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IAEE Energy Forum

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International Association for Energy Economics

PRESIDENT'S MESSAGE

I have been a member of the International Association for Energy Economics ever since, as a young researcher, I helped a colleague (and my mentor), Mr. Kenichi Matsui, organize the 8th IAEE International Conference in Tokyo. It was the first time IAEE came to Japan and I vividly remember the importance Matsui-san attached to such an undertaking. Many years later, he accepted to become President of the Association and often reminded me that such a prestigious organization was essential to the world.

Dear members, when you selected me as President-elect, more than one year ago, I felt very proud and honored that a little girl from a small country stuck in the corner of Asia could one day be considered as your representative. Thank you for your vote of confidence.

Although I have the title of professor, I am not an academic and very far from it. I am, however, responsible for quantitative and qualitative analyses on energy policy issues at the Institute of Energy Economics, Japan. As such, I am still developing my abilities to assimilate information and propose solutions or ways forward.

Now it is time for me to not only "put shoulder to the wheel" but to also initiate very small steering corrections that could direct us to our goal of advancing knowledge and understanding. The association is a very big ship to steer! I often ask myself how many "small" corrections have been made over the years by past presidents because, just a few decades ago, the driver seat was most often shared between energy and economic issues while the environment was "sometimes" riding in the back. In fact, the IAEE was established during the era of oil crises as a platform for energy economists in industry, academia, and government. Now the 3Es (economy, energy and environment) do own a legitimate driving license and all three deserve the opportunity to share in the steering.

Unfortunately, the changes or corrections I have in mind are like mini-seeds that could take years to mature and most of the path for the coming years is already under construction. For example, in the last few years we used as much acumen and vision as possible in the development of our annual international conferences which are now in their final planning stage.

For insights, I will heavily rely on the knowledge and wisdom of the past presidents, not limited to the immediate ones like David Knapp or Christophe Bonnery but also those before them if I can. I will need the help of the current president-elect (James Smith), the council members, the Executive Director (David Williams), the IAEE officers, editors and staff.

For foresights (if I can use the term) I would like to personally engage with

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President's Message (continued)

the future generation of professionals in the field of energy economics - our PhD students and young professionals. I want them to be vocal and share their vision and dreams for the world they are inheriting.

I also would like more engagement with the business sector and governments with regard to technologies that will play a major role during the so-called energy transformation. Technologies are in the hands of industries for dissemination but to push new technologies into markets, we need supporting policies. The challenges we face now call for the creative and innovative spirit of getting together, exchanging views and ideas in a neutral environment, free of suspicions. IAEE's neutral stance is ideal for organizing such platform.

I am sure the coming year will be filled with references to the 17 SDGs and buzz words that resonate well. We need to keep track of what is going on with words such as Uncertainty, Transformation, Transition, Affordability, Availability, Accessibility, Smart this, Smart that, Security, Efficiency, Growth, Geopolitics, TCFD, ESG, etc. etc.

I certainly hope to see and meet many of you in Paris this coming 21-24 June as we will discuss climate and energy policies, and some of the conflicting objectives that need to be tackled. I must admit to having a particular bias towards the 2021 conference, as I would like to welcome you all in my town, Tokyo. We will touch on the theme of navigating in stormy waters inspired by Mapping the Energy Future. The following year we will meet in the Kingdom of Saudi Arabia (2022, Energy Market Transformation in a Globalized World) then in Turkey (2023, Overcoming the Energy Challenge) . What an exciting line-up! Don't miss it!

On the subject of Mapping the energy future, many think that we have not yet completed our analyses of the relevant parts of the energy problems. I think that incomplete mapping did not stop the explorers of the past to venture in stormy waters. Like us (economists), they assumed there was a "new world" ready to be discovered out there.

Aside from the annual international conferences, many regional events will be organized during the year or years to come. Just to mention a few, the 7th Asia-Oceania Conference in Auckland, New-Zealand (Theme: Energy in Transition, 12-15 February), and the 38th USAEE/IAEE North American Conference (Energy Economics: Bringing Markets, Policy and Technology Together, 1-4 November). I should also mention some of our ongoing other services, including IAEE summer school, autumn school, symposium series and electronic publication of EEEP.

As for me, I only hope to honor my mentor of many years ago. I truly believe that IAEE is a prestigious Organization essential to the world. We are 4000 members and it must be a force to recon with!

Yukari Yamashita

IAEE MISSION STATEMENT

The International Association for Energy Economics is an independent, non-profit, global membership organisation for business, government, academic and other professionals concerned with energy and related issues in the international community. We advance the knowledge, understanding and application of economics across all aspects of energy and foster communication amongst energy concerned professionals.

WE FACILITATE:

- Worldwide information flow and exchange of ideas on energy issues
- High quality research
- Development and education of students and energy professionals

WE ACCOMPLISH THIS THROUGH:

- Providing leading edge publications and electronic media
- Organizing international and regional conferences
- Building networks of energy concerned professionals

NEWSLETTER DISCLAIMER

Editor's Notes

We conclude our coverage of stranded assets in this issue. In addition, we're fortunate to have a review of the USAEE's early November North American meeting held in Denver, Colorado. We're indebted to Mark McCarthy for the compiling and editing of this. It begins on page 15.

Tilak Doshi notes that the September 14th take out of half of Saudi Aramco's oil facilities, the equivalent of 9/11 for the oil industry, was met with only a whimper. The shift from a perceived world of oil scarcity to one of abundance has occurred in a very short time by the advent of the fracking revolution in the U.S., the result being U.S. oil production is now the highest in the world. He details how oil geopolitics have been upended.

Dawud Ansari and **Amrbia Fareed** discuss the heated debate about stranded assets and argue that the term is conceptually flawed. Nevertheless, using data on the economic diversification of fuel exporters and numerical results from their recent modelling work, they show that the potential issue is too big to ignore.

Jiang Lin, Jiahai Yuan, Xu Liu, and **Weirong Zhang** write that China is facing increasing coal power stranded assets pressure given its overcapacity of coal plants, economic transition, and environmental and climate goals. It is estimated that total coal stranded assets could be 40-103 billion yuan in 2030. Supply-side reforms can reduce stranded asset and economic losses for all parties involved.

Andrew Akweny and **Rockson Sai** note that the call for sustainable energy has drawn much attention to the uncertainty of the value of potential assets in various sectors. Africa being resource-intensive region especially with new discoveries of non-renewals has attracted a lot of capital investments. Stranded assets in the midst of optimism economic development worth discussion.

Nawaz Peerbocus writes that the creative powers of dynamic capitalism leads to the destruction of old ways of doing things, making space for new ways of doing things. In many ways, the energy transitions happening globally are sub-processes of a larger creative destruction process resulting in stranded assets across many sectors of the economy.

Minh Ha Duong notes that in 2016, Vietnam planned to build a fleet of new coal-fired power plants, expanding capacity to 54.5 GW by 2030, from 13.1 GW in 2015. Three years later, the risk of stranded assets not only made this plan sub-optimal, it also made it infeasible because investors are looking elsewhere.

Thorsten Burandt, Pedro Crespo del Granado, and **Ruud Egging** apply a multi-sectoral energy system model to analyze the energy transition with ambitious decarbonization scenarios. Results show that significant amounts of gas-fired capacity might end up stranded. Introduction of capacity markets and using biogas, synthetic methane, or hydrogen instead of natural gas, can reduce the risk of stranded assets.

Antonina Scheer, Morgan Bazilian, and **Ben Caldecott** note that the Alberta oil sands may be among the first oil resources to suffer devaluations due to their high carbon intensity and relatively low quality. Assets may become stranded depending on project-level risks and wider potential drivers. They discuss how regulations at varying jurisdictional levels – provincial, federal, and international – contribute to this stranding process.

Andrew Pickford discusses the issues surrounding forecasting energy demand and reports from the December IAEE symposium held in Abu Dhabi.

Saeed Moshiri reviews the oil-macroeconomy relationship from the standpoint of both oil-exporting and oil-importing countries and then presents the case for trade and labor migration as factors easing the pain. He uses Canada as a case study to show the importance of trade and labor movements in mitigating the adverse effects of oil price shocks

Jared Woollacott and **Justin Larson** provide asset stranding characteristics and define stranding in financial accounting terms. They identify a typology of causes and explain how different modeling approaches capture key characteristics of asset stranding. They model a stylized shock for each cause and evaluate asset stranding using the ARTIMAS general equilibrium model.

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