

### **Aggregation ready flexibility management methods for mechanical ventilation systems in buildings**

**Maask, Vahur; Rosin, Argo; Korõtko, Tarmo; Thalfeldt, Martin; Syri, Sanna; Ahmadiyahangar, Roya** Energy and buildings 2023 / art. 113369, 14 p. : ill <https://doi.org/10.1016/j.enbuild.2023.113369> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Analytical modelling and prediction formulas for domestic hot water consumption in residential Finnish apartments**

**Ferrantelli, Andrea; Ahmed, Kaiser; Pylsy, Petri; Kurnitski, Jarek** Energy and buildings 2017 / p. 53-60 : ill <https://doi.org/10.1016/j.enbuild.2017.03.021> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Benchmarking Danish, Estonian and Finnish NZEB requirements with European Commission recommendations in residential and office buildings**

**Simson, Raimo; Thomsen, Kirsten Engelund; Wittchen, Kim Bjarne; Kurnitski, Jarek** Energy and Buildings 2025 / art. 116086 <https://doi.org/10.1016/j.enbuild.2025.116086>

### **Comparative assessment of simple and detailed energy performance models for urban energy modelling based on digital twin and statistical typology database for the renovation of existing building stock**

**Hallik, Jaanus; Arumägi, Endrik; Pikas, Ergo; Kalamees, Targo** Energy and buildings 2024 / art. 114775 <https://doi.org/10.1016/j.enbuild.2024.114775>

### **Cost effectiveness of energy performance improvements in Estonian brick apartment buildings**

**Kuusk, Kalle; Kalamees, Targo; Maivel, Mikk** Energy and buildings 2014 / p. 313-322 : ill <https://doi.org/10.1016/j.enbuild.2014.03.026> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Cost optimal and nearly zero energy building solutions for office buildings**

**Pikas, Ergo; Thalfeldt, Martin; Kurnitski, Jarek** Energy and buildings 2014 / p. 30-42 : ill <https://doi.org/10.1016/j.enbuild.2014.01.039> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Cost optimal and nearly zero (nZEB) energy performance calculations for residential buildings with REHVA definition for nZEB national implementation**

**Kurnitski, Jarek; Saari, Arto; Kalamees, Targo; Vuolle, Mika; Niemelä, Jouko; Tark, Teet** Energy and buildings 2011 / p. 3279-3288 : ill

### **Demand controlled ventilation indoor climate and energy performance in a high performance building with air flow rate controlled chilled beams**

**Ahmed, Kaiser; Kurnitski, Jarek; Sormunen, Piia** Energy and buildings 2015 / p. 115-126 : ill <https://doi.org/10.1016/j.enbuild.2015.09.052> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Demand response potential of district heating in a swimming hall in Finland**

**Yuan, Xiaolei; Lindroos, Leo; Jokisalo, Juha; Kosonen, Risto; Pan, Yiqun; Jin, Hui** Energy and buildings 2021 / art. 111149, 12 p. : ill <https://doi.org/10.1016/j.enbuild.2021.111149> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Detailed and simplified window model and opening effects on optimal window size and heating need**

**Thalfeldt, Martin; Kurnitski, Jarek; Voll, Hendrik** Energy and buildings 2016 / p. 242-251 : ill <https://doi.org/10.1016/j.enbuild.2016.06.002> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Developing energy calculation methodology and calculation tool validations : Application in air-heated ice rink arenas**

**Taebnia, Mehdi; Toomla, Sander; Leppä, Lauri; Kurnitski, Jarek** Energy and buildings 2020 / art. 110389, 19 p. : ill <https://doi.org/10.1016/j.enbuild.2020.110389> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Development of weighting factors for climate variables for selecting the energy reference year according to the EN ISO 15927-4 standard**

**Kalamees, Targo; Jylhä, Kirsti; Tietäväinen, Hanna; Jokisalo, Juha; Ilomets, Simo; Hyvönen, Reijo; Saku, Seppo** Energy and buildings 2012 / p. 53-60 <https://www.sciencedirect.com/science/article/abs/pii/S0378778811005779>

### **Dynamic heating control measured and simulated effects on power reduction, energy and indoor air temperature in an old apartment building with district heating**

**Hajian, Hatef; Ahmed, Kaiser; Kurnitski, Jarek** Energy and buildings 2022 / art. 112174 <https://doi.org/10.1016/j.enbuild.2022.112174> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Editorial - IEA-ECES Annex 31 special issue on thermal energy storage**

**Kurnitski, Jarek; Haghighat, Fariborz; Mirzaei, Parham A.** Energy and buildings 2015 / p. 1-2 <https://doi.org/10.1016/j.enbuild.2015.08.024> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Energy and investment intensity of integrated renovation and 2030 cost optimal savings**

**Kurnitski, Jarek; Kuusk, Kalle; Tark, Teet; Uutar, Aivar; Kalamees, Targo; Pikas, Ergo** Energy and buildings 2014 / p. 51-59 : ill <https://doi.org/10.1016/j.enbuild.2014.01.044> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Energy demand for the heating and cooling of residential houses in Finland in a changing climate**

Jylhä, Kirsti; Jokisalo, Juha; **Kalamees, Targo** Energy and buildings 2015 / p. 104-116 : ill <https://doi.org/10.1016/j.enbuild.2015.04.001> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Energy performance of radiators with parallel and serial connected panels**

**Maivel, Mikk**; Konzelmann, Martin; **Kurnitski, Jarek** Energy and buildings 2015 / p. 745-753 : ill <https://doi.org/10.1016/j.enbuild.2014.10.007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Energy use and indoor climate of conservation heating, dehumidification and adaptive ventilation for the climate control of a mediaeval church in a cold climate**

**Napp, Margus**; **Kalamees, Targo** Energy and buildings 2015 / p. 61-71 : ill <https://doi.org/10.1016/j.enbuild.2015.08.013> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **European roadmap for the En-ActivETICS advancement and potential of the PV/PCM unventilated wall system application**

Heim, Dariusz; **Talvik, Martin**; Wieprzkowicz, Anna; **Ilomets, Simo**; Knera, Dominika; **Kalamees, Targo**; Czarny, Dariusz Energy and buildings 2023 / art. 113207 <https://doi.org/10.1016/j.enbuild.2023.113207> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Evaluation of renovation strategies : cost-optimal, COle optimal, or total energy optimal**

**Kertsmik, Kadri-Ann**; Kuusk, Kalle; Lylykangas, Kimmo Sakari; **Kalamees, Targo** Energy and buildings 2023 / art. 112995 <https://doi.org/10.1016/j.enbuild.2023.112995> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Experimental determination of radiator, underfloor and air heating emission losses due to stratification and operative temperature variations**

**Maivel, Mikk**; Ferrantelli, Andrea; **Kurnitski, Jarek** Energy and buildings 2018 / p. 220-228 : ill <https://doi.org/10.1016/j.enbuild.2018.01.061> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Facade design principles for nearly zero energy buildings in a cold climate**

**Thalfeldt, Martin**; Pikas, Ergo; **Kurnitski, Jarek**; Voll, Hendrik Energy and buildings 2013 / p. 309-321 : ill <https://doi.org/10.1016/j.enbuild.2013.08.027> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Finnish energy renovation subsidies in multifamily apartment buildings : Lessons learnt and best practices**

Hajian, Hatef; Pylsy, Petri; **Simson, Raimo**; Ahmed, Kaiser; Sankelo, Paula; **Mikola, Alo**; **Kurnitski, Jarek** Energy and buildings 2024 / art. 113986 <https://doi.org/10.1016/j.enbuild.2024.113986>

### **Geothermal energy piles and boreholes design with heat pump in a whole building simulation software**

**Fadejev, Jevgeni**; **Kurnitski, Jarek** Energy and buildings 2015 / p. 23-34 : ill <https://doi.org/10.1016/j.enbuild.2015.06.014> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Heating system return temperature effect on heat pump performance**

**Maivel, Mikk**; **Kurnitski, Jarek** Energy and buildings 2015 / p. 71-79 : ill <https://doi.org/10.1016/j.enbuild.2015.02.048> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **How well are energy performance objectives being achieved in renovated apartment buildings in Estonia?**

**Hamburg, Anti**; **Kalamees, Targo** Energy and buildings 2019 / p. 332-341 <https://doi.org/10.1016/j.enbuild.2019.07.006> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Learning based personalized energy management systems for residential buildings**

Soudari, Mallikarjun; Srinivasan, Seshadhri; Balasubramanian, Subathra; **Vain, Jüri**; **Kotta, Ülle** Energy and buildings 2016 / p. 953-968 : ill <https://doi.org/10.1016/j.enbuild.2016.05.059> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Low temperature radiator heating distribution and emission efficiency in residential buildings**

**Maivel, Mikk**; **Kurnitski, Jarek** Energy and buildings 2014 / p. 224-236 : ill <https://doi.org/10.1016/j.enbuild.2013.10.030> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Market based renovation solutions in non-residential buildings - Why commercial buildings are not renovated to NZEB**

**Kuivjõgi, Helena**; Uutar, Aivar; Kuusk, Kalle; **Thalfeldt, Martin**; **Kurnitski, Jarek** Energy and buildings 2021 / art. 111169, 13 p. : ill <https://doi.org/10.1016/j.enbuild.2021.111169> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **MO-NILM: A multi-objective evolutionary algorithm for NILM classification**

Machlev, Ram; **Belikov, Juri**; Beck, Yuval; Levron, Yoash Energy and buildings 2019 / p. 134-144 <https://doi.org/10.1016/j.enbuild.2019.06.046> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Monthly domestic hot water profiles for energy calculation in Finnish apartment buildings**

Ahmed, Kaiser; Pylsy, Petri; **Kurnitski, Jarek** Energy and buildings 2015 / 77-85 : ill <https://doi.org/10.1016/j.enbuild.2015.03.051> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Overview and future challenges of nearly zero-energy building (nZEB) design in Eastern Europe**

Attia, Shady; **Kurnitski, Jarek**; Kosin, Piotr; Borodinecs, Anatolijs; Belafi, Zsolt; Deme, Istvan; Kistelegdi, Krstic, Hrvoje; Moldovan, Macedon; Visa, Ion; Mihailov, Nicolay Energy and buildings 2022 / art. 112165 <https://doi.org/10.1016/j.enbuild.2022.112165> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Performance evaluation and development of prefabricated insulation elements for renovation of apartment buildings with autoclaved aerated concrete external walls**

Pihelo, Peep; Kalamees, Targo Energy and buildings 2025 / art. 115439 <https://doi.org/10.1016/j.enbuild.2025.115439>

### **Post-COVID ventilation design : infection risk-based target ventilation rates and point source ventilation effectiveness**

**Kurnitski, Jarek**; Kiil, Martin; Mikola, Alo; Vösa, Karl-Villem; Aganovic, Amar; Schild, Peter G.; Seppänen, Olli Energy and buildings 2023 / art. 113386 <https://doi.org/10.1016/j.enbuild.2023.113386> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Quantification of economic benefits of renovation of apartment buildings as a basis for cost optimal 2030 energy efficiency strategies**

Pikas, Ergo; **Kurnitski, Jarek**; Liias, Roode; Thalfeldt, Martin Energy and buildings 2015 / p. 151-160 : ill <https://doi.org/10.1016/j.enbuild.2014.10.004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Quantification of environmental and economic impacts for main categories of building labeling schemes**

Seinre, Erkki; **Kurnitski, Jarek**; Voll, Hendrik Energy and buildings 2014 / p. 145-158 : ill <https://doi.org/10.1016/j.enbuild.2013.11.048> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Radiator and floor heating operative temperature and temperature variation corrections for EN 15316-2 heat emission standard**

Maivel, Mikk; **Kurnitski, Jarek** Energy and buildings 2015 / p. 204-213 : ill <https://doi.org/10.1016/j.enbuild.2015.04.021> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Renovation alternatives to improve energy performance of historic rural houses in the Baltic Sea region**

Alev, Üllar; Eskola, Lari; Arumägi, Endrik; Kalamees, Targo Energy and buildings 2014 / p. 58-66 : ill <https://doi.org/10.1016/j.enbuild.2014.03.049> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Self-learning model predictive control for dynamic activation of structural thermal mass in residential buildings**

Wolisz, Henryk; Kull, Tuule Mall; Müller, Dirk; **Kurnitski, Jarek** Energy and buildings 2020 / art. 109542, 21 p. : ill <https://doi.org/10.1016/j.enbuild.2019.109542> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **A tabulated sizing method for the early stage design of geothermal energy piles including thermal storage**

Ferrantelli, Andrea; Fadejev, Jevgeni; **Kurnitski, Jarek** Energy and buildings 2020 / art. 110178 <https://doi.org/10.1016/j.enbuild.2020.110178> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Tall buildings cluster form rationalization in a Nordic climate by factoring in indoor-outdoor comfort and energy**

De Luca, Francesco; Naboni, Emanuele; Lobaccaro, Gabriele Energy and buildings 2021 / art. 110831, 16 p. : ill <https://doi.org/10.1016/j.enbuild.2021.110831> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Techno-economic analysis of a 5th generation district heating system using thermo-hydraulic model : a multi-objective analysis for a case study in heating dominated climate**

Saini, Puneet; Huang, Pei; Fiedler, Frank; Volkova, Anna; Zhang, Xingxing Energy and buildings 2023 / art. 113347 <https://doi.org/10.1016/j.enbuild.2023.113347> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **The effect of flanking element length in thermal bridge calculation and possible simplifications to account for combined thermal bridges in well insulated building envelopes**

Hallik, Jaanus; Kalamees, Targo Energy and buildings 2021 / art. 111397 <https://doi.org/10.1016/j.enbuild.2021.111397> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)