

Low Energy Buildings in Sweden

- Costs and benefits

Evaluation of Low Energy Buildings

- Energy Performance of Buildings Directive (2010/31/EU)
2020, all new buildings = Nearly Zero Energy Buildings
- Energy performance of a Swedish NZEB?
- Government assignment 2014: Evaluation of low energy buildings

Evaluation of Low Energy Buildings

- 1) 2014 – 2015: Metering project I: Methodological and practical challenges
Case study on 3 buildings.
- 2) 2016 – 2018: Metering project II: Data from 31 buildings (1-4 years)
 - Low energy building (25% better than requirements)?
 - Case study of 16 buildings
 - Private economic assessment
 - Socioeconomic assessment
- 3) 2019 - 2020 Continued metering by the Energy Agency

Case study – economic and socioeconomic assessment

- 16 buildings
- Private economic assessment
NPV(Extra construction costs, Energy cost savings)
- Socioeconomic assessment
 - + Value of avoided local air pollution
 - + Value of avoided CO2 emissions
 - + Value of improved / deteriorated indoor climate

Results

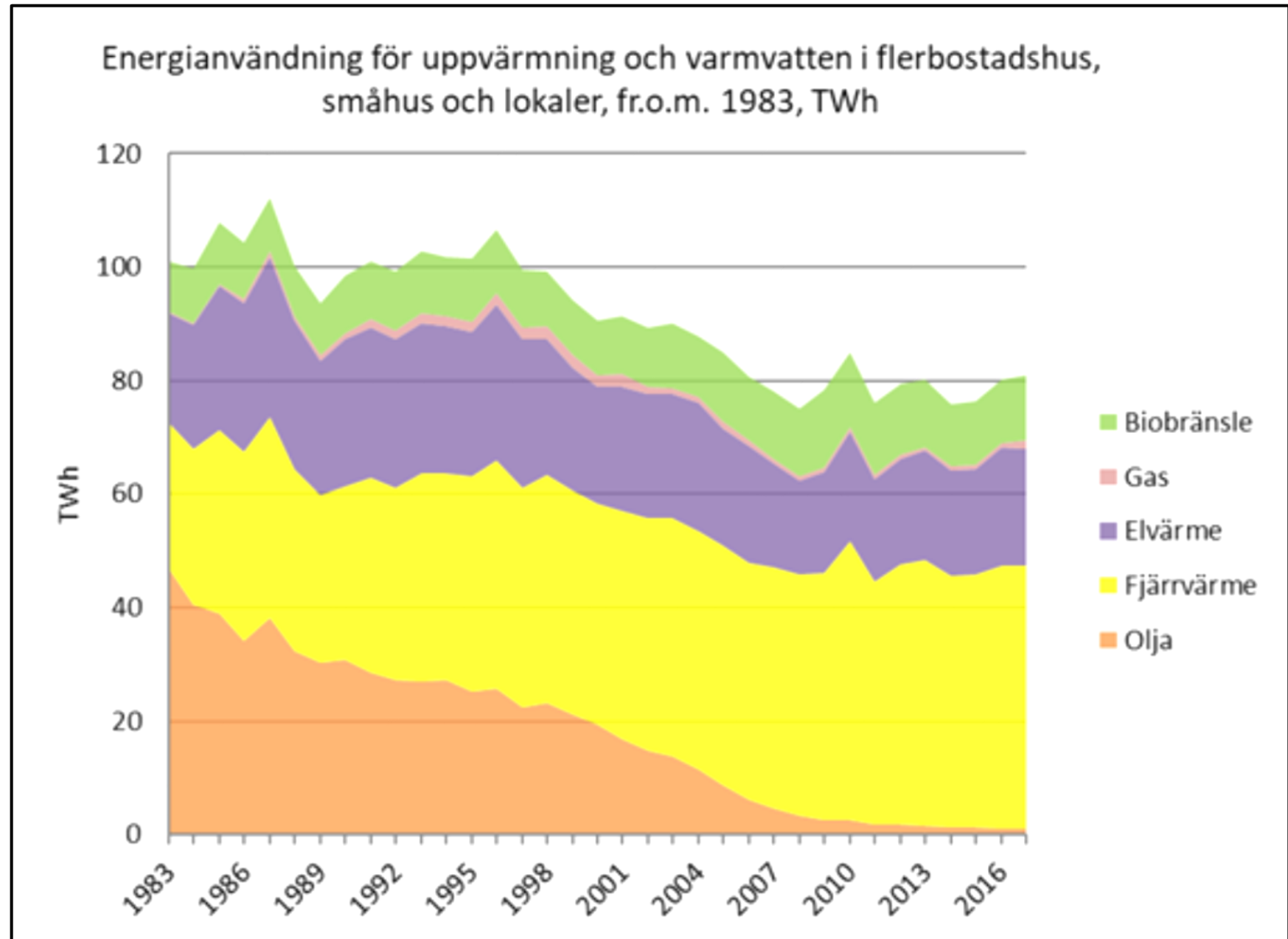
Economic efficiency in

- 2 out of 4 Single family houses
- 6 out of 6 Apartment buildings
- 3 out of 6 Commercial buildings

Socioeconomic efficiency

- 2 out of 4 Single family houses
- 6 out of 6 Apartment buildings
- 3 out of 6 Commercial buildings

Energy use in residential and service sector





Thank You!

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