



# International Journal of Sustainable Energy Planning and Management

## Editorial – IJSEPM Vol 4

Poul Alberg Østergaard<sup>1</sup>, Editor-in-Chief

Department of Development and Planning, Aalborg University, Aalborg, Denmark

---

### ABSTRACT

This editorial introduces the fourth volume of the International Journal of Sustainable Energy Planning and Management. Topics include mean-variance approach of energy systems design, the role of heat savings in smart energy systems, analyses of the German secondary reserve market, options for replacing lignite-fired district heating in plants in Greece with biomass-fired district heating plants based on boilers or cogeneration of heat and power. Topics also include how local Norwegian governments engage in local energy planning and how they differ in approach. Finally, this volume addresses characterisation of the building stock with a view to assessing savings potentials with a case from Belgium.

---

### Keywords:

Heat saving & smart energy  
Mean-variance approach  
German secondary reserve market  
Biomass district heating in greece  
Local governments  
Characterisation of the building stock

### URL:

[dx.doi.org/10.5278/ijsepm.2014.4.1](https://dx.doi.org/10.5278/ijsepm.2014.4.1)

---

### Editorial

This editorial introduces the fourth volume of the International Journal of Sustainable Energy Planning and Management. In the volume, Lund *et al.* [1]; investigate the role of heat savings in future smart energy system through energy systems analyses using the EnergyPLAN model on a Danish case. They find that energy savings in existing buildings aren't economically feasible while new buildings and renovated buildings should cut energy demands by approximately 50%

Cunha & Ferreira [2] apply a mean-variance approach (MVA) to design renewable energy portfolios for Portugal through a) output maximization and through cost optimisation. Results indicate that optimal portfolios combine a variety of renewable energy sources and that an MVA approach is appropriate for designing energy portfolios.

Sorknæs *et al.* [3] investigate the role of small-scale cogeneration of heat and power (CHP) plants participation on the German Electricity market, finding that they need to increase their flexibility for optimal performance.

Margaritis *et al.* [4] investigate possible substitutions for lignite-based district heating systems in Greece finding good prospects for both boiler and CHP-based District heating based on biomass.

Rygg [5] investigates how 14 local Norwegian governments act in respect to advancing renewable energy projects, finding that that they all act within innovation, infrastructure, regulation and public engagement, and that they despite differences in size and other conditions act similarly.

Finally, Gendebien *et al.* [6] propose a methodology for characterising the building stock, apply it to a Belgian case and investigate the potential for primary energy consumption reductions through extensive retrofitting of the Belgian building stock.

### References

- [1] Lund H, Thellufsen JZ, Aggerholm S, Wittchen KB, Nielsen S, Mathiesen BV *et al.* Heat Saving Strategies in Sustainable Smart Energy Systems. International Journal of Sustainable

---

<sup>1</sup> Corresponding author e-mail: [poul@plan.aau.dk](mailto:poul@plan.aau.dk)

- Energy Planning and Management 4(2014). <http://dx.doi.org/10.5278/ijsepm.2014.4.2>
- [2] Cunha J, Ferreira P Designing electricity generation portfolios using the mean-variance approach. International Journal of Sustainable Energy Planning and Management 4(2014). <http://dx.doi.org/10.5278/ijsepm.2014.4.3>
- [3] Sorknæs P, Lund H, Andersen AN, Ritter P Small-scale CHP as a balancing reserve for wind – The case of participation in the German secondary control reserve. International Journal of Sustainable Energy Planning and Management 4(2014). <http://dx.doi.org/10.5278/ijsepm.2014.4.4>
- [4] Margaritis N, Rakopoulos D, Mylona E, Grammelis P Introduction of renewable energy sources in the district heating system of Greece. International Journal of Sustainable Energy Planning and Management 4(2014). <http://dx.doi.org/10.5278/ijsepm.2014.4.5>
- [5] Rygg BJ Paving the Way for Heat. Local Government Policies for Developing Bioenergy in Norway. International Journal of Sustainable Energy Planning and Management 4(2014). <http://dx.doi.org/10.5278/ijsepm.2014.4.6>
- [6] Gendebien S, Georges E, Bertagnolio S, Lemort V Methodology to characterize a residential building stock using a bottom-up approach: a case study applied to Belgium. International Journal of Sustainable Energy Planning and Management 4(2014). <http://dx.doi.org/10.5278/ijsepm.2014.4.7>