上海论坛 2016 观点集萃

Mitigation Solutions and Outlook under the Paris Agreement on Climate Change

Green Development

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Chair:

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Executive Director, Center for Energy and Strategies, Fudan University
Deputy Director, Center for BRICS Countries Studies, Fudan University

Zhai Panmao

Climate Center, co-chairman of the first working group of IPCC AR6

Scientific Knowledge Relevant to Pursuing Efforts Limiting Global Warming of 1.5℃ above Pre-industrial Levels

1. Only limited AR5 model outcomes can reflect the 1.5℃ projections. Scientific community has not been ready until the end of 2015.
2. Researches on future projections of GMST and regional impacts are emerging, but open questions remain on rates of changes and scenarios.
3. The mean rate of China coastal averaged sea level rise between 1981 and 2014 was higher than the global average. China has to accelerate its action.

Elmar Kriegler

the research domain Sustainable Solutions at the Potsdam Institute for Climate Impact Research

Implications of the Paris Agreement and the 2℃ Goal for near Term Climate Action

1. The Paris agreement is successful for it brings together nationally determined actions with global coordination to reach long term ambition.
However, the agreement is very fragile that it requires all the countries ratcheting up and their coordination mechanisms; it can succeed only if it manages to organize “a race to the top” in NDC rounds.
2. To meet the bridge to 2℃ we can make some policies of incentive low-carbon energy and disincentive fossil fuel use (e.g. carbon pricing) and for unabated fossil fuel use. Besides, explicit

commitments to specific policy instruments (e.g. nationally determined carbon pricing) could play an instrumental role in ratcheting up INDCs.

INDCs can lead to significant co-benefits to climate mitigation in terms of reductions in energy dependency and local air pollution.

The Paris Agreement is supposed to have strengthening mechanisms to build bridge from INDCs to stay below 2℃

Shuzo Nishioka

Institute for Global Environmental Strategies (IGES) Senior Research Advisor, Secretary General

How Can Asia Contribute to Implementing Paris Agreement by Leapfrogging Development?

1. Zero emission is the only one ultimate solution to stabilize climate. Global target: Halving current emission by 2050.
2. Asia development pattern: leapfrogging, no way to follow high carbon development pattern. There is potential to reduce GHG emissions by 69% compared to the reference case in Asia. It is feasible to reduce GHG emissions in Asia by 69% by introducing ten actions and others appropriately compared to the reference scenario in 2050.
3. Systematic Steps for formulating low-carbon development policy. Target setting -- Policy formulation -- Policy evaluation -- Policy Implementation -- Monitoring -- Target

Okazaki Yuta

Graduate School of Global Environmental Studies, Sophia University, Associate Professor

Mitigation Solutions and Outlook in Japan

1. CO_2 emissions per GDP in Japan has once reached at the top level in the world, but today ragged behind some European countries.
2. Competition for energy efficiency is the foundation of innovation and economic growth, and 100 trillion JPY is expected to invest in total by 2030.
3. Japan should promote win-win international cooperation at different dimensions, and seek further cooperation between Japan and China.

Jung Tae Yong Yonsei GSIS, Republic of Korea	**Paris Agreement and Its Implication on Climate Finance and Technology** 1. The main points and ideas what we should change lie in that only the government support is far from enough to achieve the goal of jointly providing USD 100 billion annually by 2020 for mitigation and adaptation. However, the main requirement is the capital financing and technology from the private department. 2. So we should follow the measures: First, to find the Global Best Practices in climate change technology; Second, to develop overseas business models for developing country against climate change impact; Third, to find the climate finance scheme. Multilateral public sources: GCF, MDBs, International agencies Bilateral public sources: Korea's ODA (EDCF/KOICA), GIZ, JICA and etc. Private sources.
Jiang Kejun Senior Researcher, Energy Research Institute, National Development and Reform Commission	**China's Low Carbon and Energy Transition Peaking CO_2 emission in 2020 to 2022—We need rapid transition.** 1. Keyword: Transition – mitigation to reach some climate change targets 2. What's the future of China's low carbon policy: a big picture • Economic structure optimization policies • Energy efficiency policies • Renewable energy/nuclear power generation oriented policies • CCS • Low carbon consumption/ lifestyle • Land use emission reduction policies: so far relatively poor
Tian Zhiyu Energy Research Institute, China	**REINVENTING FIRE: CHINA** 1. Visions and goals of "REINVENTING FIRE: CHINA": meet energy demand of a comprehensive modernized country; resolve resources, environmental and ecological constraints; contribute actively to mitigating climate change. 2. "REINVENTING FIRE: CHINA" is economically feasible, and has a significant effect. 3. Overall roadmap of "REINVENTING FIRE: CHINA": develop staged strategic targets and tasks; clarify sector pathways and key tasks; make development pattern shifts from past 35

years to next 35 years.

Li Jifeng **State Information Center, China**	**Peaking Pathway till 2030 in China: From Both the Technical and Economic Perspectives** 1. Even though the economy will develop in new normal pattern, there is large potential for household consumption to increase. So the additional energy saving and CO_2 emission reduction policies are essential to meet the peaking target before 2030 which 1.7 billion tons carbon emissions will be reduced. 2. National ETS could play a vital role to reduce CO2 emission, and it needs to increase the carbon price to be at least 130rmb/t. 3. By absorbing the lesson of EU-ETS, we suggest the initial carbon price could be at the average level of the present 7 pilots, which is about 50rmb/t; however we will force it to increase continuously after that, rather than just set a loose target. 4. Other policies need to be consistent to stimulate the emission reduction, like electricity reformation, tax reduction, etc.
Wu Libo Executive Director, Center for Energy and Strategies, Fudan University Deputy Director, Center for BRICS Countries Studies, Fudan University	**Simulation Analysis of Energy Related Carbon Emission For Shanghai From 2015 to 2030** 1. Emission level is stable under BAU scenario and Shanghai can peak its emission level before with medium carbon tax rate, while high carbon tax rate is required to peak emission level under FTZ scenario. 2. Shanghai will turn into a consumption-based emission society and energy-intensive sectors will share most of emission reduction burden. 3. Carbon tax has high social cost-effective effect and has little negative effect on total welfare level. 4. Sectors will undertake higher emission reduction costs when they are the only covered sectors. Emission reduction costs will be shared by more sectors when sector coverage expands; 5. Sector coverage can help Shanghai to reach its peak emission level early with high cost-effectiveness.

Chen Sha

Beijing University of Technology

Climate Vulnerabilities of Energy Sector in Beijing.

1. Climate change could be a threat to current Beijing energy system.
2. The climate adaptive capacity should be enhanced in energy sector.
3. More options should be designed for a resilient energy system.
4. Vulnerability assessment methodology needs improving (more subjective and quantitative).

Zhang Yifei

Shanghai University of International Business and Economics

The Status, Problem and Forecasting of Energy Trade in China

1. Global oil and gas resources are unevenly distributed and the supply does not coordinate the demand; the main features of global consumption are the westward movement of supply and eastward of consumption.
2. China's energy demand continues to grow with the external dependence increasing as well.

The Agreement will constrain global emissions, improve logistics efficiency, and change the trade structure. Under the new normal pattern, China is facing structural adjustment and industrial upgrading. The salient features of urban-rural gap also urge our country to pay attention to the fairness of the energy obtained.

（Editor: Chai Yanan, Xu Chengjun, Ding Shujun ）