



Renewable Community Empowerment in Northern Territories

Improving the energy performance of community buildings



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A short introduction of Silva Herrmann, energy expert Jokkmokk municipality, Sweden



Northern Periphery and
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2014–2020



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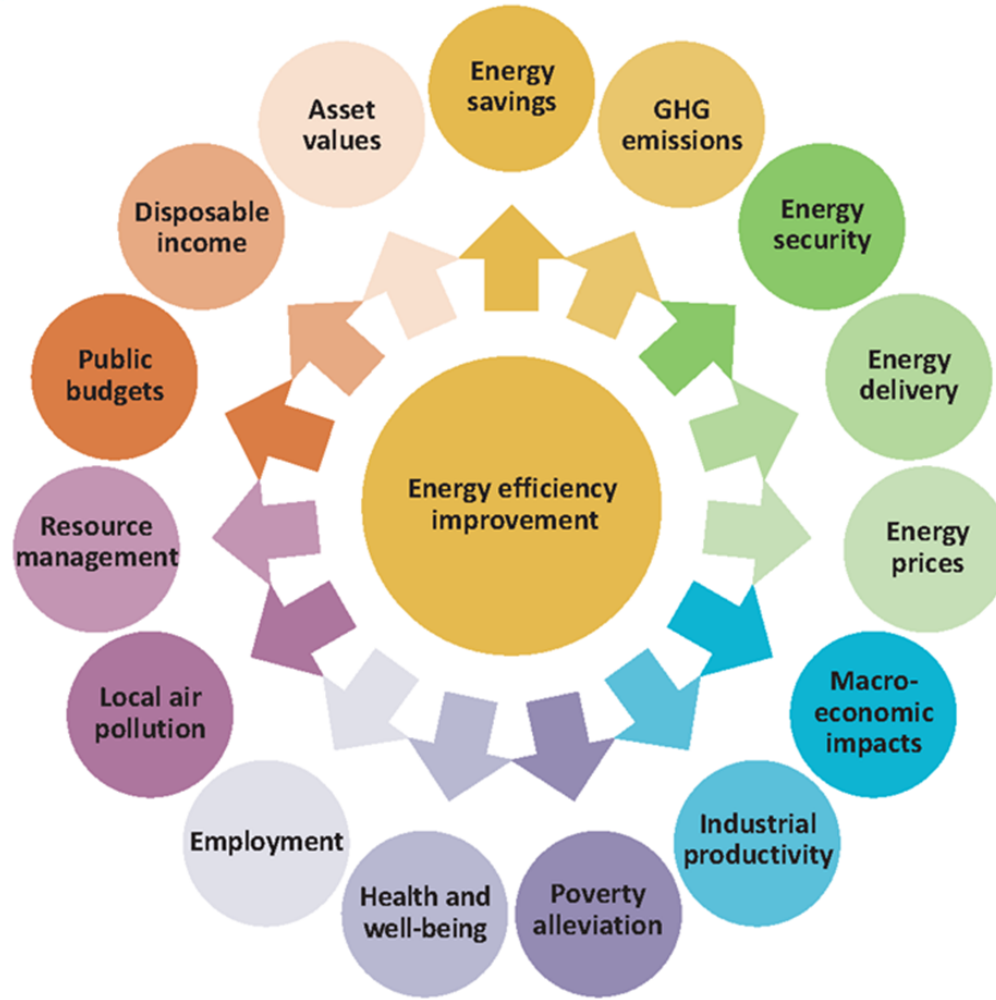
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Here is, why you
want to become more
energy efficient.



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Example: Improved insulation of buildings

- Energy savings
- Reduced GHG emissions
- Higher energy security
- Reduced energy cost
- Reduced energy dependency
- Better air quality
- Reduced local air pollution
- Employment effects
- Better comfort, health and well-being for users
- Improved asset value
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Source:

<http://www.iea.org/topics/energyefficiency/beyondenergyefficiency/multiplebenefitsofenergyefficiency/>

IEA: ["Capturing the Multiple Benefits of Energy Efficiency"](#), 2014



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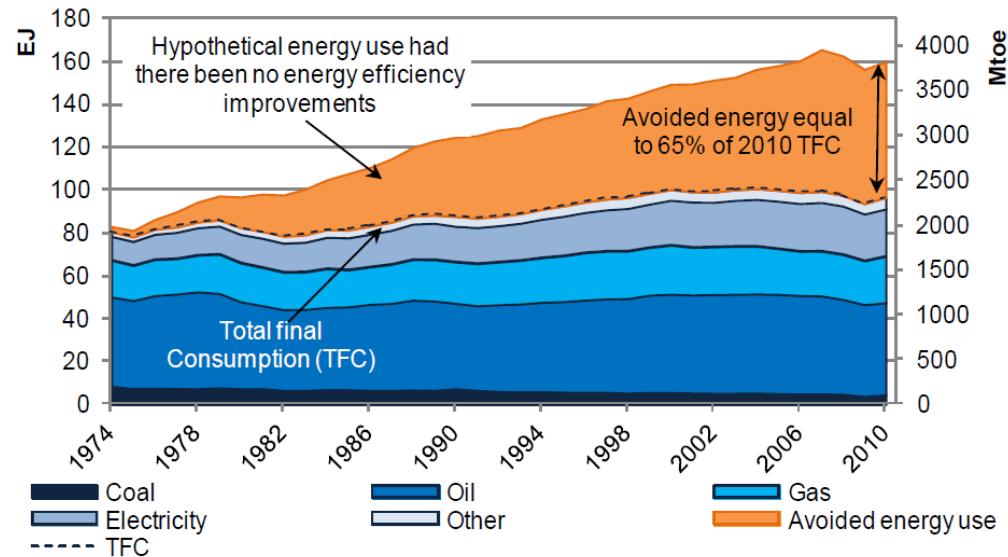


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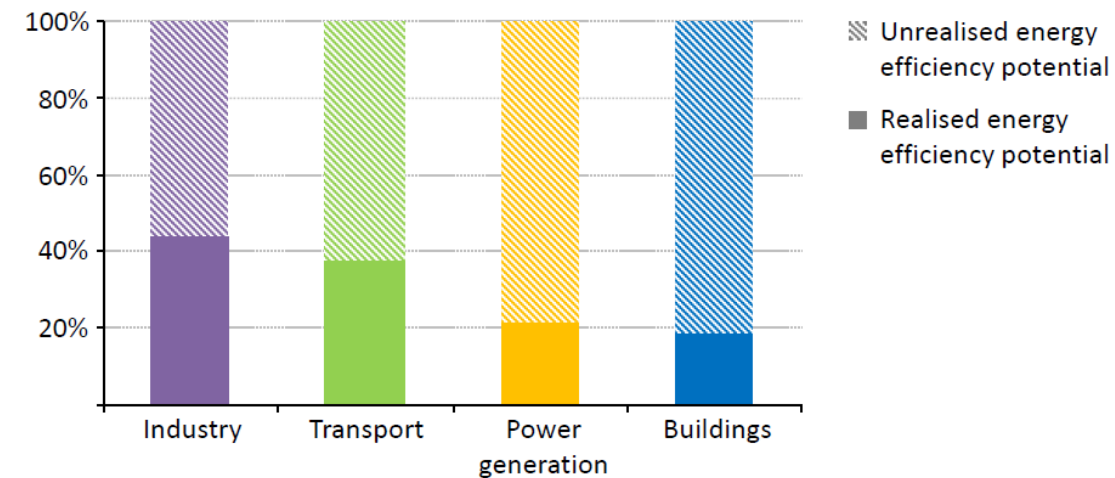
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Is there potential in energy efficiency? YES, it is!

Between 1974 and 2010, energy efficiency was the largest energy resource in a subset of 11 IEA countries



Energy efficiency potential used by sector in the WEO 2012 New Policies Scenario



Source: IEA 2014



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Here is,
how you will do.



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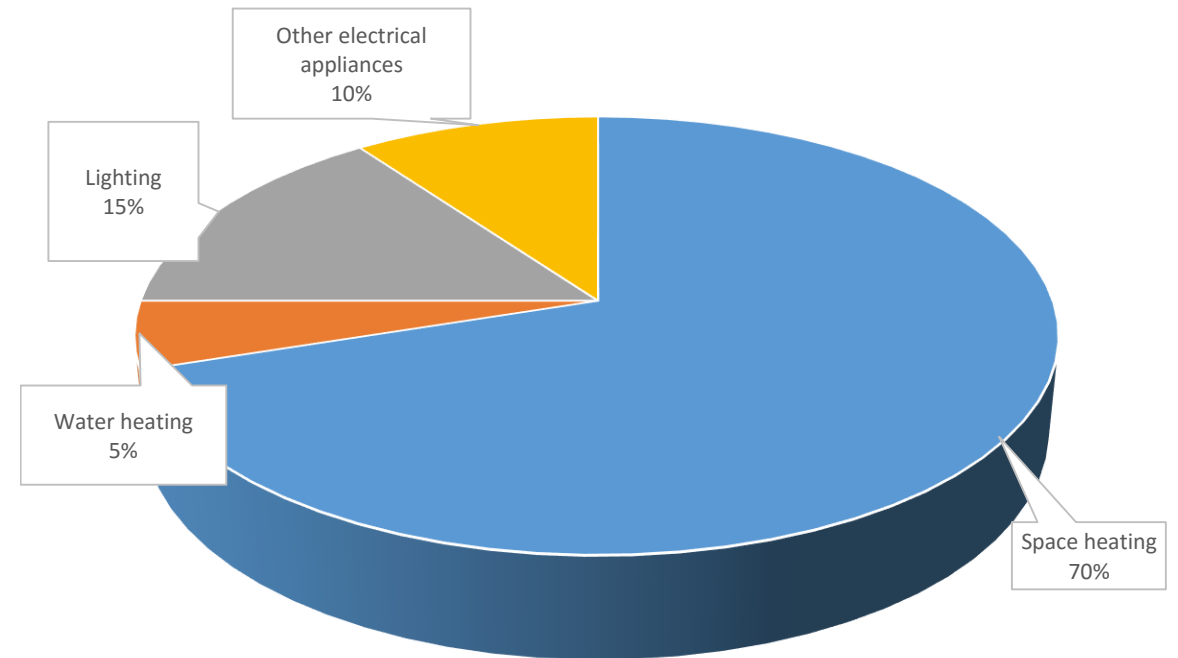


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Energy use in a typical community building

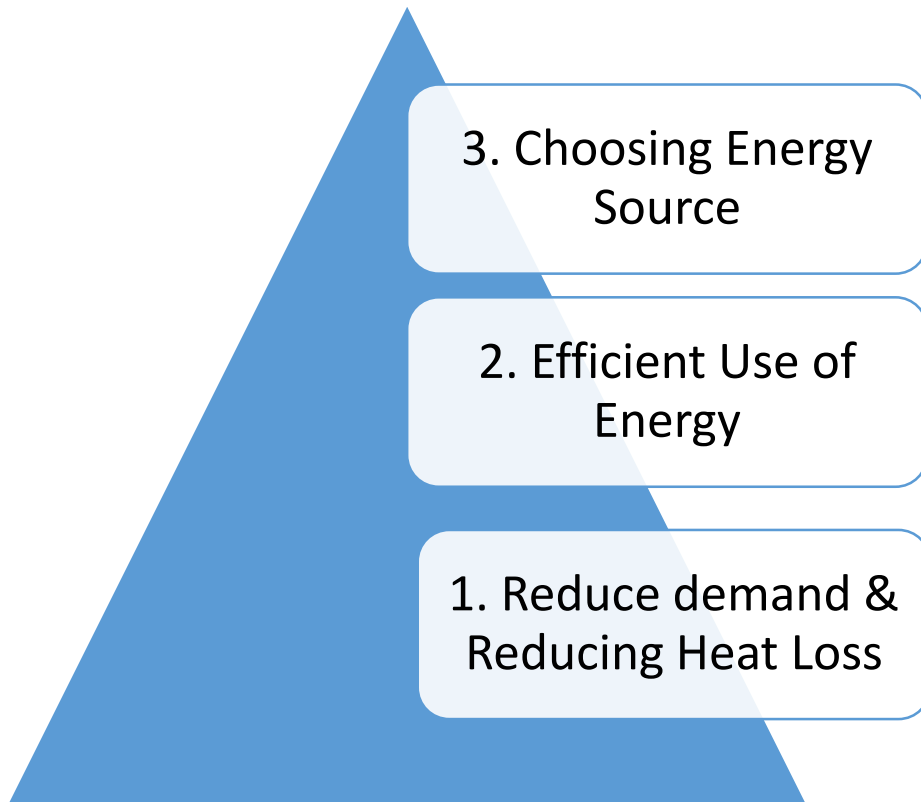
- Every building is different, so find out about your specific energy demand (see next slides)
- But in general accounts space heating for the vast majority of energy use.



How much energy do you use today?

- Find out what type of energy you use (all of it: oil, gas, electricity, wood etc.)
- Look at records of energy use: energy meter readings and bills, at least three years back to balance for warmer and colder years
- Monitor your energy use. Look at how, when and by whom the building is used. Find out about peaks and troughs in energy use over the year.
- Ask for your help from your energy provider, specifically if you have electric heating, to get access to detailed data about your energy use.
- Write your data down in a table.

Where to start?



1. Reducing Heat Loss

- Additional insulation
- Increased air-tightness
- Effective heat recovery ventilation

2. Efficient Use of Energy

- Energy-efficient electrical appliances & ventilation
- Energy-efficient lightning
- Managing consumption & controlling

3. Choosing Energy Source

- Heat pump
- Biofuel
- Solar heating or Solar Power

How to do it?

1. Behaviour change, e.g.

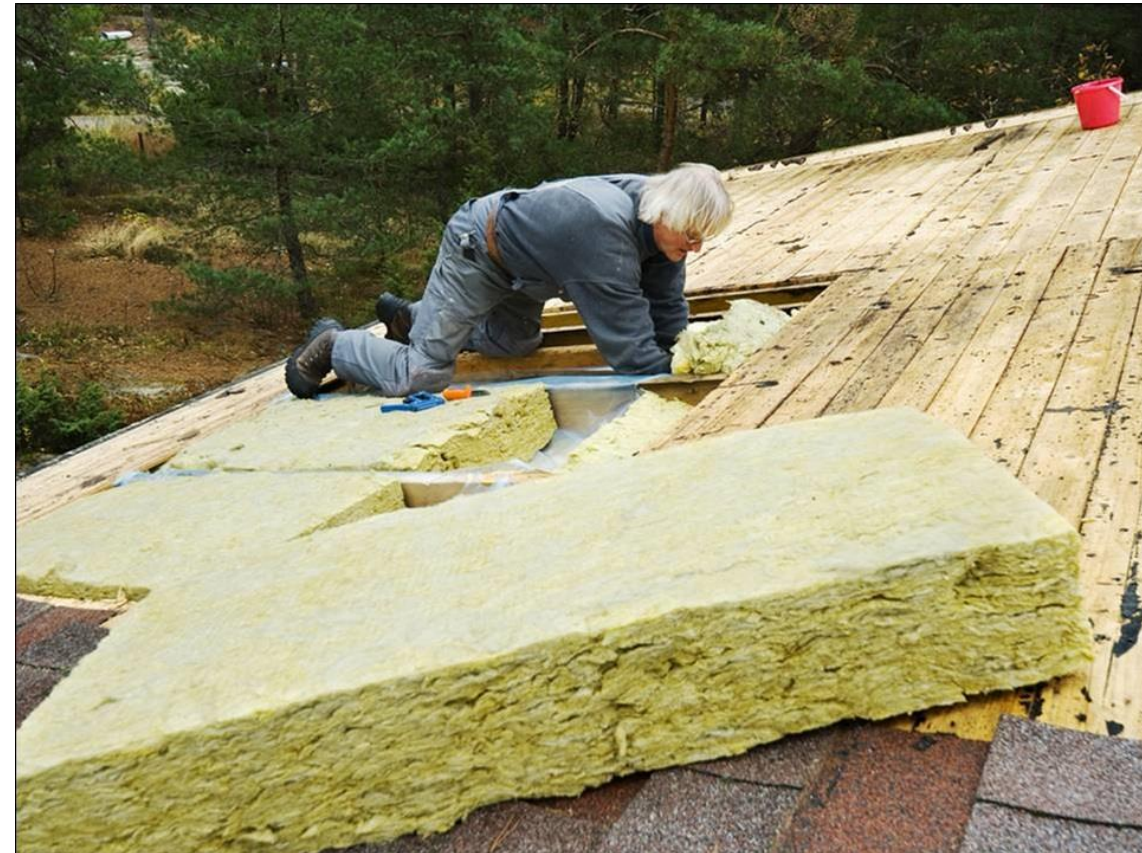
- Switch off lightning and electrical appliances when not in use
- Close doors and windows
- Report leaking taps

2. Physical improvements, e.g.

- Insulation (roof, sealing gaps around windows, doors...)
- Space and water heating (new boiler, heating controls)
- Lighting (Slim-line T5 tubes or LED)
- Water saving devices to taps, dual-flush toilets

3. Choosing Energy Source, e.g.

- Solar heating
- Bioenergy



How much to save? Some Examples

1. Behaviour change ca 10%
2. Physical improvements, e.g.
 - Roof insulation ca 10-20% of space heating energy
 - Sealing gaps around windows & doors ca 10-15%
 - Replace old T8 tubes with LED up to 80% of lightning electricity
3. Choosing Energy Source
 - Depends very much on the specific situation





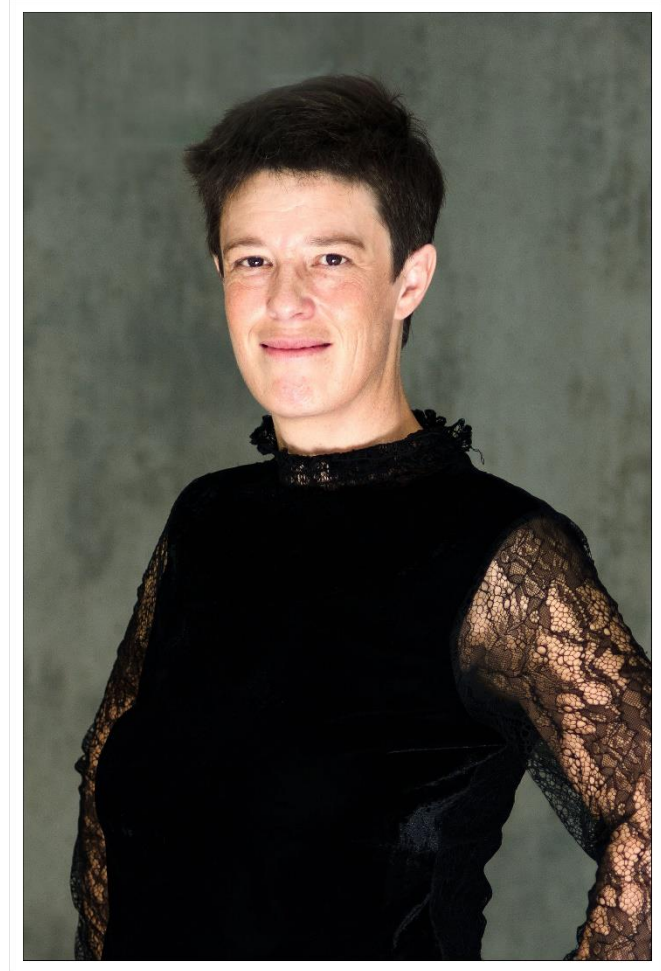
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Do you have questions?

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