

## Accepted Manuscript

Title: Heating and cooling energy demand in underground buildings: potential for saving in various climates and functions

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- Energy saving potential of underground buildings is investigated using monthly calculations
- Compared aboveground and underground buildings for different climates and functions
- Underground buildings have energy saving potential, magnitude related to design elements
- Balance between underground temperature and internal gains of high importance
- Sensitivity analysis indicates same trends are dominant in all climates and functions

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