

Key factors on the Swedish market for micro production of electricity

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Produce your own electricity, why not?

”The Swedish electricity industry is in favor of a development towards a market where more consumers become their own electricity producers” (Svensk Energi, 2010)

Layout of the master thesis

- Sociotechnical analysis
 - PESTLE, net-billing & regulatory framework
- Computational analysis
 - Theoretical one-family-house & Norra Djurgårdsstaden
- Considered factors and fluctuations within
 - Spot price, investment costs, solar subsidies, interest rate on investment, year of investment & falling product prices

Limitations: Sweden, maximum allowed facility output 43.5 kW & 63 A (due to legal reasons) and little regard to technical details in equipment

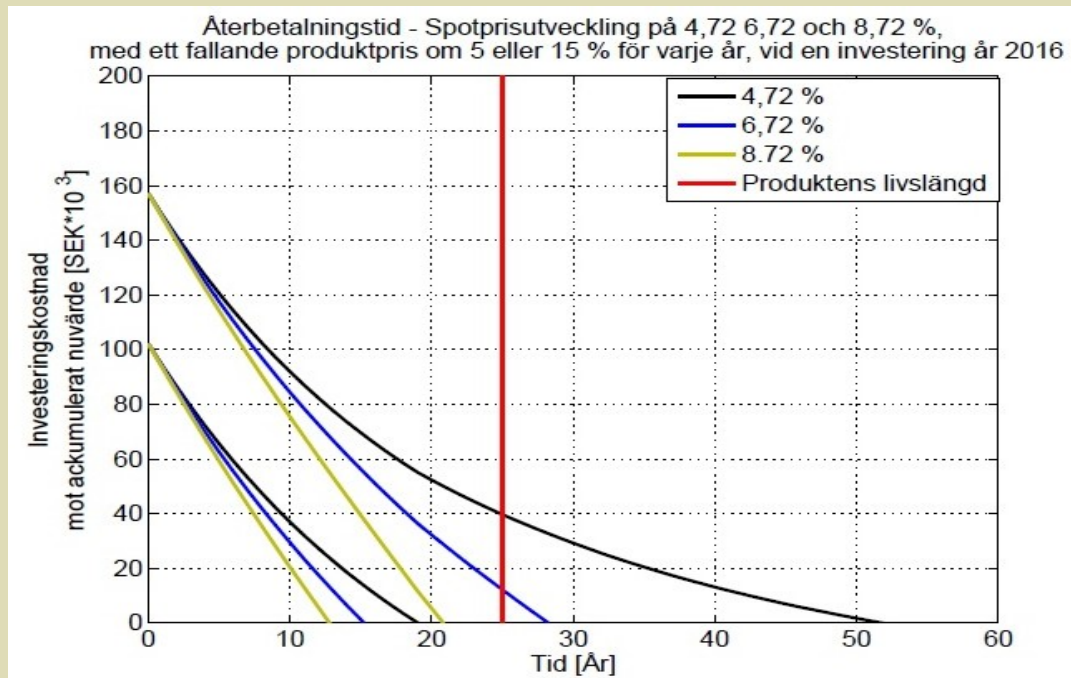
This is why

Identified key factors - how they influence micro production

Positive aspects and reasoning	Increased spotprice development - <i>Higher revenue from self produced electricity.</i>	Falling product prices - <i>Reduces the investment cost.</i>
Negative aspects and reasoning	Today's regulatory framework – <i>Too complicated. Introduction of net-billing will make it easier and more profitable. High cost related to gaining access of green certificates, due to the present reporting practice.</i>	Investment costs - <i>Not profitable with products present on the market today, even with existing solar subsidies.</i>

The figure on the right is an example of calculations made for the soon to be built apartment complex in Norra Djurgårdsstaden.

For the theoretical one-family-house three additional scenarios has been analyzed. Two with today's regulatory framework and one in if net-billing would be introduced.



Now, how does our thesis contribute to solving a problem in our society?

- Identifying problems in the Swedish bureaucracy concerning laws and tax requirements (ellagen and lagen om skatt på energi).
 - Resulting in making it easier for common people to produce a part of their own consumption.
- Increased production of green electricity results in a more sustainable society.
- Awareness of the definition of energy can help marketing electricity as a product instead of a necessary evil when one pays the bill.
 - Understanding the ratio between production and consumption of electricity, can also make for a more sustainable society. The micro production facilities could increase the knowledge of how much energy is needed to cook a steak or even read a book at night.

In all the analyzed cases net-billing was found to be the best solution for micro production of electricity on the Swedish market. Not only providing the best economical conditions but it also makes it easier and therefore more interesting for common people, not only for us passionate about energy.