

# IAEE ENERGY FORUM

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Published By:



## PRESIDENT'S MESSAGE

Six months already! Six months under my one-year term as a president of IAEE has already passed; what have I achieved? It has been six months since the unsolicited arrival of Covid-19; what have we learned from it? Despite the enormity, gravity and the unprecedented long-term losses associated with the virus, there have been a few (some small, some significant) benefits or eye-opening virtues that emerged from the lockdowns.

Who would have thought that we could be without the stress of the daily two-hour commute? Who would have thought that we could be looking for more quality family time? Who would have thought that husbands could find new hobbies or contribute more to the household? We have more time to read, relax and think, while simply baking, cooking, cleaning, walking, gardening... In Japan, we were surprised that butter and flour disappeared from shelves of stores because school kids joined the force and started to bake cakes at home.

These are challenging times for humanity, no doubt, but for many of earth's "other" inhabitants, it is like a blessing with clearer skies, quiet streets and tranquil shores inviting nature and wildlife back such as bluer and cleaner water in Venice canals or cleaner sky in China. Who would have thought that nature needed a break?

But what are we learning from all this? Will we take this opportunity to change just a few of the things we know we have been doing wrong for a long time? Will we reassess our needs and adjust accordingly? What about you, dear members? Have you made a few resolutions to change the future?

IAEE is also adjusting to the new reality and we are preparing platforms to virtually contact each other. I hope that many of you are enjoying IAEE's continuous roll-out of webinars and podcasts. For those of you who have not done so, please check out our webinar listings at <https://www.iaee.org/en/Webinars/> and join us.

We have been punctually conducting these webinar series hoping to unite our members and invite new faces from all over the world. We have covered a variety of topics so far. And yet, we still have lots to cover. If you are interested in leading one of our webinars, please reach out to our Executive Director, David Williams at [iaee@iaee.org](mailto:iaee@iaee.org). Your contribution will make a difference.

Please do not forget to check out the new dates for 2021 conferences as well.

See [https://www.iaee.org/documents/2010/IAEE-Affiliate\\_Master\\_Calendar.pdf](https://www.iaee.org/documents/2010/IAEE-Affiliate_Master_Calendar.pdf)

We look forward to seeing all members in Paris and in other places in 2021 to exchange news and discuss energy matters, face to face. Please stay safe, until then.



*Yukari Niwa Yamashita*

## Careers, Energy Education and Scholarships Online Databases

IAEE is pleased to highlight our online careers database, with special focus on graduate positions. Please visit [http://www.iaee.org/en/students/student\\_careers.asp](http://www.iaee.org/en/students/student_careers.asp) for a listing of employment opportunities.

Employers are invited to use this database, at no cost, to advertise their graduate, senior graduate or seasoned professional positions to the IAEE membership and visitors to the IAEE website seeking employment assistance.

The IAEE is also pleased to highlight the Energy Economics Education database available at <http://www.iaee.org/en/students/eee.aspx>. Members from academia are kindly invited to list, at no cost, graduate, postgraduate and research programs as well as their university and research centers in this online database. For students and interested individuals looking to enhance their knowledge within the field of energy and economics, this is a valuable database to reference.

Further, IAEE has also launched a Scholarship Database, open at no cost to different grants and scholarship providers in Energy Economics and related fields. This is available at <http://www.iaee.org/en/students/ListScholarships.aspx>

We look forward to your participation in these new initiatives.

### 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

IAEE is a 501(c)(6) corporation and neither takes any position on any political issue nor endorses any candidates, parties, or public policy proposals. IAEE officers, staff, and members may not represent that any policy position is supported by the IAEE nor claim to represent the IAEE in advocating any political objective. However, issues involving energy policy inherently involve questions of energy economics. Economic analysis of energy topics provides critical input to energy policy decisions. IAEE encourages its members to consider and explore the policy implications of their work as a means of maximizing the value of their work. IAEE is therefore pleased to offer its members a neutral and wholly non-partisan forum in its conferences and web-sites for its members to analyze such policy implications and to engage in dialogue about them, including advocacy by members of certain policies or positions, provided that such members do so with full respect of IAEE's need to maintain its own strict political neutrality. Any policy endorsed or advocated in any IAEE conference, document, publication, or web-site posting should therefore be understood to be the position of its individual author or authors, and not that of the IAEE nor its members as a group. Authors are requested to include in a speech or writing advocating a policy position a statement that it represents the author's own views and not necessarily those of the IAEE or any other members. Any member who willfully violates IAEE's political neutrality may be censured or removed from membership.

## Editor's Notes

We conclude our coverage of the theme, *Energy Transition*, in the issue. As noted in the last issue, we are most grateful for our reader response. I believe this theme brought forth a record response in article numbers.

**Steven Dahlke** and **Brock Mosovsky** note that electricity supply and distribution is becoming increasingly decentralized and intermittent. They demonstrate how optimized and automated battery dispatch relative to dynamic retail rate structures can shape electricity demand profiles in a way that is economically beneficial to both utilities and their customers.

**Marina Bertolini** notes that Institutional willingness to move towards a new market paradigm for electricity is clear; technological tools are ready to be applied; economic research is endowed with robust theoretical models on market functioning. Why are we still waiting for energy markets' revolution? The answer could be the high uncertainty that blocks regulation.

**Alan Rai** posits that despite a significant increase in VRE penetration and digital technologies, most electricity customers in Australia remain on network tariffs designed for a more traditional electricity system. He discusses the emergence of more dynamic network tariffs, and argues tariffs need to continue to become more dynamic and cost-reflective given expected increases in digital load controlling technologies, DER and VRE penetration, in order to achieve efficient and equitable outcomes.

**Robert Kleinberg** and **Marie Fagan** note that Econometric analysis shows that U.S. upstream research and development efforts track oil price movements with a delay, while case studies show that the results of technology development requiring substantial R&D resources are often driven by innovations that arise independently of the business cycle.

**Andrés Alonso** comments on the application of a public policy coming from the Chilean mining industry that will allow the regulated electricity consumers in Chile to save more than 20,000 million dollars compared to the level of prices paid in 2013.

**Daiman Shaw-Williams** notes that in the distribution network sector, much has been made of the cost of adaptation and yet it also stands to gain significantly by moving to new business models. Through digitalisation and the incentivisation of localised network supporting behaviour, new models of aggregation can lead the way in investment in optimisation.

**Bruce Mountain, Steven Percy** and **Kelly Burns** report on an analysis of 48,677 residential electricity bills that reveal rooftop photovoltaics (PV) reduces prices for all customers. Even high penetration of residential rooftop PV does not have a big impact on network usage.

**Mohammad Ansarin** notes that there is some controversy about pricing electricity, especially where there's small-scale solar generation. Persistent misunderstandings exist about tariff fairness in debates between utilities, regulators, consumers, and solar energy advocates. What is needed most are objective evaluations of a tariff's pros and cons and viewing electricity more as a private good.

**Doug Reynolds** investigates in "Competitive Electric Utility Analysis" how electric utility markets can or cannot be compared to a road network in a city and if power generators on a grid resemble perfect competition, monopolistically competitive markets, or oligopolistic competition. The efficiency is assessed compared to a regulated monopoly.

**Yoshihiro Yamamoto** posits that customers could mitigate the imbalance between supply and demand with devices such as photovoltaic systems and energy storage systems. Although aggregation of those operations is effective, it may be difficult for some small-scale owners to be aggregated. He presents a rewarding system to encourage them to operate those devices appropriately.

**John Morris** examines the history and potential future of retail rates in the electric power industry. Changes in information and technology have impacted retail energy rates in the past and will likely continue to do so in the future. As long as our wealth stays the same or increases, changes in technology and the availability of information will increase at an increasing rate. Hence, utility rate structures in the future will need to be more flexible and dynamic to accommodate the increasing rate of change.

**Burcin Unel, Sylwia Bialek, Jip Kim** and **Yury Dvorkin** note that proliferation of distributed energy resources spurred discussions about how reform today's utility regulation. However, these discussions overlook the role information plays in optimal regulation. They discuss how information, or lack thereof, can affect the cost-effectiveness of the transition to a clean and distributed energy future.

**Jackie Ashley** reports on British Columbia's approach to demystifying the various energy cost-effectiveness tests by looking at the question from the perspective of 'effectiveness (how effective is the energy efficiency program in 'nudging' a customer to change their behaviour or investment decision?) and balance' (do all customers have a reasonable opportunity to benefit from energy efficiency programs? She discusses in detail the 'effectiveness and balance' approach to reviewing energy efficiency programs.

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