

# **China's National Carbon-Pricing System: Challenges and Opportunities**

Co-Sponsored by Tsinghua University's Institute of Energy, Environment and Economy

and the Harvard Project on Climate Agreements

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## **Participant Bios**

### **Cyril CASSISA**

Senior Energy Analyst, Environment and Climate Change Unit; Coordinator, IEA-China Project on China's Emissions Trading System

International Energy Agency

Cyril, expert on energy and climate policy analysis, became Project Coordinator in the Environment and Climate Change Team at the International Energy Agency (IEA) in 2018 taking charge of the project on China's Emissions Trading System and leading works on energy and climate policy packages for clean energy transition. Previously, he was Project Manager at Enerdata from 2015 to 2018 leading several projects on energy transition, NDC assessment and carbon pricing instruments for the WB, UNEP, IRENA, national administrations and private sector companies. Cyril has more than 10 years' experience in China from 2005 to 2015 where he did his PhD thesis jointly between Ecole Centrale Lyon in France and Chinese Academy of Science (CAS) in China, worked as a Researcher at CAS, Beihang and Tsinghua Universities as well as a Climate Expert at the French Embassy in China. His research activities cover carbon-pricing policies including carbon markets, energy transition scenarios, particularly in EU and China, and energy modelling.

### **DUAN Maosheng**

Professor and Director, China Carbon Market Center (CCMC)

Tsinghua University

Prof. Duan Maosheng is the Director of China Carbon Market Center (CCMC) of Tsinghua University. He has been working on carbon markets since 2000 and has been a Member of the Chinese climate delegation since 2001, responsible for issues related to market-based mechanisms. He has been a Member of an alternate of the Kyoto Protocol's Clean Development Mechanism Executive Board since 2010 and served as Chair of the board in 2012. Duan has been intensively involved in the design and operation of China's domestic carbon market, including both the pilot and the national emissions trading systems. His latest assignments include coordinating the drafting of rules for China's national emissions trading system.

## **VK DUGGAL**

Principal Climate Change Specialist  
Asian Development Bank

Mr. Virender Kumar Duggal is a Principal Climate Change Specialist in the Sustainable Development and Climate Change Department at the Asian Development Bank (ADB). Mr. Duggal is an accomplished professional with a proven track record in the areas of climate change [mitigation], carbon finance, and international trade cooperation. He has extensive experience of working in multilateral, public, and private sector institutions in the areas of trust fund management, portfolio management, capacity building, advisory services, project development, technology transfer/diffusion, and strategic collaborations. Mr. Duggal has a wide range of leadership and teamwork experience in multicultural environments across Asia, Europe, and Africa. He is currently leading ADB's Carbon Market Program which provides carbon finance and technical capacity building support for mitigation actions in the Asia and Pacific region. ADB's Carbon Market Program, among others, includes (i) the Future Carbon Fund, (ii) the Japan Fund for Joint Crediting Mechanism, and (iii) the Article 6 Support Facility. In this role, Mr. Duggal is contributing to development of the next generation of carbon markets by supporting ADB's developing member countries (DMCs) in enhancing their capacity to operationalize Article 6 of the Paris Agreement as an integral part of their national climate policy framework and mobilizing carbon finance to incentivize mitigation actions. In this context, he is leading ADB's Article 6 Support Facility that provides technical, capacity building, and policy development support to DMCs to enhance their preparedness to take advantage of new carbon markets envisaged under the framework of Article 6 of the Paris Agreement. He is also working on the Climate Catalyst Action Fund, ADB's post-2020 carbon fund that aims to mobilize carbon finance to support mitigation actions pursued under Article 6. ADB is adopting a holistic approach by helping DMCs in enhancing their technical capacity through piloting mitigation actions under Article 6 and mobilizing carbon finance among other initiatives.

## **Jackson EWING**

Senior Fellow, Nicholas Institute for Environmental Policy Solutions; Adjunct Associate Professor,  
Sanford School of Public Policy  
Duke University

Jackson Ewing holds a joint appointment as a senior fellow at Duke University's Nicholas Institute of Environmental Policy Solutions and an adjunct associate professor at the Sanford School of Public Policy. He works closely with the Duke Kunshan University Environmental Research Center and International Masters of Environmental Policy programs to build policy research collaboration across Duke platforms in the United States and China. Prior to joining Duke, Dr. Ewing was director of Asian Sustainability at the Asia Society Policy Institute (ASPI) in New York, where he founded and led the project, Toward a Northeast Asian Carbon Market, which contributed to ETS development and cooperation in the Asia Pacific. He continues this work as an ASPI Senior

Adviser. Dr. Ewing previously served as a MacArthur Fellow and head of the Environment, Climate Change and Food Security Program at Singapore's S. Rajaratnam School of International Studies, and has worked throughout Asia with actors in government, the private sector, civil society, and international organizations.

## **Lawrence GOULDER**

Shuzo Nishihara Professor of Environmental and Resource Economics  
Stanford University

Lawrence H. Goulder is the Shuzo Nishihara Professor in Environmental and Resource Economics at Stanford and Director of the Stanford Environmental and Energy Policy Analysis Center. His research examines the environmental and economic impacts of environmental policies in the U.S. and China, with a focus on policies to deal with climate change and air pollution. His work also has explored the sustainability of natural resources and well-being in several countries. Dr. Goulder has conducted analyses for several government agencies, business groups, and environmental organizations, and has served on advisory committees to the U.S. Environmental Protection Agency and the California Air Resources Board. Results from his work have been published in academic journal articles as well as in the book, *Confronting the Climate Challenge: Options for US Policy*, which was published by Columbia University Press in 2017. Dr. Goulder graduated from Harvard College with an A.B. in philosophy and received his Ph.D. in Economics from Stanford.

## **Frank JOTZO**

Professor, Crawford School of Public Policy; Director, Centre for Climate and Energy Policy  
Australian National University

Frank Jotzo is Professor of environmental economics at the Australian National University's Crawford School of Public Policy, where he directs the Centre for Climate and Energy Policy. His work includes research on instruments for climate change policy including emissions trading schemes. He was involved in research and advisory on China's pilot emissions trading schemes. Frank is joint editor-in-chief of the journal *Climate Policy* and a Lead Author of Intergovernmental Panel on Climate Change 5th and 6th Assessment Reports and member of the core writing group for the next IPCC Synthesis Report. He has been involved in many policy research and advisory exercises, and has advised national and state governments, international organisations and businesses. He frequently writes and comments in the media and tweets @frankjotzo.

## **Valerie KARPLUS**

Associate Professor of Engineering and Public Policy  
Carnegie Mellon University

Valerie J. Karplus is an Associate Professor (with tenure) in the Engineering and Public Policy Department at Carnegie Mellon University. Karplus studies resource and environmental

management in firms operating in diverse national and industry contexts, with a focus on the role of institutions and management practices in explaining performance. Karplus is an expert on China's energy system, including technology and business model innovation, energy system governance, and the management of air pollution and climate change. Karplus was previously on the faculty at the MIT Sloan School of Management, where she maintains a visiting appointment. She has worked as a Research Scientist in the MIT Joint Program on the Science and Policy of Global Change, as a Robert Bosch Foundation Fellow in the development policy section of the German Federal Foreign Office in Berlin, Germany and the KfW Development Bank in Frankfurt, Germany, and as a Luce Scholar in the agricultural biotechnology industry in Beijing, China. From 2011 to 2016, she directed the MIT-Tsinghua China Energy and Climate Project, a five-year research effort focused on analyzing the design of energy and climate change policy in China, and its domestic and global impacts. She holds a BS in biochemistry and political science from Yale University and a PhD in engineering systems from MIT.

## **Nathaniel KEOHANE**

Senior Vice President, Climate  
Environmental Defense Fund

Nathaniel Keohane is an economist, advocate, and expert on climate, environment, and energy issues in the United States and globally. Dr. Keohane is Senior Vice President for Climate at Environmental Defense Fund, a leading nonprofit advocacy organization based in New York. In 2011-2012, he served in the Obama Administration as Special Assistant to the President for Energy and Environment in the National Economic Council and Domestic Policy Council, where he helped to develop and coordinate administration policy on a wide range of energy and environmental issues. Prior to joining the Administration, Dr. Keohane was Director of Economic Policy and Analysis and then Chief Economist at EDF, playing a lead role in efforts to enact comprehensive cap-and-trade legislation in Congress. Dr. Keohane is an Adjunct Professor of Law at New York University, and a past Senior Fellow and Lecturer in Global Affairs at Yale University's Jackson Institute. Before joining EDF in 2007, Dr. Keohane was an Associate Professor of Economics at the Yale School of Management. His research in environmental economics has been published in prominent academic journals, and he is the co-author of *Markets and the Environment* (2nd ed., Island Press, 2015), and co-editor of *Economics of Environmental Law* (Edward Elgar, 2009). He received his Ph.D. from Harvard University in 2001, and his B.A. from Yale College in 1993. He lives in New York City with his wife and two daughters.

## **LEI Yuwei**

Researcher  
China Electricity Council

Lei Yuwei, researcher at China Electricity Council (CEC), has worked with Department of Industrial Planning, Environment and Resource Division in CEC and was involved in a series of researches

such as Allowance Allocation Plan, Research on National Carbon Market Operation Test Scheme, Research of Technical Standard System of Carbon Emission in Power Industry, and Research of Electrification promotes the Low-carbon Energy Transition.

## **Paichen LI**

Ph.D. Student in Public Policy (Economics)  
Harvard University

My research focus is on environmental/energy economics, particularly in topics related to climate change. In particular, I'm interested in studying how electricity and transportation fuel markets can operate more efficiently in the context of renewable energy expansion, and how supply side changes on the energy market affect consumption choices when considering inefficiencies in behavioral response. My ongoing research aims to assess the effectiveness of the USDA Biofuels Infrastructure Partnership in increasing biofuels penetration in the transportation fuels market. I hold a Bachelor of Liberal Arts degree in Environmental Science from the University of Tokyo, and a Master of Environmental Management (M.E.M.) degree from the Nicholas School of Environment at Duke University.”

## **Xianling LONG**

Ph.D. Student in Management Science and Engineering  
Stanford University

Xianling Long is a PhD student in Department of Management Science and Engineering at Stanford University. Xianling Long's research addresses climate policy questions, including carbon tax and different variants of cap and trade. She uses equilibrium models to assess the cost-effectiveness and distributional impacts of climate policies.

## **LU Xuedu**

Lead Climate Change Specialist, East Asia Department  
Asian Development Bank

Xuedu Lu provides ADB advice on carbon market, technology transfer and other climate change business since 2010. Prior to joining ADB, he served the Government of the People's Republic of China in research, policymaking and international negotiations on climate change. He was elected as Member/Alternate of the CDM Executive Board under the Kyoto Protocol from 2001 to 2010. Mr. Lu has published more than 30 academic papers and 7 books.

## **Richard MORGENSTERN**

Senior Fellow

Resources for the Future

'Dick' Morgenstern's research focuses on the economic analysis of environmental issues with an emphasis on the costs, benefits, evaluation, and design of new and existing policies, especially economic incentive measures. His analysis also focuses on climate change, including the design of cost-effective options to reduce emissions in the United States and abroad. He has worked (intermittently) on Chinese environmental policy issues for more than three decades. Previously he served at the U.S. Environmental Protection Agency, where he acted as deputy administrator (1993); assistant administrator for policy, planning, and evaluation (1991-93); and director of the Office of Policy Analysis (1983-95). He also spent a year at the State Department (1999) as a counsellor to the Under Secretary for Global Affairs. In his earlier academic career, he was a tenured associate professor of economics at the City University of New York. He has also taught at Oberlin College, the Wharton School of the University of Pennsylvania, Yeshiva University, American University and Sichuan University (Chengdu) and served on expert committees of the National Academy of Sciences and as a consultant to various organizations. Dick received his A.B. from Oberlin College (with high honors) and Ph.D. in Economics from the University of Michigan.

## **William PIZER**

Susan B. King Distinguished Professor of Public Policy, Sanford School of Public Policy  
Duke University

Billy Pizer is the Susan B. King Professor at the Sanford School of Public Policy and Faculty Fellow at the Nicholas Institute for Environmental Policy Solutions, both at Duke University. He is also a University Fellow at Resources for the Future and a Research Associate at the National Bureau of Economic Research. His past and current research examines how we value the future benefits of climate change mitigation, how environmental regulation and climate policy can affect production costs and competitiveness, and how the design of market-based environmental policies can address the needs of different stakeholders. He has recently begun work examining the potential role of solar radiation management (injection of aerosols in the stratosphere) in climate change policy, in addition to mitigation and adaptation. He has been actively involved in creation of an environmental program at Duke Kunshan University in China, a collaborative venture between Duke University, Wuhan University, and the city of Kunshan. He recently served as Associate Dean for Academic Programs and Senior Associate Dean for Faculty and Research at the Sanford School. Before coming to Duke, he was Deputy Assistant Secretary for Environment and Energy at the U.S. Department of the Treasury from 2008 to 2011, overseeing Treasury's role in the domestic and international environment and energy agenda of the United States. Prior to that, he was a researcher at Resources for the Future for more than a decade. He has written more than sixty peer-reviewed publications, books, and articles, and holds a PhD and MA in economics from Harvard University and BS in physics from the University of North Carolina at Chapel Hill.

## **QI Shaozhou**

Professor; Director, Research Center for Climate Change and Energy Environment  
Wuhan University

QI Shaozhou is a Professor and Doctoral Supervisor in the Economics and Management School, Wuhan University. He currently serves as Dean of the Low Carbon Economics School of Hubei University of Economics and Director of the Climate Change and Energy Economics Study Center (CCEE) and the Center for European Studies, Wuhan University. He was awarded the New Century Excellent Researcher by the Education Ministry of China and Jean-Monnet Chair Professor by the European Union. His research interests include carbon market (ETS), climate change and energy economics. He has published more than sixty research papers in international and domestic journals as well as several books in related fields. Professor Qi has presided over major research projects in philosophy and social sciences for the Education Ministry of China, 973 Science -Technology Programs, the “11th Five-Year plan,” the Science-Technology Support Program for the “12th Five-Year plan,” and the Science and Technology Ministry of China, as well as a number of national-level major projects related to carbon markets, climate change, energy economics and policies. He has submitted more than 20 advisory reports and policy plans for The Development and Reform Commission, The Science and Technology Ministry, The Ministry of Commerce, the government of Hubei province, and Wuhan city. He is a Reviewer of IPCC AR5 and the major author of the China Evaluation Report on Climate Change in the “13th Five-Year plan.”

## **QIAN Guoqiang**

Deputy General Manager  
SinoCarbon

Mr. QIAN Guoqiang is Deputy General Manager of SinoCarbon, the leading climate policy and green development consultant in China. He is an ETS specialists and recognized expert on climate policy and green development, with one of the most extensive records of supporting ETS designing and operation both at the pilot and national level in China. He is currently the Key Expert of EU-China ETS Policy Dialogue Platform, and also managing a team for a diversified portfolio of projects for a wide variety of clients, including national and local governments, key international and domestic enterprises, international organizations and foundations, covering areas of climate policy, ETS, carbon neutral, green branding, circular economy, waste treatment, green transportation, renewable energy, ect. Mr. QIAN was climate policy expert in the Department of Treaty and Law of the Chinese Ministry of Foreign Affairs, and one of the key climate negotiators in the Chinese delegation during 2005 and 2011. He participated in the formulation of a number of key climate policies in China, including China’s national Climate Change Programme, China’s Initial National Communication to UNFCCC, Measures for the Management of VER Trading, Administrative Rules on Managing the Operation of CDM Projects in China and its follow up amendments, as well as Administrative Rules on Managing the CDM Fund in China. Mr. QIAN is serving as focal point to the International Carbon Action Partnership (ICAP). He was Member of UNFCCC Joint

Implementation Supervisory Committee (JISC) for 6 years, and Board Director of the Gold Standard Foundation for 5 years.

## **Stian REKLEV**

Director, Co-founder, and China Correspondent  
Carbon Pulse

Stian Reklev is a director and co-founder of Carbon Pulse, the world's leading news and intelligence source for the global carbon markets. Stian reported on carbon markets and climate policies for Point Carbon and Reuters from 2001 to 2015, and also launched and edited specialist publications on emissions markets in Europe and Australia/New Zealand. Based in Beijing since 2009, he has written extensively on climate policy and market developments in China and the Asia-Pacific. Previous to that he worked at the Fridtjof Nansen Institute in Oslo, Norway as assistant editor for the Yearbook of International Co-operation on Environment and Development, before leaving to become a freelance journalist. He studied political science and Russia and Eastern Europe regional studies at the University of Oslo.

## **Alistair RITCHIE**

Director of Asia-Pacific Sustainability  
Asia Society Policy Institute

Alistair Ritchie is Director of Asia-Pacific Sustainability at the Asia Society Policy Institute (ASPI), where he leads and oversees activities on Asian carbon market development and ASPI's overall sustainability portfolio. Alistair is an international expert in greenhouse gas emissions trading systems (ETSs), and a known leader in their development. He is currently leading a major project to contribute to resolving ETS design challenges and building regional connections of China's national ETS. Previously, he was leader of the European Commission project to support the Korean government's implementation and upgrade of the KETS (the first national ETS in East Asia). He was also the technical lead for the European Commission project to support the development of China's national ETS and led studies to support ETS development in Chinese Taipei. In Europe, Alistair played a key role in improving the EU ETS through managing and directing several projects to support Phase 3 and 4 policy design and implementation. He holds a degree in Chemical Engineering from Nottingham University in UK and an MBA from the Open University.

## **Robert STAVINS**

A.J. Meyer Professor of Energy and Economic Development; Director, Harvard Project on Climate Agreements  
Harvard Kennedy School

Robert N. Stavins is the A. J. Meyer Professor of Energy & Economic Development at the Harvard Kennedy School, Director of the Harvard Environmental Economics Program, Director of Graduate Studies for the Doctoral Programs in Public Policy and Political Economy & Government, Co-Chair of the Harvard Business School-Kennedy School Joint Degree Programs, and Director of the Harvard Project on International Climate Agreements. He is a University Fellow of Resources for the Future, a Research Associate of the National Bureau of Economic Research, Co-Editor of the Review of Environmental Economics and Policy and the Journal of Wine Economics, and a member of the Board of Directors of Resources for the Future and the Scientific Advisory Board of the Fondazione Eni Enrico Mattei. He is an elected Fellow of the Association of Environmental and Resource Economists. He was formerly Chairman of the Environmental Economics Advisory Committee of the U.S. Environmental Protection Agency's Science Advisory Board. He has been a Lead Author of the Second, Third, and Fifth Assessment Reports of the Intergovernmental Panel on Climate Change. His research has focused on diverse areas of environmental economics and policy, and has appeared in leading economics, law, and policy journals, as well as a dozen books. He has been a consultant to the several Administrations, Members of Congress, environmental advocacy groups, the World Bank, the United Nations, state and national governments, and private foundations and firms. He holds a B.A. in philosophy from Northwestern University, an M.S. in agricultural economics from Cornell, and a Ph.D. in economics from Harvard.

## **Robert STOWE**

Co-Director, Harvard Project on Climate Agreements  
Harvard Kennedy School

Robert Stowe is Executive Director of the Harvard Environmental Economics Program and Co-Director of the Harvard Project on Climate Agreements – both University-wide programs based in the Harvard Kennedy School (HKS). Stowe has been engaged through the Harvard Project in the annual Conferences of the Parties of the U.N. Framework Convention on Climate Change since 2007. He was a Contributing Author to a chapter on international cooperation in the Intergovernmental Panel on Climate Change's Fifth Assessment Report. Stowe has worked in non-profit, academic, and business organizations, including as Vice President of Programs of the Citizens Network for Foreign Affairs, which provides assistance in agriculture and agribusiness to developing countries, and as a consultant to the World Bank and other organizations on agricultural management projects. Stowe holds a Ph.D. in political science from the Massachusetts Institute of Technology and an A.B. in physics from Harvard College. His blog posts on climate-change policy

appear on LinkedIn at: [www.linkedin.com/in/robertstowe/detail/recent-activity/posts](http://www.linkedin.com/in/robertstowe/detail/recent-activity/posts) and he can be reached at [robert\\_stowe@hks.harvard.edu](mailto:robert_stowe@hks.harvard.edu).

## **WANG Pu**

Associate Professor, Institutes of Sciences and Development  
Chinese Academy of Sciences

WANG Pu is currently an associate professor at Institutes of Sciences and Development, Chinese Academy of Sciences. His research fields include climate and energy policies and sustainable development strategies. More specifically, his current research projects involve China's carbon emissions trading program and co-benefits between greenhouse gas mitigation and environmental pollution reduction. Pu received his Ph.D. degree from Cornell University in 2014, in the field of natural resources and environment. He was a postdoctoral fellow at Belfer Center of Kennedy School of Government, Harvard University in 2015-2017, where he conducted research on cap-and-trade systems for greenhouse-gas emissions in China and China-U.S. cooperation in climate-change policies.

## **WU Libo**

Professor; Director, Century for Energy Economics and Strategy Studies  
Fudan University

WU Libo is Professor of Economics and Professor of Applied Statistics at Fudan University, Director of the Dept. of Development and Planning, Fudan University, Deputy Director, Institute for Big Data, Fudan University, and Director, Center for Energy Economics and Strategies at Fudan University. She was the 2016 Youth Yangtze Scholar nominated by the Ministry of Education of the People's Republic of China. She is mainly devoted to studying energy consumption behavior and emissions reduction mechanism of micro-market entities, assessing their environmental willingness and driving factors, simulating the economic and technological impacts of low-carbon energy policies, emissions reduction effects and exploring their industrial, regional and individual heterogeneity. She has published more than 50 papers in *PNAS*, *Nature Climate Change*, *Energy Economics*, *Social Sciences in China*, *Economic Research Journal* and other SSCI, SCI, and domestic authoritative journals. She has undertaken national major projects such as the National Social Science Fund Major Project and the National 863 Project. Wu has received several awards for theoretical research achievements, having won second prize of the Excellent Research Achievements of the Humanities and Social Sciences of the Ministry of Education, third prize of the Outstanding Achievements of Shanghai Philosophy and Social Science Research, and second prize of the Shanghai Excellent Teaching Achievement. She has abundant consulting experiences for government policy making and successively won four policy decision-making consultation awards such as the second prize of the National Energy Administration's outstanding achievements in soft science research. Several research achievements were adopted by the Development and Reform Commission, the Economic and Information Commission of Shanghai Municipal Government.

## **ZENG Xuelan**

Director, Guangdong Research Center for Climate Change  
Ministry of Ecology and Environment; Sun Yat-sen University

ZENG Xuelan, PhD, is Director of Guangdong Research Centre for Climate Change of Sun Yat-sen University (Mainland China). She is mainly engaged in the research and application in the field of carbon trading, low-carbon policy and planning, and renewable energy. She is one of the major experts supporting the design, construction and operation of Guangdong ETS (once served as the leader of Guangdong ETS management working team established by Guangdong Development and Reform Commission). She also participates in the design of the China national ETS (served as deputy director of China national ETS allowance allocation working team established by Department of Climate Change, National Development and Reform Commission). She has received grants from Ministry of Science and Technology, National Development and Reform Commission and Guangdong Province etc. to undertake many projects on low-carbon development, carbon trading and renewable energy. She has published many papers in journals such as Climate Policy and Applied Energy. She has been awarded the first prize of environmental protection science and technology of Guangdong province and the third prize of science and technology of Guangdong province.

## **ZHANG Jianyu**

Chief Representative and Vice President  
Environmental Defense Fund – China

Zhang, Jianyu helped found the China program of Environmental Defense Fund (EDF), a leading US environmental NGO. Since 1999, he has been responsible for the establishment and overall management of EDF China program, including but not limited to setting up goals, executing programs, establishing operation systems, hiring key personals, developing partnerships, overseeing communication strategy, as well as fund raising. He is currently the active longest-serving head of all known foreign organizations' China programs. EDF China program's success led to EDF becoming the first officially registered foreign Environmental NGO in China under the Ministry of Ecology and Environment, following the promulgation of China's foreign NGO law effective on January 1st, 2017. Zhang is a visiting fellow with the School of Public Policy and Management of Tsinghua University, as well as a visiting professor with the School of Environment and Energy, Peking University. Zhang got his advanced degrees from Tsinghua University (Bachelor), Stanford University (Master), and Carnegie Mellon University (Ph.D.). He recently completed his Ph.D. studies in Finance from Chinese Academy of Social Science.

## **ZHANG Jingjie**

Division Chief, Department of Environmental Protection and Response to Climate Change  
China Electricity Council

Zhang Jingjie, PhD Degree in Engineering, Senior economist, a director of the *Division of Environmental Protection & Climate Change and Electricity Low-Carbon development Research Center of China Electricity Council (CEC)*, an assistant director of *Energy Charter-CEC Research Center*. As a core member of ETS working group for Chinese power industry, which helps forming the basic rules for China's national carbon market, she has undertaken and participated in the setting up allowance allocation method of national carbon market (power generation industry), operating test scheme, drafting technical guide for carbon trading of power generation enterprises, preparing training materials, establishing carbon price mechanism, standard system and credit system, composing research report on participation of self-provide power plants in carbon market, transacting risk prevention of power generation enterprises, etc. In the past decades, she led and took part in composing multiple research about energy, power sector development and emission reduction& carbon trading mechanism. She also contributed constructive suggestions for governmental policies and regulations. She has written more than ten academic works and published many SCI papers and core journal papers, among which the representative work is *Constraints and Solutions for Energy and Electricity Development* Her research was published in both Chinese and English by *Springer* and *China Electric Power Press*. She also spent a year working for International Energy Agency (IEA) as consultant in France.

## **ZHANG Junjie**

Director, Environmental Research Center, and Director, Master of Environmental Policy Program  
Duke Kunshan University (and Associate Professor, Duke University)

Junjie Zhang is Director of the Environmental Research Center and the International Master of Environmental Policy (iMEP) Program at Duke Kunshan University, Associate Professor of Environmental Economics in the Nicholas School of the Environment at Duke University. He is a co-editor of *China Economic Review*. He also serves as a vice chair for the Chapter of Environmental Economics in the Chinese Academy of Environmental Science, an advisory board member for the Nicholas Institute for Environmental Policy Solutions, and a board member for the Professional Association for China's Environment. Prior to the current position, he was an associate professor in the School of Global Policy and Strategy at the University of California, San Diego. His research centers on empirical issues in environmental and resource economics, with topics covering air pollution, energy transition, and climate change. His research projects have been funded by U.S. National Science Foundation, U.S. National Oceanic and Atmospheric Administration, China National Natural Science Foundation, China's Ministry of Ecology and Environment, China Council for International Cooperation on Environment and Development, Energy Foundation, The World Bank, and Asian Development Bank. He holds a B.S. from Renmin University of China, a B.S. and a M.S. from Tsinghua University, and a Ph.D. from Duke University.

## **ZHANG Lixin**

Deputy Division Chief  
China Quality Certification Centre

Mrs. Zhang Lixin is Deputy Division Chief of Product Certification 6 Department of China Quality Certification Centre (CQC) and leads CQC's Climate Change business. Mrs Zhang has successively presided over the research project of CHINA: PARTNERSHIP FOR MARKET READINESS (P145586) Consulting Service for Study on Monitoring, Reporting and Verification Systems funded by the World Bank, research on the key technologies of carbon emission verification of industrial enterprises under the 12th Five year national science and technology support program, and also participated in drafting Guidelines for GHG verification at key emitting enterprise level and CCER validation and verification at project level which are used for providing guidance for 3rd party validation and verification body to provide verification service under China National ETS and to provide validation and verification service under China CCER scheme. Mrs Zhang has conducted hundreds of times of validation and verification Under China National ETS, China CCER scheme and CDM scheme.

## **ZHANG Xiliang**

Professor; Director, Institute of Energy, Environment, and Economy  
Tsinghua University

Dr. Zhang Xiliang is Professor of Management Science and Engineering and Director of the Institute of Energy, Environment, and Economy at Tsinghua University. His current research interests include low-carbon energy economy transformation, integrated assessment of energy and climate policies, renewable energy and automotive energy. Since 2015, Professor Zhang has been heading the expert group on China's national carbon market design, which is a taskforce of the Climate Change Department in the Ministry of Ecology and Environment. He also served as the co-leader of the expert group for drafting China's Renewable Energy Law from 2004 to 2005, which was organized by the Environmental Protection and Resource Conservation Committee of the National People's Congress, and as a lead author of the 4th and 5th IPCC Climate Change Assessment Report. Dr. Zhang is the current Chair of the Energy Systems Engineering Committee of the China Energy Research Society and a member of the board of directors of Chinese Society of Sustainable Development. He holds a PhD in Systems Engineering from Tsinghua University.

## **ZHANG Xin**

Director, CDM and Carbon Market Management  
National Center for Climate Change Strategy and International Cooperation

## **ZHAO Xiaolu**

Senior Manager, China Climate Initiative  
Environmental Defense Fund – China

ZHAO Xiaolu is Senior Manager of China Climate Initiative at Beijing Representative Office of Environmental Defense Fund, a United States-based nonprofit environmental advocacy group. She manages projects to support regional and national carbon markets development in China, including carbon pricing policy research and advocacy, stakeholder engagement and capacity building. Xiaolu not only has deeply participated in the building of National Carbon Market in China, actively promote regional collaboration of carbon pricing mechanism, but also a frequent speaker and co-authored research reports, including The Progress of China's Carbon Market.

## **ZHOU Li**

Associate Professor; Deputy Director, China Carbon Market Center  
Tsinghua University

ZHOU LI. Female. Born in 1983. She is an associate professor in Institute of Energy, Environment and Economy at Tsinghua University and deputy director of China Carbon Market Center (CCMC). She is an expert in the field of key technologies and national policies related to climate change and energy issues. And more than 30 papers have been published. She has obtained the support of Beijing's first youth talent program for outstanding young teachers under the age of 35, was selected by exchange program for new scientists supported by the Chinese Ministry of Science and Technology. She hosted or participated in several important projects, sponsored by scientific and technological support research of 11th five-year plan, National 973 Program, National Natural Science Foundation of China, UNDP, Rockefeller Foundation, World Bank and so on. Her research results are recognized by other experts, and she was invited to be an author for Global Energy Assessment (GEA) report, National Assessment Report of Climate Change, China's third national assessment report on climate change and so on. Some of the results were adopted as important technical support for national policy making, like provincial carbon emission intensity control target and national carbon market design. And she is invited as an expert to participate "Annual obligation trial assessment and evaluation work of controlling greenhouse gas emission targets" since 2013, which is organized by the national departments.