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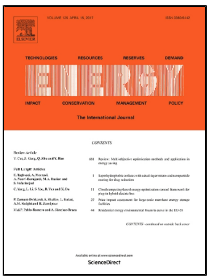

Thermoeconomic analysis of heat and electricity prosumers in residential zero-energy buildings in Finland

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Highlights:

- Study of energy, exergy balances and cost-optimality in a Finnish residential nZEB
- Bidirectional energy/exergy exchange with electricity and heat grids is investigated
- Payback periods, levelized energy costs and internal rates of return are calculated
- Positive energy and exergy balances can be achieved, but not cost-optimality
- Export to a heating grid improves the energy balance and has economic potential