

# ENERGY-EFFICIENT HOUSES



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

Výuka jazyků  
prostřednictvím ICT

CZ.1.07/1.1.10/03.0026

# Advantages

- More stable temperature
- Indoor humidity better controlled
- Drafts reduced
- Reduced moisture
- House are very quiet

# Drawbacks

- Higher initial costs
- Longer building period (in comparison to a conventional house)
- Special training and experience with these systems needed for contractors and builders

# Beginning a Project

- Careful evaluation of the site
- Evaluation of the climate
- Optimum design and orientation



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# Thermal Envelope

- Shield of a living space from the outdoors

It includes:

- Wall and roof assemblies
- Insulation
- Windows
- Doors
- Vapor retarders

# Controlled Ventilation

- Controlled, mechanical ventilation: reduction of an air moisture infiltration
- Health risk reduction of outdoor air pollutants
- Promotion of more comfortable atmosphere
- Less probability of structural damage from excessive moisture accumulation

# Heating and Cooling Requirements

Auxiliary heating can include:

- A small boiler
- Furnace
- Electric heat pump
- Radiant in-floor heating

Cooling:

- Large fan
- Cooler

# Sources

<http://www.baufritz.com/uk/>, 27/6/11

[http://www.pueblo.gsa.gov/cic\\_text/housing/energy-eff/energy.html](http://www.pueblo.gsa.gov/cic_text/housing/energy-eff/energy.html), 11/8/11



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