ISETS
INTERNATIONAL SOCIETY FOR ENERGY TRANSITION STUDIES

ISETS NEWSLETTER 2023 Q4

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INAUGURAL ISETS INTERNATIONAL CONFERENCE SUMMARY

The Inaugural ISETS Conference Was Held to Address Energy Transition Efforts in the Asia-Pacific

The inaugural international conference of the International Society for Energy Transition Studies (ISETS) was held in Bangkok from 16th to 18th October.

The conference, as part of the Asia Pacific Energy Week and a side event of the third Asian and Pacific Energy Forum, was co-hosted by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).

Other co-organisers included the Economic Research Institute for ASEAN and East Asia (ERIA), Collaborative Innovation Center for Emissions Trading System at Hubei University of Economics, the Society for the Studies of Climate Finance, and Ember.

Professor Xunpeng (Roc) Shi, President of the ISETS executivite committee, explained the history of ISETS and highlighted its mission of continuously and unbounded knowledge sharing, available to all those in need, regardless of their ability or willingness to pay.

Ms. Armida Salsiah Alisjahbana, Under-Secretary-General of the United Nations and Executive Secretary of the Economic and Social Commission for Asia and the Pacific (ESCAP), opened the Asia-Pacific Energy Week by recognising the pivotal role that think tanks and research institutes, including ISETS, play in facilitating Asia-Pacific's energy transitions.

"It is impressive to see the extent to which you have managed to assemble expertise and diversity of stakeholders under the ISETS banner." She said, and "We have joined hands with many ISETS members on these efforts, and we look forward to greater collaboration in the future." She anticipated that "ISETS will evolve into a valuable hub of knowledge and collaboration, unwavering in its commitment to foster dialogue and effectively gather and share information on technologies, products, solutions and experiences." Full speech can be found here.

Dr. Xiansheng Sun, the Chairman of the ISETS Council, explained ISETS's mandate, which is "to collectively steer the global energy ship towards a sustainable, inclusive, and equitable transition, one that embraces carbon neutrality as a shared goal."

The ISETS conference gathered over 200 energy sector leaders, policy makers and experts, and the discussion highlighted the following issues most pertinent to Asia-Pacific's transition towards a clean and sustainable energy future.

The conference presentations are available at: www.isets.org/data.

The 1st Youth Dialogue Was Held at the United Nations Conference Center on 17 October 2023

On October 17th, 2023, the 1st ISETS Youth Dialogue and the 1st Youth Voice Competition award ceremony took place at the United Nations Conference Center (UNCC) in Bangkok.

The theme of the 1st Youth Voice competition is "Equitable and Just Energy Transition". It is aimed to foster more effective engagement with the younger generations (aged 18-24), inviting them to share their unique perspectives, viewpoints, and insights on energy transition. The competition witnessed an incredible display of talent and innovation from across the globe.

After rigorous assessment by the International Assessment Committee, Team "Zephyr" from China has emerged as the distinguished first prize winner. Four outstanding teams hailing from China, Thailand, India, and the USA respectively, have jointly earned the prestigious second prize. Similarly, the third prize has been shared among three remarkable teams from Pakistan, Azerbaijan, and Indonesia respectively, as well as three additional teams from China.

Seven teams from across the worlds, including China, India, Indonesia, Thailand, and the United States, participated in the 1st ISETS Youth Dialogue at the UNCC, diving into a range of issues related to energy transition, such as energy poverty, and international cooperation.

Messages from the Winning Teams:

"We are honoured to be able to share the ideas of a zero-carbon energy prosumage system (ZEPS) and exchange views with youth from around the world, which has broadened our horizons and provided inspiration for further research and thinking.

We believe the ISETS Youth Voice competition is very meaningful, providing a platform for youth to communicate, broaden perspectives, and jointly participate in decision-making on climate change and energy transition issues. We hope it will continue and expand its global influence, such as including youth from more developed countries and listening to the voices of youth from more different districts."

--Team Zephyr, China

"The ISETS Youth Voice Competition has been a transformative experience, allowing young voices, like mine, to be heard and contribute to vital discussions regarding energy transition and sustainability. The platform you provided not only empowered us but also allowed us to connect with experts and fellow participants from diverse backgrounds, making it a truly enriching experience. "

—Team "Perairan", India

"We were very pleased and grateful to be able to join together with youth from different parts of the world to exchange opinions on this important issue.

The dialogue was a valuable experience for us. It allowed us to learn about the different perspectives and challenges that young people are facing in their efforts to promote a just energy transition. It also gave us the opportunity to share our own ideas and experiences, and to build relationships with other young people who are passionate about this issue.

We are hopeful that ISETS will continue to host dialogues like this in the future. We believe that it is essential for young people to have a voice in the conversation about just energy transition. We also believe that dialogue and collaboration are essential to building a more sustainable and equitable future for all."

—Team GGGs, Thailand

ISETS POLICY BRIEF

2023 No. 1: Renewable Energy Integration and Electricity Prices: Australia's Energy Transition Experience

Australia stands at the forefront of a global energy transformation. Its National Electricity Market (NEM) is currently navigating a monumental transition from a reliance on centralized coal-fired power generation to an embrace of variable renewable energy (VRE). Notably, Australia's commitment to renewable electricity capacity installation surpasses that of other

nations, being 2.5 times greater than its closest competitor, Germany, as in 2019 (Stocks et al., 2019). Furthermore, Australia distinguishes itself as a pioneer in solar PV generation, much of which is derived from household rooftop installations (AER, 2021).

Historically, the trajectory of Australia's electricity industry reforms spanned several decades, primarily focusing on deregularization. However, the narrative has evolved in recent times. The imperatives of climate change, advancements in technology, and the ageing of coal-fired generators have steered the latest wave of reforms. Originating with a robust fleet of coal-powered plants, the NEM has been predominantly fuelled by fossil fuels, positioning the electricity sector as a significant contributor to the nation's greenhouse gas emissions (AER, 2021).

With the pressing challenge of climate change, Australia's electricity sector bears a crucial responsibility. It is instrumental in actualizing the country's emissions reduction goals, especially the ambitious net-zero carbon dioxide emissions target set by state governments. Renewables, in this context, emerge as pivotal players in the decarbonization process. Yet, the transition is not without its dilemmas. Balancing emissions reduction with the dual imperatives of affordability and system reliability —often referred to as the "energy trilemma" — poses a significant challenge.

This policy brief seeks to illuminate the evolving landscape of Australia's energy sector, exploring pertinent policies, elucidating challenges, and proffering recommendations for a sustainable renewable energy future.

The policy brief is available at: ISETS Policy Brief – iSets.

REPORT

China's Climate Transition Outlook 2023: Expert Survey and Interviews

Xunpeng Shi, Muyi Yang, Shurui Wang

As part of the Centre for Research on Energy and Clean Air's (CREA) annual China Climate Transition Outlook report to measure insiders' views on whether China is on track with its climate commitments, CREA and the International Society for Energy Transition Studies (ISETS) have published a joint expert survey of 89 climate and energy experts.

The experts in this year's survey are more optimistic than those interviewed last year and, overall, believe that China's economic situation after the COVID-19 pandemic has accelerated the country's energy transition and CO2 peaking. 21% of experts believe China's CO2 will peak before 2025, up from 15% in 2022's survey. The percentage of experts expecting China's

CO2 emissions to rise more than 15% above the 2020 level before peaking fell from 69% to 56%. This change may reflect the experts' increased expectations for China to achieve its emission reduction goals.

Most of the experts believe that China is on track to peak its carbon emissions before 2030, but limiting emissions increases before the peak remains a significant challenge, as most experts expected emissions to increase by 15% or more from 2020 to the peak. Over half of the experts surveyed expressed optimism about China reaching its peak primary energy consumption before 2030. However, the findings are mixed for the country's coal consumption as it is closely linked to China's socio-economic developments. Some 30 experts, or 34% of those surveyed, are uncertain when the peak will be achieved.

- **Power sector:** Experts remain divided in their opinion on when the emissions from the country's power sector would peak. While 27 predicted the peak only after 2030, five foresaw the peak in 2030, and 22 believed the peak to happen between 2026 and 2030.
- **Steel sector:** The steel sector is more optimistic, with nearly half of the experts surveyed predicting that carbon emissions will peak before 2025 – an increase of 12 percentage points from 2022.
- **Cement industry:** In the 2023 survey, nearly 60% of experts believe that carbon emissions from China's cement industry will peak before 2025, while 24% predict that the peak will not occur until after 2030. This reflects a shift from the 2022 data, where 38% anticipated a post-2030 peak. The decrease to 24% suggests a more optimistic view among experts regarding the progress of emissions reduction in the cement industry and the anticipated timing of its peak.
- **Transportation sector:** Compared to 2022, the 2023 survey shows that more experts tend to believe that the peak of carbon emissions in the transportation sector will come earlier. Predictions for a peak before 2030 have significantly increased, while predictions for a peak between 2030 and 2035 and between 2035 and 2040 have correspondingly decreased.

The report is available in both English and Chinese versions: https://isets.org/isets-reports/.

SHARED DATA

A Dataset of Low-Carbon Energy Transition Index for Chinese Cities 2003–2019

Cities are at the heart of climate change mitigation as they account for over 70% of global carbon emissions. However, cities vary in their energy systems and socioeconomic capacities to transition to renewable energy. To address this heterogeneity, this study proposes an Energy Transition Index (ETI) specifically designed for cities, and applies it to track the progress of energy transition in Chinese cities. The city-level ETI framework is based on the national ETI developed by the World Economic Forum (WEF) and comprises two sub-indexes: the Energy System Performance sub-index, which evaluates the current status of cities' energy systems in terms of energy transition, and the Transition Readiness sub-index, which assesses their

socioeconomic capacity for future energy transition. The initial version of the dataset includes ETI and its sub-indexes for 282 Chinese cities from 2003 to 2019, with annual updates planned.

These and other data are available at www.isets.org/data.

GLOBAL CALL FOR PAPERS: THE 2ND ISETS INTERNATIONAL CONFERENCE

"Boosting Energy Transition for Greener Economy"

November 1-4, 2024 Nanjing, China

The International Society for Energy Transition Studies (ISETS) invites submissions for its 2024 international conference, scheduled to take place at Nanjing, CHINA on November 1-4, 2024. Nanjing University of Aeronautics and Astronautics (NUAA) will serve as the local host for the conference. We welcome submissions and proposals for sessions from all areas of energy transition.

Important dates

Abstract submission deadline: **30 June 2024**
Notification of Acceptance: **15 July 2024**
Session proposal deadline: **31 July 2024**
Registration deadline: **15 September 2024**
Conference: **1-4 November 2024**

For inquiries related to the conference, please direct your questions to events@isets.org and isets2024@hotmail.com, or refer to https://isets.org/isets2024.

GLOBAL CALL FOR NOMINATIONS: OUTSTANDING CARBON NEUTRALITY AND ENERGY TRANSITION CASES

The International Society for Energy Transition Studies (ISETS) welcomes enterprises, institutions, and professionals around the world to recommend or self-nominate outstanding cases in the fields of carbon neutrality and energy transition. This initiative aims to highlight innovative practices, technologies and solutions that significantly contribute to the global efforts towards achieving a sustainable low-carbon future.

We invite nominations from all sectors, including but not limited to, renewable energy, energy efficiency, sustainable transportation, carbon capture, utilization and storage as well as green infrastructure. The nominated cases can range from groundbreaking research, transformative projects or practices, effective policies to revolutionary products or technologies.

Submissions are open permanently. However, for those wishing to join the exhibition at the 2nd International Conference in Nanjing, China, on November 1-4, 2024, the deadline is August 31, 2024.

Businesses, organizations, and professionals are encouraged to nominate cases. Nominations can be made by self-nomination or by nominating others.

We look forward to receiving your nominations and celebrating the achievements of those leading the way in carbon neutrality and energy transition. Your participation will inspire others and contribute to a more sustainable and equitable world.

Contact Information: isets@isets.org; secretariat@isets.org
For more information and to submit your nomination, please visit https://isets.org/nominations-for-outstanding-cases/.

About ISETS

ISETS is an independent, non-profit, global organisation headquated in Sydney, Australia. ISETS is open to anyone who is interested. Registration (at www.isets.org) as Associate Member is **free** permanently. Currently, ISETS has more than 900 members from 60 countries.

ISETS dedicates to facilitating a just, 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.

ISETS creates a global dialogue platform to discuss, share and disseminate knowledge on the energy transition for professionals from government, industry, academia, research institutes and other organizations across countries.

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