



Dear colleague and user of the EnergyPLAN software,

You receive this newsletter, because you have signed up as an EnergyPLAN user. If you do not wish to receive future newsletters, please send an e-mail to [energyplanmodel@gmail.com](mailto:energyplanmodel@gmail.com).



## **International Conference on Smart Energy System and 4<sup>th</sup> Generation District Heating**

On 25-26 August 2015, the 4DH Research Centre hosts the [\*International Conference on Smart Energy Systems and 4th Generation District Heating\*](#) in Copenhagen, Denmark. The conference applies to everyone with an interest in energy systems and district heating and cooling. Based on the Call for abstracts, 4DH has received more than 70 interesting contributions to both industrial and scientific presentations. Presentations involve subjects such as Smart Energy Systems; Future district heating production and systems; Energy planning and planning tools; Low-temperature district heating grids; Low-temperature district heating and buildings, and Organisation, ownership and institutions. Keynotes include:

- *The future of District Heating and Cooling in China* by Professor Xiliang Zhang, Tsinghua University, China
- *District heating - the Danish case as an export model?* by Former CEO of DONG Energy Anders Eldrup
- *District Heating and Cooling in the EU energy policy framework and the EU Strategy for heating and cooling* by Eva Hoos, DG Energy – European Commission
- *EU Research and Innovation towards an integrated approach on district heating and cooling* by Philippe Schild, DG Research – European Commission

See the [conference programme](#), [invitation](#) and [conference introduction](#).

**Member Map has just Passed 1000 Users Across 100 Countries:**  
[www.EnergyPLAN.eu](http://www.EnergyPLAN.eu)

At the start of this year, we developed a new feature on the EnergyPLAN website to help connect users from different countries: <http://www.energyplan.eu/models/members-map/>. We are happy to announce that the feature is working very well and we have just passed 1000 registered users across more than 100 countries. The purpose of this map is to connect users with similar interests to one another. You can see the people who have registered in each country by clicking on the map icon and you can contact them by selecting their name on the right-hand side.

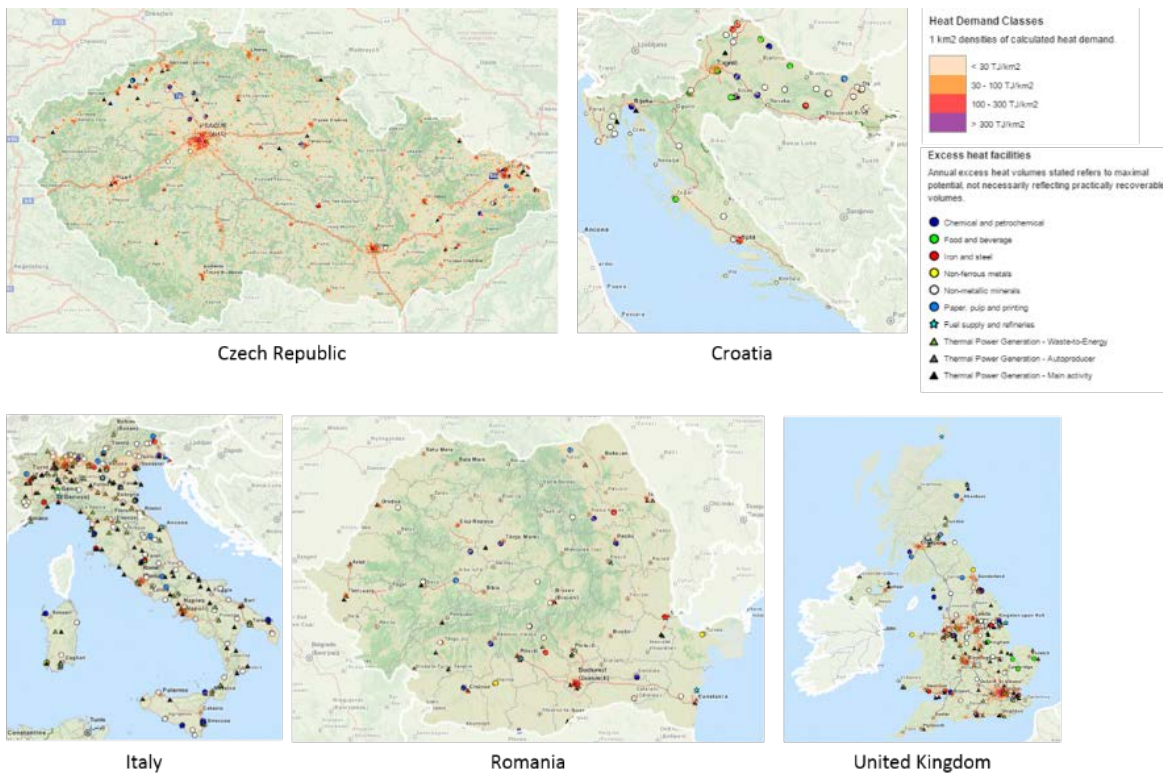
To supplement the map, we have also begun distributing some national reference models. There are now 15 national models available, including China, Croatia, Czech Republic, Denmark, Hungary, Ireland, Italy, Latvia, Macedonia, Mexico, New Zealand, Norway, Romania, Sweden, and the United Kingdom. You can download these models here: <http://www.energyplan.eu/models/existingmodels/>.



### Heat Roadmap Europe 3 Out Now: [www.heatroadmap.eu](http://www.heatroadmap.eu)

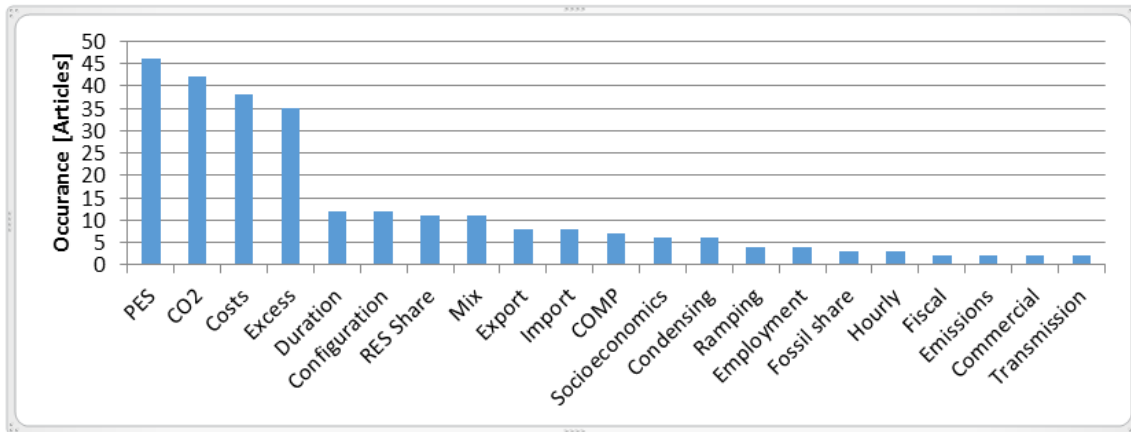
Heat Roadmap Europe 3 is from work package 2 of the [STRATEGO](#) project. It quantifies the impact of implementing various energy efficiency measures in the heating and cooling sectors of five EU Member States: Czech Republic, Croatia, Italy, Romania, and the United Kingdom. These countries vary considerably in terms of population, climate, resources, and energy supply, so the key results, conclusions, and recommendations presented in this report can inform national energy policy across all of Europe. The results from this study indicate that a total investment of approximately €1.1 trillion in energy efficiency measures across all five of these countries, between 2010 and 2050, will save enough fuel to reduce the costs of their energy systems. After considering both the initial investment and the resulting savings, the total annual cost of the heating, cooling, and electricity sectors is reduced by an average of ~15% in each country. These initial investments are primarily required in heat savings for the buildings, district heating in urban areas, and electric heat pumps in rural areas. In essence, energy efficiency measures in the heating sector will enable EU Member States to simultaneously reduce energy demand, imported fossil fuels, carbon dioxide

emissions, and the cost of the heating, cooling, and electricity sectors. The reports and maps produced in Heat Roadmap Europe 3 are available here: [www.heatroadmap.eu](http://www.heatroadmap.eu).



## New study on EnergyPLAN applications and simulations

The article [Reviewing EnergyPLAN simulations and performance indicator applications in EnergyPLAN simulations](#) investigates all published articles applying the EnergyPLAN model which at the time of writing was 95 articles. The vast majority of these articles – 76 – model country-wide energy systems, while fewer either model supra-national energy systems or smaller energy systems. Primary energy supply, carbon dioxide emissions and costs are the main criteria according to which scenarios are evaluated; thus, pointing towards this important nexus of political goals. In addition, excess power, duration, import, and export are also important criteria for assessment indicating the strong focus on the integration of fluctuating renewable energy sources.



In addition to reviewing the application of EnergyPLAN, the survey also probes into advanced performance indicators of EnergyPLAN simulation – e.g., Mismatch compensation factor, Emissions reduction effectiveness, Compromise coefficient, Marginal export, Relocation coefficient, Biomass system efficiency, Intermittent RES use with lowered base-load production, Thermal plant PES reduction with lowered base-load production, Synergy from the inclusion of electric vehicles, Flexibility Factor or System Flexibility, Marginal Primary Energy Supply, Curtailment fraction, and Marginal Economic Efficiency

Selected other new publications related to EnergyPLAN

- [Smart Energy Systems for coherent 100% renewable energy and transport solutions.](#)
- [Copenhagen Energy Vision: A sustainable vision for bringing a Capital to 100% renewable energy.](#)
- [Large combined heat and power plants in sustainable energy systems.](#)

As always, we welcome new suggestions and invite you to share your experience with EnergyPLAN. Please, contact us here: [www.energyplan.eu/contact/](http://www.energyplan.eu/contact/).

*The EnergyPLAN development team*

*Henrik Lund, David Connolly, Poul Østergaard, Iva Ridjan, Jakob Zinck Thellufsen and Brian Vad Mathiesen*



**AALBORG UNIVERSITY**  
DENMARK