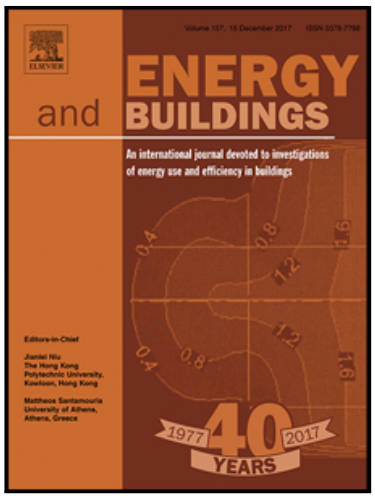

Predicting Danish residential heating energy use from publicly available building characteristics

Martin Heine Kristensen , Adam Brun , Steffen Petersen

PII: S0378-7788(18)30095-1
DOI: 10.1016/j.enbuild.2018.05.011
Reference: ENB 8552

To appear in: *Energy & Buildings*

Received date: 9 January 2018
Revised date: 7 March 2018
Accepted date: 5 May 2018

Please cite this article as: Martin Heine Kristensen , Adam Brun , Steffen Petersen , Predicting Danish residential heating energy use from publicly available building characteristics, *Energy & Buildings* (2018), doi: 10.1016/j.enbuild.2018.05.011

Highlights:

- Hierarchical bottom-up building energy model of Danish detached single-family dwellings.
- Publicly available building characteristics.
- Approx. 50% of residential building energy use is explained by simple building characteristics.
- City-scale predictions with a mean bias error of approx. 2%.
- Building-scale predictions with a mean absolute error of approx. 25%.
- Predictive capabilities of statistical approaches are comparable to physics-based approaches.