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ABSTRACT

This editorial introduces the 18th volume of the International Journal of Sustainable Energy Planning and Management, which addresses the energy mix of Indonesia, the water-energy nexus in the Drina River Basin, the effects of economic crises on electric utilities, the potential for biogas production in Ukraine and the organisation and ownership of community energy projects.

Keywords:

Water-energy nexus;
Indonesia;
Crises and electric utilities;
Biogas in Ukraine;
Community projects;

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1. Contents

In this volume, Almulla et al.[1] probe into the water-energy nexus of rivers through analyses of the impacts on water availability and hydropower. Based on analyses of the river Drina (running through Montenegro, Serbia and Bosnia-Hercegovina until flowing into Sava) using the Open Source energy Modeling System (OSeMOSYS), the authors investigate hydropower and untapped potentials – potentials that do not compromise upstream plants. In turn the authors also investigate the effects hydropower may have on the regional electricity landscape.

In [2], Sani et al. looks at the widening gap between energy demand and supply in Indonesia, and investigate the historical evolution in this as well as in the energy mix with a view to providing inputs for an Indonesian energy vision. Using System Dynamics, they model the energy mix. They find, that unfortunately, oil and other fossil fuel resources in Indonesia are prioritized ahead of renewables. On the positive side, scenario modelling shows there is room for improvement.

Mota et al. [3] also turns to investigations of historical data to explain developments. Taking a starting point in the global financial crisis (2008–2009), the debt crisis (2010–12) and the commodity price realignment (2014–2016) they investigate the effects on European electric utilities. At the same time of the crises, these were subjected to increasingly higher greenhouse gas reduction requirements. This contribution is a virtual contribution to the Special Issue on the 2017 Conference on Energy & Environment [4].

Kurbatova [5] investigate the potential for biogas generation in Ukraine based on animal manure. At present, the utilisation rate is negligible, and one of the issues facing biogas utilisation in Ukraine is that nearly half the animals are on farms too small for biogas plants. Thus, in order to exploit the potential, common biogas systems are required. In fact, the economic feasibility of building these is favourable, with pay-back-times below five years

Finally, Tricarico [6] follows up on the perspective of community projects – not from biogas but for the general

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exploitation of distributed energy sources, where organisation and ownership may play an important role.

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