ISETS
INTERNATIONAL SOCIETY FOR ENERGY TRANSITION STUDIES

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CONTENTS

OPINION

PERSONAL INTERVIEW: ISETS CHAIRMAN PROF. XIANSHENG SUN

Prof. Sun was interviewed by Petrol Trader (石油商报) on Africa-China cooperation. He stressed the importance of helping African countries develop infrastructure capacity – essential for catalysing more sustainable socio-economic growth. He also highlighted some key factors for driving the success of Africa-China cooperation, most notably no interference with domestic affairs, and no conditional cooperation. He also pointed out a few areas for improvement to deepen Africa-China cooperation.

READ FULL INTERVIEW

EAST ASIA FORUM: AUSTRALIA GASSES UP ENERGY SECURITY CONCERNS

This article discusses soaring gas prices in Australia earlier this year and the government's initial response to containing its impact on energy security and affordability. It argues that the use of Australian Domestic Gas Security Mechanisms (ADGSM), a policy instrument for reserving gas for domestic consumption, may bring sovereign risks associated with cutting exports. It instead suggests that the Australian government may like to consider other options, such as gas reservation policy, and LNG levy.

READ FULL ARTICLE

21ST CENTURY BUSINESS HERALD: RESILIENCE OF POWER SUPPLY IS A KEY PRE-REQUISITE FOR ACHIEVING ENERGY SECURITY AND CARBON NEUTRALITY

This article argues that coal power helped maintain the security of power supply this summer while record-setting heatwaves and prolonged droughts were testing the resilience of China's power system. Clean power, whether it be solar, wind or hydro is weather-dependent, naturally linked to the availability of sunlight, wind speed and rainfall. Extreme weathers therefore would cause large variations in clean power, especially during long periods of time, posing a major challenge to the system operation to keep the lights on. This summer, while clean power was unavailable in China, coal power was able to fill the supply gaps in most parts of the country, thanks to the implementation of a series of policy measures to support coal production since last year.

READ FULL ARTICLE

21ST CENTURY BUSINESS HERALD: GAS CRISIS IN EUROPE: IMPLICATIONS ON ENERGY SECURITY AND TRANSITION

This article provides a panoramic overview of the gas supply crisis in Europe and the initial policy response. It suggests that the crisis provides a stimulus for European countries to expedite its transition away from fossil fuels, towards clean energy sources. It also suggests that substantial short-term uncertainties remain as to how to keep the lights on as gas supply crisis deepens. Some European countries have gone back to coal power as a short-term relieve for energy supply shortfalls. This, in turn, creates difficulties for European countries to attain a clean energy future. The article also suggests that balancing energy security with decarbonisation is a key issue faced by all countries around the world.

READ FULL ARTICLE

EAST ASIA FORUM: AUSTRALIA-CHINA CLIMATE COOPERATION CAN THAW THE DIPLOMATIC ICE

This article suggests that Australia-China climate cooperation provides an ice-breaker to recalibrate the relationship between these two countries. It also suggests a few areas for cooperation: LNG, solar PV, and hydrogen.

READ FULL ARTICLE

SOUTH CHINA MORNING POST: TO END POWER CRUNCHES, CHINA MUST REBUILD ITS ELECTRICITY GRID AROUND CLEAN ENERGY

This article analyzed the problem of power shortage in Sichuan, a large hydropower province, and points out that the main problem facing China's power supply security is that the contradiction between the power system based on traditional power sources and clean energy sources is increasingly prominent. The fundamental way to solve this problem is to accelerate the construction of electricity grid around clean energy.

READ FULL ARTICLE

WORKING PAPERS

No. 22-0006:
THE COVID-19 PANDEMIC AND ENERGY TRANSITIONS: EVIDENCE FROM LOW-CARBON POWER GENERATION IN CHINA

Kai Li, Shaozhou Qi, Xunpeng Shi

Abstract: The Corona Virus Disease 2019 (COVID-19) has led to a decline in carbon emissions or an improvement in air quality. Yet little is known about how the pandemic has affected the "low-carbon" energy transition. Here, using difference-in-differences (DID) models with historical controls, this study analysed the overall impact of COVID-19 on China's low-carbon power generation and examined the COVID-19 effect on the direction of the energy transition with a monthly province-specific, source-specific dataset. It was found that the COVID-19 pandemic increased the low-carbon power generation by 4.59% (0.0648 billion kWh), mainly driven by solar and wind power generation, especially solar power generation. Heterogeneous effects indicate that the pandemic has accelerated the transition of the power generation mix and the primary energy mix from carbon-intensive energy to modern renewables (such as solar and wind power). Finally, this study put forward several policy implications, including the need to promote the long-term development of renewables, green recovery, and so on.

CLICK HERE TO DOWNLOAD

KNOWLEDGE-SHARING

Wind power

It is reported that Scotland's biggest offshore wind farm is about to be completed. It has 114 turbines with installed capacity of 1.1 gigawatts - sufficient to power about one million homes.

ASEAN Power Grid

It is reported that Singapore started importing renewable energy from Laos through Thailand and Malaysia on Thursday (June 23), making the first multilateral cross-border electricity trade in ASEAN.

Electricity market

British power utilities under pressure to use their windfall profits for green energy projects.

Europe is reactivating coal power to keep the lights on.

Lessons from Japan on how to handle a gas crisis.

Hydrogen

Rising gas prices mean that green hydrogen is cheaper than natural gas in many European countries, according to Bloomberg NEF.

Energy digitalisation

How AI technologies can help expedite energy transition? Some insights from a new report by the World Economic Forum.

Energy storage

Thermal energy storage – an attractive solution to fill the flexibility gaps in the power sector.

United States

What does the Inflation Reduction Act mean for the climate?

ORGANISATIONAL DEVELOPMENT

The 2nd ISETS Council meeting in 2022

ISETS held the 2022 Mid-Year Council Meeting on 24 August online through Zoom. Eleven of the 17 council members attended the meeting. The meeting was chaired by ISETS President, Professor Roc Xunpeng Shi and received reports from three Vice-Presidents: Professor Dayong Zhang, Professor Qiang Ji and Dr Farhad Taghizadeh-Hesary. The meeting discusses ISETS activities in the first half of 2022 and future plans, including events, working papers and the inaugural ISETS International Conference. The council appreciated the work of the Executive Committee. The Council welcome to possibility of holding the Inaugurating ISETS International Conference in the United Nations Conference Center in Bangkok in the second half of 2023.

EVENTS

THE 4TH ISETS ENERGY TRANSITION FORUM

The Australia-China Relations Institute at the University of Technology Sydney (UTS:ACRI), in partnership with Energy Observer and the Collaborative Innovation Center for Emissions Trading System co-constructed by the Province and Ministry, co-hosted the Fourth Energy Transition Forum organised by the International Society for Energy Transition Studies (ISETS).

The Forum discussed how Australia and the People's Republic of China (PRC) might navigate energy crises during the energy transition towards net zero over the next few decades with a focus on the electricity market. The electricity market was suggested as a solution when China faced the energy crisis in the second half of 2021, but it was at the centre of the storm in Australia's energy crisis in June.

Full record can be found here.

ISETS CONFERENCE: AUSTRALIA-CHINA ENERGY TRADE AND TECHNOLOGY COOPERATION IN THE ENERGY TRANSITION

Australia and the People's Republic of China (PRC) have complementary economic structures with clear opportunities for mutually beneficial trade. In 2019, coal and liquefied natural gas (LNG) accounted for 25percent of Australia's goods exports to the PRC, behind only iron ore in terms of value. Now, however, bilateral energy commodity trade is facing two significant challenges. First, in 2020 geopolitical tensions spilled over to bring an end to Australian coal exports. The PRC has also stepped-up efforts to diversify LNG imports away from Australia. This has included striking multiple long-term supply deals with US companies, despite strategic rivalry between Beijing and Washington becoming increasingly fractious. Second, Beijing is transitioning from fossil fuels to a low carbon energy system. This energy transition, which is critical to achieving Beijing's ambitious plan of achieving a carbon peak by 2030 and carbon neutrality by 2060, will significantly impact Australia's coal and LNG exports in the

long run. Australia's own more ambitious emission reduction targets and climate goals may also affect its industries and exports. These factors are also creating challenges for research and technology cooperation in the energy area.

This raises several questions: How will the PRC's domestic climate change and energy policies affect Australia? What are the opportunities and challenges for energy trade and technology cooperation between Australia and the PRC? What impact is political tensions in the bilateral relationship having upon energy trade and technology cooperation?

On August 18, The Australia-China Relations Institute at the University of Technology Sydney (UTS:ACRI), in partnership with the International Society for Energy Transition Studies (ISETS), hosted a webinar with 10-minute presentations by Dr. Xiujian Peng, Senior Research Fellow, Centre of Policy Studies, Victoria University; Dr. Jorrit Gosens, Fellow, Crawford School of Public Policy, ANU; and Mr Anthony Coles, Chair, Net Zero Working Group, Australia-China Business Council (ACBC) in a session chaired by Professor Xunpeng Shi, UTS:ACRI Research Principal, to discuss these questions and more. The presentations will be followed by audience Q&A.

Full record can be found here.

UPCOMING EVENTS

1.THE 5TH ISETS ENERGY TRANSITION FORUM

The *5th Energy Transition Forum* of the International Society for Energy Transition Studies (ISETS) and Tokyo Energy Transition Forum will be held in Tokyo, Japan on 14 Oct 2022. The forum will be jointly organized by the Tokai University (School of Political Science and Economics, and School of Global Studies), TOKAI Research Institute for Environment and Sustainability, TRIES), the University of Kitakyushu, and ISETS, at Tokai University in Tokyo and on the ZOOM platform. It will bring distinguished experts from Japan, Australia, Singapore, Sweden, and India to discuss ways to foster the energy transition and achieve a carbon neutrality society.

The draft agenda is here.

2.THE 2ND ISETS V-DIALOGUE: A SOCIAL COST OF CARBON WITH CHINESE CHARACTERISTICS

On 14 Oct 2022, Prof. Richard Tol will deliver a talk on the topic of a social cost of carbon with Chinese characteristics. Prof. Tol is at the Department of Economics, University of Sussex. He is also the Professor of the Economics of Climate Change, Institute for Environmental Studies and Department of Spatial Economics, Vrije Universiteit, Amsterdam, the Netherlands, and a Research Fellow of the Tinbergen Institute, CESifo, and the Payne Institute for Public Policy. He is an elected Member of the European Academy. Formerly, he was a Research Professor at the Economic and Social Research Institute, Dublin, the Michael Otto Professor of Sustainability and Global Change at Hamburg University and an Adjunct Professor, Department of Engineering and Public Policy, Carnegie Mellon University, Pittsburgh, PA, USA. He has had visiting appointments at the Canadian Centre for Climate Research, University of Victoria, British Colombia, at the Centre for Social and Economic Research on the Global Environment, University College London, and at the Princeton Environmental Institute and the Department of Economics, Princeton University. He received an M.Sc. in econometrics (1992) and a Ph.D. in economics (1997) from the Vrije Universiteit Amsterdam. He is ranked among the top 100 economists in the world and among the top 100 most-cited

climate scholars. He has 299 publications in learned journals (with 100+ co-authors). He specialises in the economics of energy, environment, and climate, and is interested in integrated assessment modelling. He is the editor-in-chief for Energy Economics, a top field journal. He is the author of the only textbook on the economics of climate change. He is advisor and referee of national and international policy and research. He was an author of Working Groups I, II and III of the Intergovernmental Panel on Climate Change, shared winner of the Nobel Peace Prize for 2007.

Register here.

3.THE 6TH ISETS ENERGY TRANSITION FORUM

The 6th Energy Transition Forum of the International Society for Energy Transition Studies (ISETS) will be held in Beijing, China on 12 Nov 2022. The forum will be jointly organized by ISETS, Institutes of Science and Development, Chinese Academy of Sciences, China Energy Finance Network and the Branch Society for the Studies of Climate Finance of Chinese Society of Optimization, Overall Planning and Economical Mathematics. The organization committee will select papers for in-depth discussion and invite 1-2 experts to comment on each article. More information can be found in the WeChat official post of ISET.

A notice of soliciting papers here.

4.THE 7TH ISETS ENERGY TRANSITION FORUM

The *7th Energy Transition Forum* of the International Society for Energy Transition Studies (ISETS) will be held in Xuzhou, Jiangsu Province, China on 20 Nov 2022. The forum will be jointly organized by ISETS, School of Economics and Management and Carbon Neutralization and Energy Strategy Think Tank, China University of Mining and Technology, China Energy Finance Network and the Branch Society for the Studies of Climate Finance of Chinese Society of Optimization, Overall Planning and Economical Mathematics. The organization committee will select papers for in-depth discussion and invite 1-2 experts to comment on each article. More information can be found in the WeChat official post of ISETS.

A notice of soliciting papers here.

About ISETS

The International Society for Energy Transition Studies (ISETS) is a worldwide non-profit professional organisation based in Australia, which has members in 40+ nations and more than ten international organisations.

ISETS was founded on 16 June 2020 through the Founding Declaration signed by a group of 31 energetic and internationally acclaimed professionals who have extensive experiences in energy, environment and other sustainable development issues.

ISETS aims to facilitate an equitable and inclusive transition of energy and relevant sectors toward a sustainable low-carbon future with consideration of economic development, social equity, and environmental stewardship through international partnerships.

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