The Chinese government is re-examining its energy development strategies together with long-term economic strategies. Besides the national energy reduction targets set in the 12th Five Year Plan (FYP), China’s State Council further announced the “12th Five-Year Plan for Energy Development” in January 2013. This plan summarises China’s major achievements in energy development in the 11th FYP, and clarifies national energy policy priorities through an ambitious set of infrastructure and market targets in the 12th FYP. One of the important mechanisms for China’s energy development is through energy efficiency improvement and energy conservation, which are identified as the most effective ways to manage and restrain the growth in energy consumption and reduce emissions globally. This conference will discuss the opportunities and challenges in China’s energy efficiency and conservation developments, including (a) sectoral energy efficiency/conservation strategies and their impacts; (b) energy efficiency/conservation projects and regulation; and (c) relationships between energy efficiency/conservation and other social-economic factors.
Programme:

08:30-09:00  Registration

09:00-09:10  Welcome Address by Prof. S.K. CHOU (邹绍强), Executive Director, Energy Studies Institute, NUS

09:10-09:40  A/Prof. HUO Hong (霍红), Tsinghua University, China

09:40-10:10  A/Prof. YUAN Jiahai (袁家海), North China Electric Power University, China
           “Energy Efficiency/Conservation Strategies in Power Sector”

10:10-10:40  A/Prof. WEI Chu (魏楚), Renmin University, China
           “Energy Efficiency/Conservation Strategies in Household”

10:40-11:00  Tea Break

11:00-11:30  Prof. WU Libo (吴立波), Fudan University, China
           “Energy Efficiency/Conservation Strategies in Industry”

11:30-12:00  Prof. WANG Shengwei (王盛卫), Hong Kong Polytechnic University, Hong Kong
           “Best Practices in Building Energy Efficiency and Conservation Projects”

12:00-12:30  A/Prof. DENG Haifeng (邓海峰), Tsinghua University, China
           “China’s Regulation and Law on Energy Efficiency and Conservation”
12:30-14:00 Lunch

14:00-14:30 Prof. FAN Ying (范英), Institute of Policy and Management, Chinese Academy of Sciences, China
“Energy Efficiency and Energy/Carbon Market”

14:30-15:00 Asst/Prof. MA Chunbo (马春波), The University of Western Australia
“Energy Conservation and Energy Substitution”

15:00-15:30 Dr. Philip ANDREWS-SPEED, Energy Studies Institute, NUS, Singapore
“Energy Conservation and Behaviour Change”

15:30-15:50 Tea Break

15:50-16:20 Dr. KAINUMA Mikiko (甲斐沼美紀子), National Institute for Environmental Studies, Japan
“Energy Efficiency and Conservation Strategies in Japan and Their Implications for China’s Future Energy Development”

16:20-16:50 A/Prof. ZHANG Youguo (张友国), Institute of Quantitative Economics and Technical Economics, Chinese Academy of Social Sciences, China
“Prospects for Energy Savings and GHG Emission Reductions from Energy Efficiency and Conservation”

16:50-17:20 Prof. HU Jin-Li (胡均立), National Chiao Tung University, Taiwan
“Regional Energy and Emission Efficiencies in China”
**About the Speakers**

<table>
<thead>
<tr>
<th>Dr. Philip ANDREWS-SPEED</th>
<th>Associate Professor Haifeng DENG</th>
<th>Professor Ying FAN</th>
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<td>A Principal Fellow and Head of the Energy Security Division at the Energy Studies Institute of the National University of Singapore. Specialising in international energy policy and regulation, he has 35 years of experience in the field of energy and resources.</td>
<td>Assistant Dean in the Law School at Tsinghua University. He is also the Vice Director of the Center for Environmental, Natural Resources and Energy Law at Tsinghua University and a Senior Research Fellow at the CDM Development and Research Center of Tsinghua University. Haifeng's research focuses on environmental law, natural resource law and energy law. He is currently the Director of the China Environmental Law Research Society, Vice General Secretary of the Environmental Law Research Society of the China Environmental Science Society and the formal expert for the official version of the legislation on the Chinese Climate Change Arrangement Law. Since 1994, he has participated in about 40 key research programmes relating to Chinese environmental, energy and natural resource law. He has published nearly 60 academic papers, 8 books and an encyclopaedia of energy law.</td>
<td>Director of the Center for Energy and Environmental Policy Research at the Institute of Policy and Management, Chinese Academy of Sciences. She is a Vice President of the Chinese Society of Optimization, Overall Planning and Economic Mathematics, and was elected as a member of the International Association for Energy Economics Council in 2013. Ying’s main interests are energy-environment-economy system modelling, and energy and environmental policy. She has carried out over 40 research projects and published 8 books and over 90 papers in journals such as <em>Energy Economics, Energy Policy, Environmental Modelling and Software, Journal of Policy Modelling, Technical Forecasting and Social Change, Environmental Impact Assessment Review and Computers and Industrial Engineering</em>. She was a visiting scholar at Cornell University from 2004 to 2005 and has received important awards, such as a research grant for distinguished young scientists sponsored by the National Science Foundation of China and the Hundred Talents Program sponsored by the Chinese Academy of Sciences.</td>
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**Professor Jin-Li HU** teaches in the Institute of Business and Management at National Chiao Tung University in Taiwan. Prior to this, he taught at Ming Chuan College and Tamkang University. He received his PhD in Economics from State University of New York at Stony Brook in USA. Jin-Li’s research interests include Chinese economy, decision science, and sustainable development. Doing both theoretical and empirical studies, he has published 135 referred papers in the *Journal of Economics & Management Strategy, Journal of Banking & Finance, Journal of Institutional & Theoretical Economics, Journal of Productivity Analysis, Journal of the Operational Research Society, Energy Policy, Applied Energy, Technovation, etc.*

In 2012, he was awarded the title, “Asia's Best Economics Professor”. He currently serves on the editorial boards of several key journals as well as the boards of directors for Taiwan’s Efficiency and Productivity Association and Institute of Marketing Science.

**Associate Professor Hong HUO** teaches in the Institute of Energy, Environment and Economy at Tsinghua University. Upon completing her PhD from Tsinghua University, she worked as a postdoctoral research associate at Argonne National Laboratory. Her research areas include modelling of air pollution in China, development of emission inventories at urban and regional levels, analysis of energy and environmental impacts of advanced vehicle technologies and new transportation fuels, and the evaluation of policies relating to China’s transportation sector.

Hong has published widely in the area of life-cycle analysis for vehicle/fuel systems, vehicle emission measurement and modelling, energy policies for the transport sector, and emission inventories in China. She has authored 31 publications that are included in the SCI database and has a citation score of over 1000.

**Dr. Mikiko KAINUMA** is a Fellow in the Centre for Social and Environmental Systems Research at the National Institute for Environmental Studies, Japan. With a PhD in Applied Mathematics and Physics from Kyoto University, she is engaged in the development of the Asia-Pacific Integrated Model (AIM), which assesses policy options for stabilising the global climate, particularly in the Asian-Pacific region.

Mikiko is also involved in a study tasked with developing scenarios for realising low carbon societies and also leads the Low Carbon Asia Research Network which involves several leading institutes in Asia. She was lead author for the Intergovernmental Panel on Climate Change Fourth and Fifth Assessment Report (Working Group III: Mitigation of Climate Change).

In 2011, she received the “Academic Award of the Society of Environmental Science”, and in 2010 both the “Remarkable Contribution to Science and Technology Award” and the “Japanese National Institute of Science and Technology Policy Award”.
### Assistant Professor MA Chunbo

Teaches in the School of Agricultural and Resource Economics and Centre for Environmental Economics and Policy at the University of Western Australia. After completing his PhD in China’s energy economy from Rensselaer Polytechnic Institute, he was an Alcoa Sustainability Research Fellow at the University of Michigan at Ann Arbor where he researched China’s electricity market.

Chunbo has secured a number of major grants and fellowships, including an Australia Research Council Discovery Project for work on energy transitions, and an ARC DECRA fellowship for modelling household PV diffusion. He was also recently awarded an Australia-China Emerging Future Leaders Fellowship in Low Emission Coal Technology by the Australian Academy of Technological Sciences and Engineering. His current research interests lie primarily in renewable energy markets and policy analysis, the Australia-China electricity market, environmental consumerism, non-market valuation and China’s energy economy.

### Professor WANG Shengwei

Is the Chair Professor of Building Services Engineering in the Department of Building Services Engineering and Director of the Research Laboratory of Building Energy and Automation at Hong Kong Polytechnic University. His PhD is from the University of Liege.

Shengwei’s research focus is the application of building energy management, building/HVAC diagnosis and optimal control, and intelligent building and building automation technology. He has been awarded over 25 grants from the Research Grants Council of Hong Kong, the National Science Foundation of China and other organisations.

He has published two books, co-authored four books, and published over 300 papers in refereed journals. He is an associate editor of *HVAC&R Research* and an editorial board member for several other journals. He also holds eight guest/adjunct professorships at Chinese and American universities.

### Associate Professor Chu WEI

Teaches in the Department of Energy Economics at Renmin University. Upon completing his PhD from Zhejiang University, he was Associate Professor at Zhejiang Sci-Tech University and Zhejiang University. He has been a visiting scholar at the Toulouse School of Economics, University of Nebraska, Uppsala University, Center for European Economic Research in Mannheim and Pennsylvania State University.

Chu’s recent research has focused on performance evaluation of the power sector, household energy demand, modelling the marginal abatement cost curve and political factors behind energy policy. He has published widely in *Energy Economics, Energy Policy, China Economics Review, China and the World Economy, the Social Science Journal*, etc.

For his research work, he has received several scholarships (Humboldt Foundation, CSC, NSFC, NSSFC, MOE) and awards (Chinese Economics Society and Zhejiang provincial government).
**Professor WU Libo** teaches in the Energy and Environmental Economics Department at Fudan University. She is also the Executive Director of the Center for Energy Economics and Strategies Studies and Deputy Director of the Center for Environmental Economics at Fudan University. She has been the principal investigator for dozens of projects funded by the National Ministry of Science and Technology, National Development and Reform Commission, National Ministry of Education, Shanghai Municipal Development and Reform Commission, Shanghai Municipal Science and Technology Commission, etc. She is now in charge of the National 12th Five Year Plan key Project “Key Technologies Development and Utilization for International Climate Negotiation and Domestic Emissions Reduction”.


**Associate Professor YUAN Jiahai** teaches in the School of Economics and Management at North China Electric Power University. From 2011 to 2012, he was a visiting scholar with the Erb Institute for Global Sustainable Enterprise at the University of Michigan (Ann Arbor).

Jiahai’s research focuses on energy economics and planning and policy, with a special interest in Chinese energy issues. He has authored or co-authored more than 40 papers in Energy Economics, Energy Policy, Renewable and Sustainable Energy Reviews, etc. His research covers a wide range of interrelated topics, including empirical study of the energy-economy-environment nexus, China’s national energy policy, integrated resource strategic planning, and sustainable transition of power systems.

**Associate Professor ZHANG Youguo** is Deputy Director of the Division for Environmental Technical Economics and Deputy Director of the Center for Environment and Development, Institute of Quantitative Economics and Technical Economics, Chinese Academy of Social Sciences (CASS). Youguo’s main research is the application of input-output models and computable general equilibrium models to energy and environmental problems in China. He has carried out two key projects related to Chinese environmental-economic problems sponsored by CASS. Currently, he leads a project “Technical Economic Optimizing Path and Policy for Cross-provincial Carbon Emissions Mitigation”, sponsored by the National Social Science Foundation of China.

His articles have been published in Ecological Economics, Environmental and Resource Economics, Energy Economics and Economic Systems Research. In 2012, he received the 17th “AN Zijie International Trade Research Award” for his book, Environmental Cost of China’s Foreign Trade. He has been a visiting scholar at University of California, Berkeley.
About the Moderators

**Dr. Christopher LEN** is a Fellow at the Energy Studies Institute (ESI), National University of Singapore (NUS). He was previously a Research Fellow at the Stockholm-based Institute for Security and Development Policy (ISDP) where he was responsible for the Energy and Security in Asia Project. There, he also served as Executive Editor of the *China and Eurasia Forum Quarterly* published by the Central Asia-Caucasus Institute and Silk Road Studies Programme, which is a Joint Transatlantic Research and Policy Centre affiliated with the Paul H. Nitze School of Advanced International Studies of Johns Hopkins University and ISDP. Christopher obtained his PhD from the Centre for Energy, Petroleum and Mineral Law and Policy at the University of Dundee, Scotland.

**Ms. Melissa LOW** is an Energy Analyst at ESI. She has a Master of Science in Environmental Management from the National University of Singapore. For her Master thesis on past and contemporary proposals on equity and differentiation in shaping the 2015 climate agreement, she was awarded the Shell Best Dissertation Award 2013. Her research at ESI centres on climate change, focusing on the analysis of countries’ greenhouse gas emissions and evaluation of their mitigation potential. Other areas of interest include equity questions and understanding the climate negotiation dynamic. She has participated in the United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP) talks since December 2009.

**Dr. Bin SU** is a Research Fellow at ESI. He received his PhD in Industrial and Systems Engineering from NUS. His main research interest is energy and environmental systems modelling and analysis, with particular emphasis on energy efficiency, embodied energy/emissions, carbon footprinting, and carbon pricing. Bin is presently an Associate Editor for *Energy Economics* and a referee for more than twenty international peer-reviewed journals, including *Proceedings of the National Academy of Sciences of the United States of America, Energy Economics, Ecological Economics, Energy Policy, Applied Energy*, etc.

**Dr Elspeth THOMSON** is a Senior Fellow and Head of the Energy and the Environment Division at ESI. Originally from Canada, she has lived in Singapore since year 2000. Through the 1990s she taught at Simon Fraser University in Vancouver and Lingnan University in Hong Kong. From 2001-2007, she was a Research Fellow at the East Asian Institute at NUS where she was a China energy specialist.

Besides her book tracing the history of China’s coal industry, and several edited collections, she has published numerous articles and book chapters on many aspects of the various types of energy consumed and traded throughout Asia.

A main project she is working on now is ESI’s new Asia-Europe Energy Policy Research Network. Its main purposes are to compare the content of existing Asian and European energy policies through inter-regional quantitative and qualitative analysis within the three broad areas: climate change mitigation, competitive electricity market design and reduction of fossil fuel consumption in the transport sector.