

IAEE ENERGY FORUM

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Published By:

IAEE
International Association for
ENERGY ECONOMICS

PRESIDENT'S MESSAGE

We can hope that 2020 and 2021 will be labelled by future historians as “the” years of the coronavirus-19 pandemic. Regardless, they have been extremely stressful individually, for our communities, families, friends, and colleagues and for our Association. Fortunately for the Association, past management actions had allowed us to accumulate financial resources to weather the severe reduction in revenue.

Technology also enabled us to keep in touch with each other via online webinars, podcasts, and online conferences. Having the technology available is one thing. Being able to quickly gear up to use it effectively is something else. We are very grateful to Dave Williams and his team for all the effort they put into to making these online activities a success.

We also thank many of our regional affiliate councils and individual members for supporting, organizing, or sponsoring events. A special thanks is due to the French Association for Energy Economics and the team at the Florence School of Regulation for organizing the very successful online Paris International Conference in June of this year.

A major issue for the Association as we transition out of our “pandemic quarantine” is how best to sustain online activities, which many members have found very useful. While we had resources to support the online activities when face-to-face conferences were in abeyance, something different is needed going forward.

There is no doubt that the world is going more electronic all the time and that the pandemic accelerated that process. However, it also is clear that many organizations struggle with how to pay for the production, management, and dissemination of online content. This issue is perhaps linked to our ongoing efforts to grow our social media presence. Council is investigating and debating how we should take the best out of this experience and carry it forward in a sustainable way.

While the Association has missed in-person conferences, I am pleased to say that our publications provided a welcome continuing source of revenue, while also helping to sustain us as a community. They have been proven yet again to be a valuable part of IAEE. They also are feeling some pressures from the expansion of electronic communication. Council has set up a sub-committee that is examining many issues surrounding the way that we handle publications.

The process improvements in handling *Energy Journal* submissions, refereeing and publication since all operations were moved to headquarters have been notable. Although it has been a lot of work for Dave Williams and his team, we look forward to having *Economics of Energy and Environmental Policy* handled via the same methods. Changes instituted to raise the impact of both journals as measured by standard metrics have been bearing fruit. We are also looking forward to the energetic and experienced Charles Mason taking over as *EEEP* Editor-in-Chief.



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President’s Message (continued)

The Association can thus begin 2022 with some positive momentum – something we were most uncertain about at this time last year. Nevertheless, we are also very anxious to get back to normal business, especially as regards face-to-face conferences. While the ready availability of teleconferencing has enabled many of us to continue working productively, I think we have all experienced the severe limitations of the technology.

We very much want you all to think about our 2022 International Conference to be held in Tokyo from July 31 - August 3, 2022 as your “coming back” party! Please visit <https://iaee2022.org/> for the latest conference information and Call for Papers.

The other big shock for the IAEE in 2021 is that we learned that we are going to lose AMS as our Association Management Company (AMC) when our contract with them expires at the end of 2022. It is going to be extremely difficult to replace AMS, and to ensure that as much information and knowledge as possible is transferred to the new AMC. Like all transitions, there are undoubtedly going to be unforeseen problems with the new arrangement.

Council has been working on transition matters in part by establishing a “Transition Task Force”. We are very pleased to say that AMS is working closely with us to write the RFP, interview candidates and select the best team for us in 2023 and beyond. Nevertheless, we believe it is important for IAEE Council to form its own views about what we should look for in the new AMC. We need to retain as much as possible of the prior arrangements that worked so well. When everything is working smoothly it is all too easy to ignore the effort required to keep it that way. We therefore need to look more explicitly and critically at the way we have been doing things. We need to identify what worked well, and what we think could be changed for the better as we transition systems and processes.

In summary, 2022 is going to be a significant and eventful year for IAEE. Let us try to make it as much as possible an opportunity that allowed us to improve the value we provide to our members.

I look forward to keeping you, our members, well informed throughout 2022.

Peter Hartley

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NEWSLETTER DISCLAIMER

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IAEE MISSION STATEMENT

IAEE’s mission is to enhance and disseminate knowledge that furthers understanding of energy economics and informs best policies and practices in the utilization of energy sources.

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

- **Leading edge publications and electronic media**
- **International and regional conferences**
- **Networking among energy-concerned professionals**

Editor's Notes

We conclude our focus on vulnerabilities within the utility industry, continued from the fourth quarter 2021 issue. We are most grateful for the enthusiastic reader response on this topic.

Fateh Belaid and **Aisha Al Sarihi** write that the global energy sector is undergoing a rapidly accelerating transition. This accelerated path is motivated by a range of drivers. Tackling climate change is a critical consideration among these drivers, but policy makers and governments are faced with other priorities, including ensuring affordable energy supply, energy security, and energy access to everyone. Fossil fuel will continue to play a role in meeting future increasing energy demand. Two key energy policies to tackle change are: energy efficiency and renewable energy. Within this context, this analysis intends to: (1) explore the ongoing energy transition in Saudi Arabia; (2) examine the role of renewable energy in achieving the sustainability goals in Saudi Arabia. The results have important policy implications, highlighting how aggressive energy transition initiatives may achieve sustainability and climate goals in the context of very active and engaged economy in the energy transition. It can help policy-makers design effective mitigation policies and consider renewable energy as a vehicle for tackling climate change and building a better future.

Md. Nasimul Islam Maruf, **Jos Sijm**, and **Germán Morales-España** inform us that power-to-heat (P2H) technologies offer great potential for the European energy transition. This article identifies the vital P2H technologies to use in households and industries in future sustainable energy systems

Sophie Chlela, **Sandrine Selosse**, and **Nadia Maïzi** posit that the increase of renewable energy share in the power generation mix to achieve national and international targets of greenhouse gases emissions reduction comes with important consequences, especially for the electricity grid that has to increase its flexibility to assure the quality and reliability of supply. This requirement can be much more relevant when dealing with islands, as they have limited (or no) interconnections to the continent and thus have to rely more on more flexible options to ensure the secure and cost-efficient operation of their energy system. In this context, a longterm prospective study, based on technico-economic optimization of TIMES model generator, is carried out to explore decarbonisation pathways that ensure grid flexibility of the two investigated European islands - Procida in Italy and Hinnøya in Norway. Emphasis is given to technical, economic and policy aspects of the evolution of the islands' power systems.

Humphrey Oruwari and **Gordon M. Bubou's** paper examines the impact of environmentally sound technologies on climate change in Nigeria and recommends ways for policy decisions. Using literature review and case study, it is revealed that energy companies use environmentally sound technologies to mitigate climate change. It recommends the need to embrace environmentally sound technologies,

Lilia García Manrique, **Mónica Santillán Vera**, and **Isabel Rodríguez Peña** note that transitioning to clean energy includes using natural gas as a transitional energetic. Nevertheless, for a country like Mexico, this transition is more of a static strategy. Gas infrastructure is planned to be highly dependent on US gas imports. This creates a gas lock-in strategy reliant on US gas supply.

Ernesto Elenter comments that Uruguay has proven in its first energy transition (2010-2020) that it has achieved a 97% renewable energy share and is among the top 2 in the world in terms of wind energy share. The country is currently outlining its second energy transition to decarbonize transportation, harness the vast renewable resources available, while solving the problem of high electricity and fuels prices that the country still faces.

Kimmo Palanne and **Anna Sahari** discuss that despite a high carbon tax introduced over 30 years ago, Finland's transport emissions have not decreased. Analysing data on households' vehicle ownership and driving indicates that fears of regressive fuel taxation may be overplayed.

Dieter Oesterwind and **Philipp Riegebauer** present that over the next two decades, the German energy system will be completely transformed. There is no one-dimensional path that will lead us to a climate-neutral future. Conflicting goals, obstacles and imponderables lurk along the way. The citizens decide on its success.

Javier Bustos- Salvagno apprises us of the Chilean experience's good example of how the energy transition is impacting the institutional design of the energy sector and how relevant institutions are to have a successful transition, with costs and benefits well-distributed, and a socially accepted paradigm shift .

Jinxi Yang writes that when modeling the energy transition, the agent-based model (ABM) approach is far less used compared to the optimization model approach. However, an ABM has the advantage of including important features of the energy transition such as heterogeneous characteristics of decision-makers, bounded-rationality, historic path-dependency, etc. This article illustrates and discusses how an agent-based model can complement an optimization model.

Andrew Kilmartin advises us that decisions and change management are crucial to energy transitions. We need a framework that can capture the whole energy system transition and its challenges and opportunities. An independent and transparent decision quality framework can provide the policy governance and facilitate a strategic Cost Based Analysis project review based on value and utility.

María Eugenia Ibararán and **Alejandro Rodríguez Chacón** report that the 2013 Energy Reform in Mexico led to lower wholesale electricity prices, an increase in renewables in the energy matrix, and lower GHG emissions. Changes will fade under the counter-reform proposed by President López Obrador.

Maryam Bello states that in Nigeria, the imbalance between power generation, transmission and consumption has resulted in unreliable supply and frequent blackouts. These necessitate Households to resort to self-generation using backup electricity generators. However, there is a recent gradual transition of replacing these fossil fuel backup generators with solar home systems.

Jamil Khan notes that Pakistan is a developing country and as such its power supply has become a challenging task. To support its growing middle class, industrial outputs, and to reduce pollution, Pakistan is pursuing its energy transition through renewables. The addition of Nuclear Power Plants to its grid shows its commitment to the Paris agreement for 2050

Douglas B. Reynolds explains in Energy Architecture and Economic Growth the physical characteristics of energy and how such architecture can enhance the power of technology to create economic growth. He also suggests that a transition from fossil fuels to renewable energy may require a lot of energy demand side technologies to compensate for the weaker energy architecture.