

How to improve and build an energy efficient building?



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Rane = Building and Living Energy Adviser

Nokia

Kangasala

Ylöjärvi

Orivesi

Health- environment

Tampere
City

Building community

Building Inspector
As.

Lempäälä

EcoFellows

Pirkkala

Vesilahti



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Organized Events.

- Asta Builders expo plus others
- Cities' land lot info (Construction/building permit)
- Rane's Energy saving lectures for builders
- Solar and wind energy lectures (home & leisure homes)
- Learn to service air conditioners (heat pumps)
- Community & city summer happenings
- House Owners' Association yearly events
- Lectures at schools and other education centers



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energycertificate energy reports



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Measuring Performance U-Factor

U-arvovaatimus	C3/1985	C3/2003	C3/2007	C3/2010
Ulkoseinä	0,28	0,25	0,24	0,17
Yläpohja, ulkoilmaan rajoittuva alapohja	0,22	0,16	0,15	0,09
Ryömintätilaan rajoittuva alapohja	0,22	0,20	0,19	0,17
Maata vasten oleva rakennusosa	0,36	0,25	0,24	0,16
Ikkuna tai ovi	2,1 (0,7)	1,4	1,4	1,0
Kattoikkuna		1,5	1,5	1,0
Ikkunapinta-ala	enintään 15 % kerrosalasta, enintään 70 % huoneen ulkoseinän alasta	enintään 15 % kerrosalasta, enintään 50 % rakennuksen ulkoseinien yht.lask. alasta	enintään 15 % kerrosalasta, enintään 50 % rakennuksen ulkoseinien yht.lask. alasta	15 % kerrosalasta, enintään 50 % rakennuksen julkisivupinta- alasta



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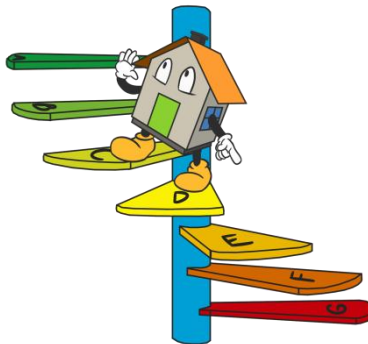


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Energy efficient building

WHERE DOSE ALL THE ENERGY ESCAPE FROM OUR HOMES

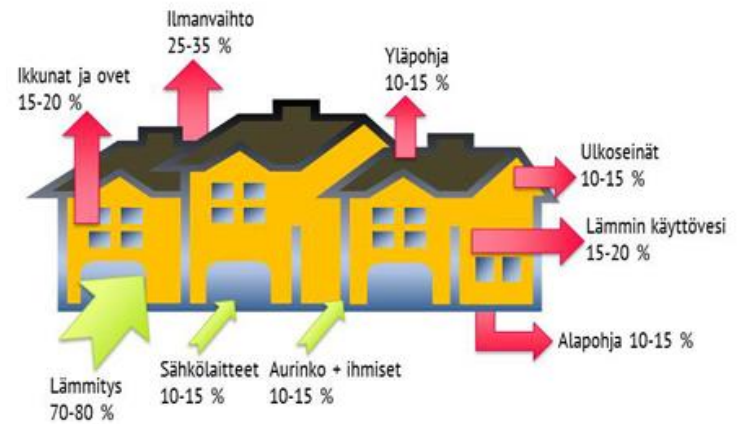


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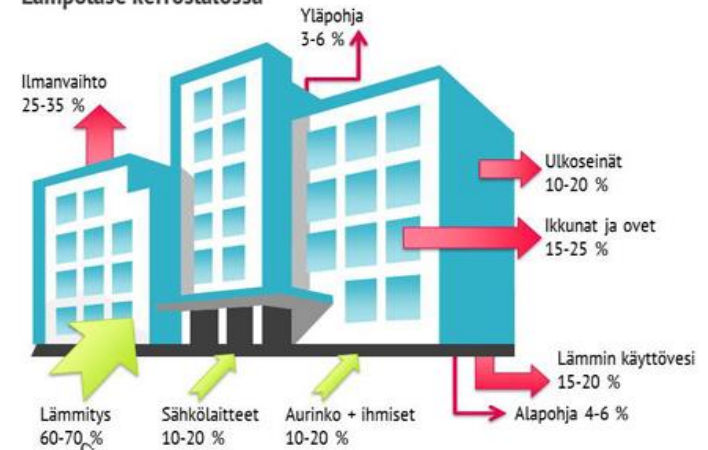
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Kuva: Taloyhtiön energiakirja 2012

Lämpötase rivitaloissa



Lämpötase kerrostalossa



Seal and Insulate

Wet or damp insulation indicating a leaky roof

Moldy or rotted attic rafters or floor joists indicating moisture problems

Kitchen, bathroom, and clothes dryer vents that exhaust moist air directly into the attic space instead of outdoors

A history of ice dams in the winter (an indication of serious air leaks)

Little or no attic ventilation

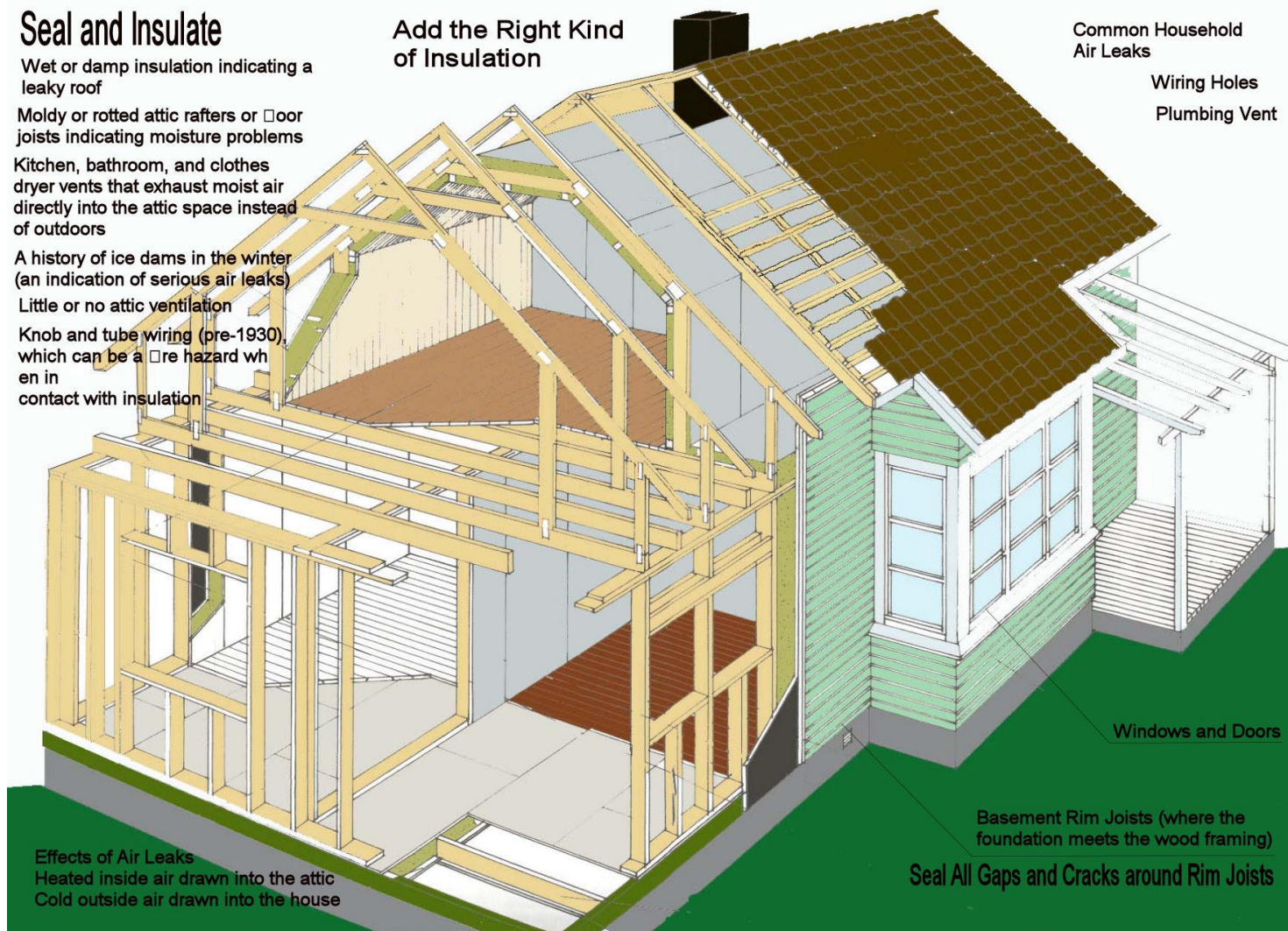
Knob and tube wiring (pre-1930), which can be a fire hazard when in contact with insulation

Add the Right Kind of Insulation

Common Household Air Leaks

Wiring Holes

Plumbing Vent



Effects of Air Leaks
Heated inside air drawn into the attic
Cold outside air drawn into the house

Basement Rim Joists (where the foundation meets the wood framing)
Seal All Gaps and Cracks around Rim Joists



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10 Energy-Efficient Home Improvements

1. Energy-efficiency adviser:

To make your home more energy efficient, you need to know where you currently stand.

2. Seal it up:

Ensuring that your home is sealed right.

3. Decrease electricity use in homes :

Energy saving lamp's or led lamp's, plus unnecessary use of power.

4. Seal the ducts:

If not sealed ducts carry hot or cold air to different parts of house.

5. Programmable thermostat:

Cut down on energy costs is a programmable thermostat. Plus the right temp.

6. Energy- efficient windows:

Leaky and in bad shape windows that can't be saved or efficient.

7. Energy- efficient outer doors:

Higher-efficiency door (renew seals frequently)

8. Energy-efficient heating, ventilating, and air conditioning system:

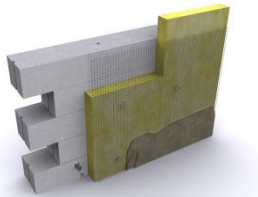
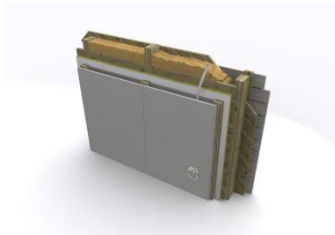
The right use plus frequent service

9. High-efficiency in water use:

The large amount of water use per person.

10. Insulate upstairs:

Adding insulation to attic or under the roof is a good improvement if possible.





Thank YOU



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