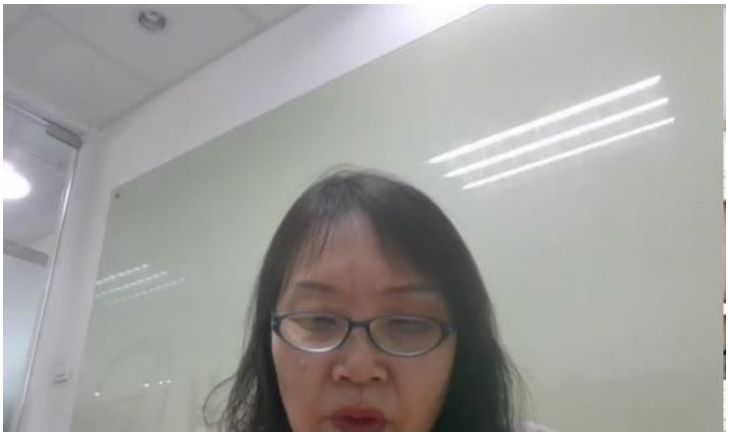
Jinping's guidance and logical framework on the ecological civilization governance system. From the perspective of sustainable development, the modern climate governance system should run under the leadership of the Party committee and government, and with the joint participation of enterprise entities, social organizations, and the public. It is also recommended that natural sciences and social sciences should be combined to form more effective institutional arrangements and explore new

technological paths.

Ms. GUO Yuanyuan: Our media institution should play an important role in the publicity and guidance during the joint promotion of sustainable development and green and low-carbon transformation. And fully reflect China's advanced experience and practices in carbon neutrality, ecological civilization construction, particularly the progress made in response to risks from climate change as well as in the green and low-carbon development. Also help to mobilize the whole society to participate in low-carbon actions and continue to raise the society's awareness of in tackling climate change.



Ms. MIAO Hong: The epidemic has put greater pressure on China's energy conservation and emission reduction. In terms of energy supply structure, it is necessary to build a renewable energy-driven power system. In the energy consumption structure, the increase in electrification rate is an important approach to realize the energy transition. The green power consumption of enterprises is the driving force to promote the low-carbonization of China's power system on the consumer side, but it still faces challenges and obstacles. For instance, the direct purchase of renewable energy still lacks clear policies or rules, the installed capacity of the distributed renewable energy power system built by enterprises is limited, and the green certificate issuance mechanism is still in its infancy, which all requires continuous actions and efforts.



Mr. LIU Qiang: The direction of low-carbon transformation is coordinated with the economic development. Although the transformation process requires a lot of investment, the input-output and rewards brought by it are huge, it is also an opportunity

for industrial development. We should realize that only by taking the path of low-carbon transformation can help us shield from possible economic and financial risks of stranded assets in the future. The huge values and benefits in ecology, environment and

health brought about by the low-carbon transition also need to be strengthened and incorporated into the formulation of decision-making or related action plans. Tackling climate change and promoting low-carbon transformation are issues that involve all aspects of the economy and society, which require international communication and global win-win cooperation.

Dr. WANG Ke: It is necessary to strengthen society's consensus on climate change and dual-carbon goals, and take measures such as setting up general education courses in response to the

Ministry of Education's call, broadening the coverage of related science popularization and dissemination. Electrification and decarbonization of the power sector are important ways to achieve carbon neutrality and emission reduction requirements, but it does not mean unrestricted liberalization of low-carbon electricity. On the contrary, energy-saving and emission-reduction work under the dual-carbon background needs to be further strengthened and supplemented by supporting incentive policies and measures to decarbonize under the premise of tapping the potential of energy saving and electricity saving.

Ms. WANG Xiangyi: The CANGO has some work experiences worth sharing in tackling climate change. On the international front, it has initiated a non-governmental climate action network, carried out exchange projects of Chinese non-governmental organizations, and held an East Asia Climate Forum to tell the international community the story of China's non-governmental response to climate change. These measures have enhanced mutual trust and global cooperation. On the domestic front, the CANGO has

launched China's climate change education program and worked as the role of a platform to integrate all parties to work together, and promote the dual-carbon goal at the action level.

Mr. CHEN Liangzhong: Teenagers have played an important role in tackling the challenges of climate change. Operation Earth, as China’s first international field research volunteer organization, mobilizes the public, especially teenagers to directly participate in field research projects. Besides, another Climate Leaders Inter-School Partnership Program has been launched, which take practical actions to tackle climate change and make energy-saving and emission-reduction commitments.

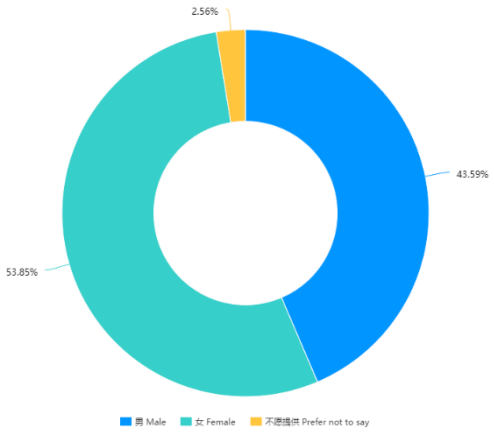
Post Webinar Survey and Assessment

According to the questionnaire survey after the online forum, nearly 200 representatives from different fields attended the conference, among which 53.85% were female and 43.59% were male (2.56% of the participants did not want to provide gender information), showing a basically balanced gender ratio. Most of the representatives came from public sector, private sector and university.

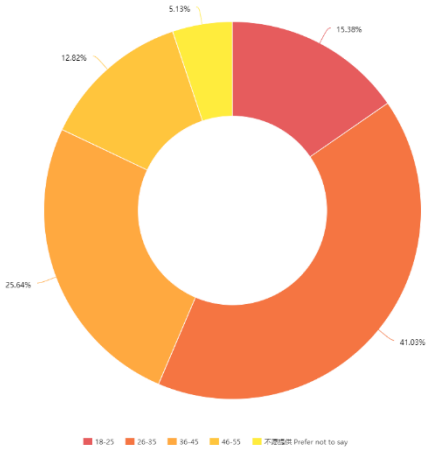
A total of 39 valid questionnaires were received after the forum, among which:

- 97.43% of the survey respondents considered the forum delivered the information they expected;
- 100% thought the subject matter was presented effectively;
- 100% considered the pace of the meeting was satisfactory;
- 100% thought the speakers were knowledgeable;
- 94.87% gained new knowledge applicable to future work;
- 97.43% planned to apply what they learned during the forum;
- 97.44% interested in participating future webinars/meetings.

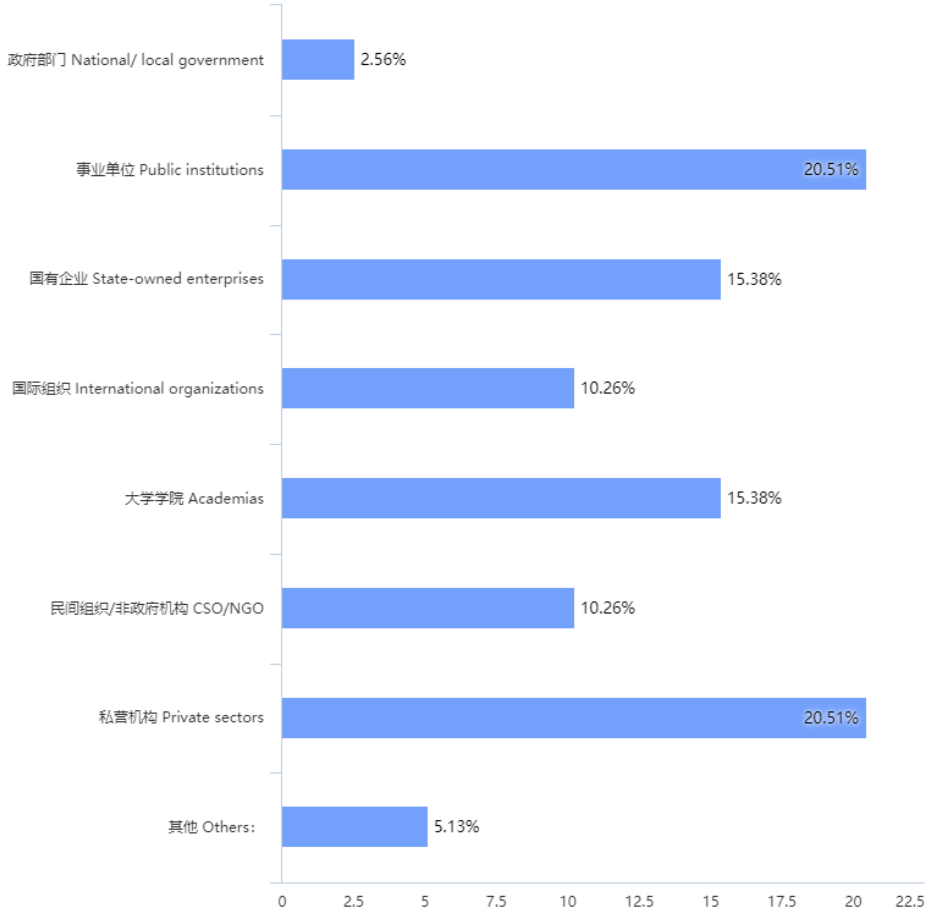
Snapshot



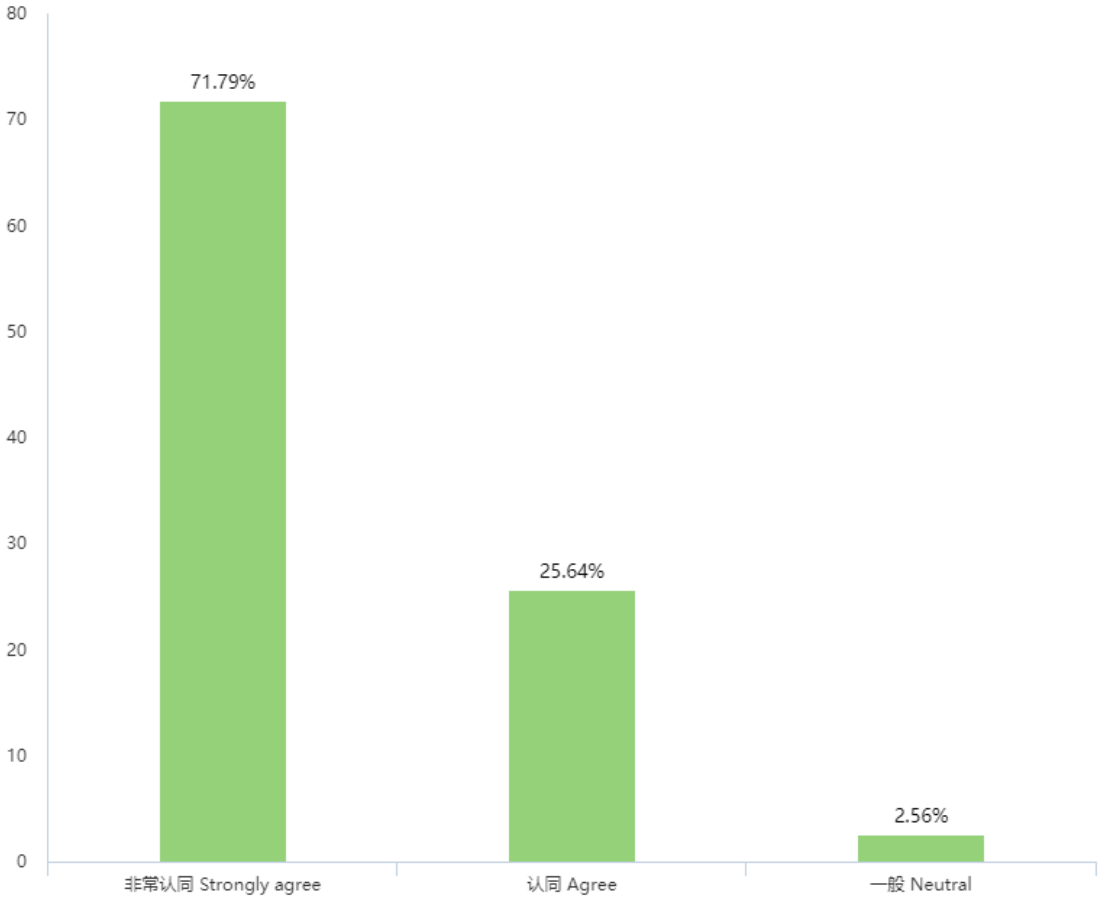
Overall gender representation among participants



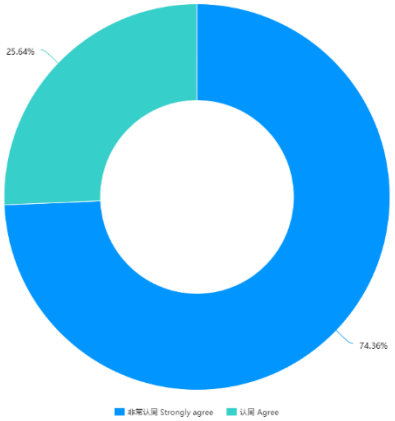
Overall age composition among participants



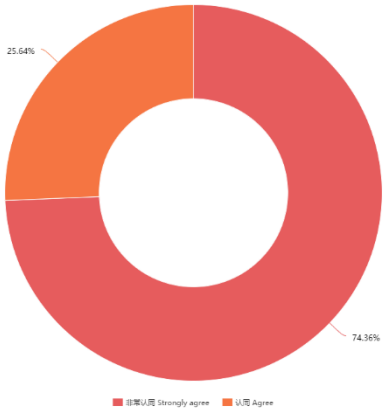
Which sectors do participants work for?



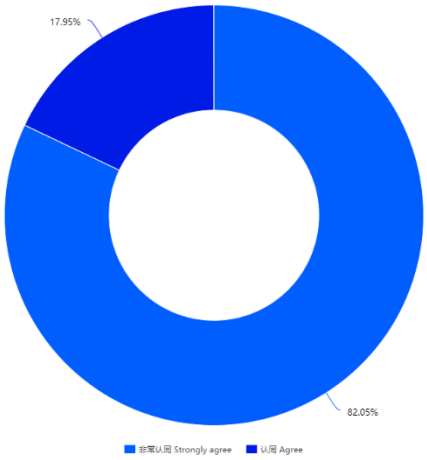
The forum delivered the information they expected



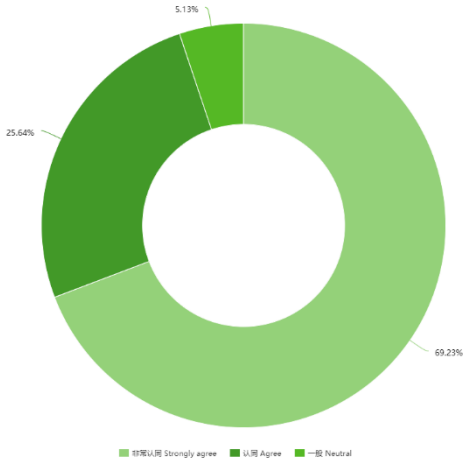
the subject matter was presented effectively



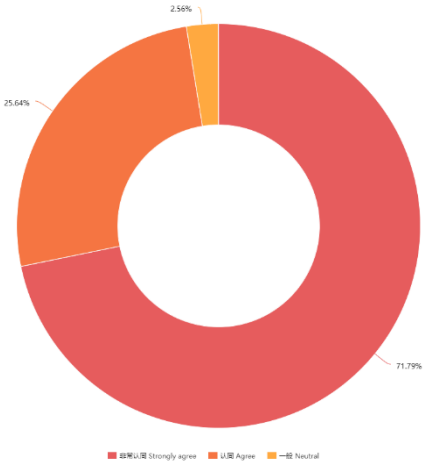
the pace of the meeting was satisfactory



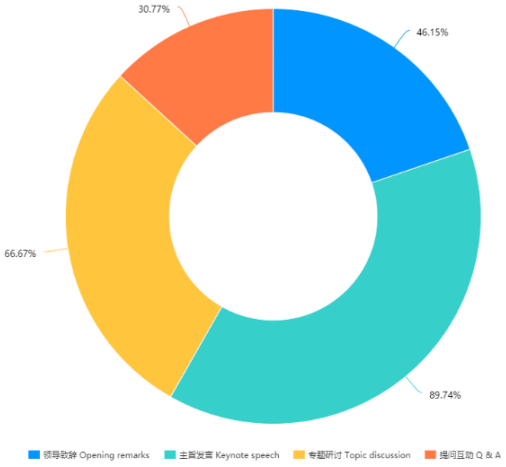
the speakers were knowledgeable



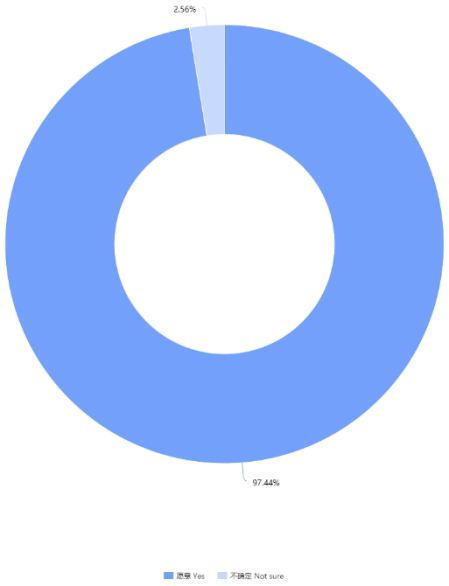
I gained new knowledge applicable to future work



I planned to apply what they learned during the forum



the most satisfied session of the forum



Are you interested in participating future webinars/meetings

Expectations on Future Discussion

Concluding

Dr. SU Mingshan delivered concluding remarks, this forum involved the energy system and also economic issues, it analyzed the development history of energy conservation in China and also condensed future work goals, it discussed issues of sustainable development not only from the perspective of the production side but also from the consumption side. This online forum brought together nearly 200 representatives of different fields from government agencies, social organizations, business associations, enterprises, international organizations, and member units of the China South-South Cooperation Network. It is hope that we could have more opportunities to exchange ideas and interact face-to-face in the future.