

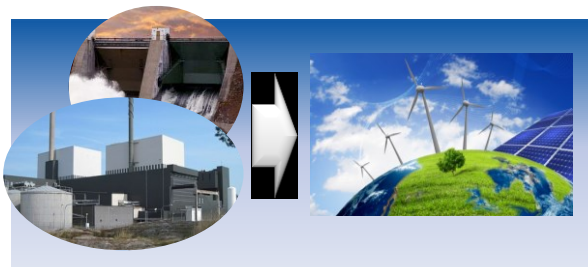
New network tariffs in Sweden
NordREG seminar, 5 November 2015
Thorstein Watne
Vattenfall Eldistribution

New network tariffs in Sweden – Future electricity system

Produktion

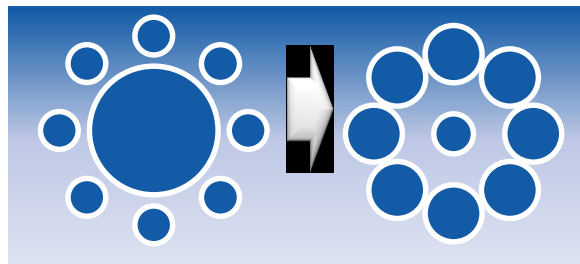
Base power

Intermittent



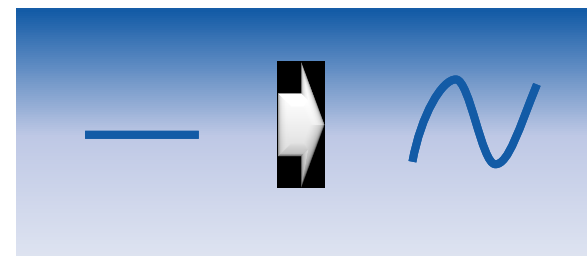
Centralized

Decentralized



Stable

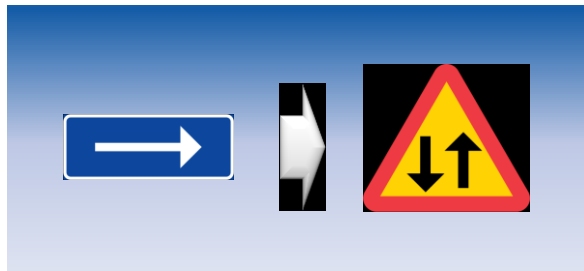
Flexibel



Kund

One way

Two way



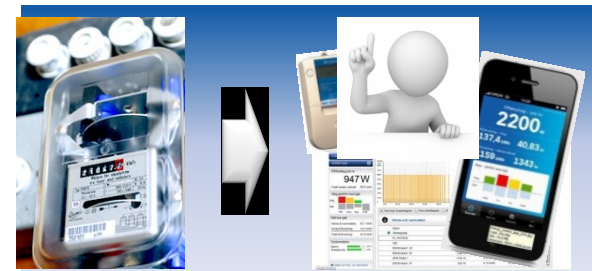
Energy

Capacity



Lack of knowledge

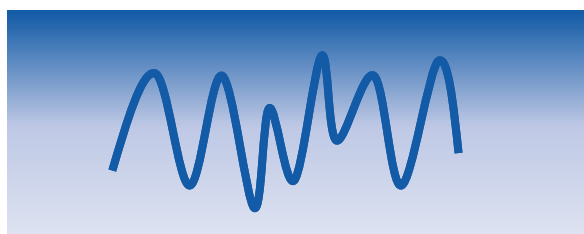
Awareness



Nät

Stable

Unstable



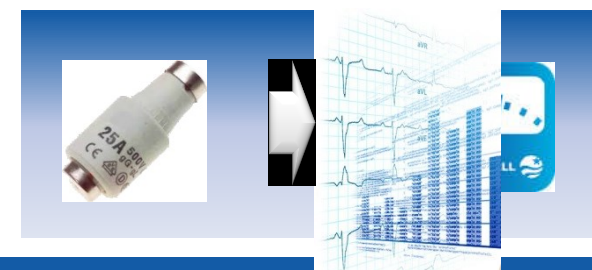
No bottle necks

Lack of capacity



Fixed prices

Influenceable prices



New network tariffs in Sweden – Common principles

- The association “Swedish energy” has published a report about new network tariffs
- A good tariff structure is an optimal compromise of many different goals
- The new tariff structure must be functional in the expected future electric system
- To continue to have high security of supply we need metering, information of meter values and tariff structures that can contribute to more flexibility
- We think that the future network tariff structure must have three types of charges. One fixed and two variable, power and an energy. All three charges have their advantages
- Hourly metering can give an opportunity to introduce charges for utilized power and all forms of time of use tariffs
- A transition to power tariffs must be as smooth as possible
- The same price model for all customers therefore also for apartment’s
- A general condition is that the network company and the customers has agreed about a subscribed maximum demand, normally a metering fuse, for the connection fee
- Monthly based charges enables definitive billing each month

New network tariffs in Sweden – Subscription “if it`s easy for the customer to decide”



- As rent of a flat
- The customer have a possibility to choose the number of rooms and the area etc.
- Correct that he customer pays for the opportunity

New network tariffs in Sweden – Subscription "If it's difficult for the customer to decide"



Only Sweden and Finland have fuse tariffs

- Many customers has not choose their metering fuse.
- Many customers do not know the possibility to choose
- Difficult for the customer to choose the optimal size
- The metering fuse is foremost a protection
- Sometimes the company has the wrong size in their register
- Change of the size of the metering fuse leads to costs for both customers and companies

New network tariffs in Sweden - Alternatives



More influenceable network tariff – power tariff or low fixed charge and high distribution charge . Fuse tariff is not a long term solution.

Must be functional in an supplier centric model

New network tariffs in Sweden – Tariffs and connection fees

Network tariff: The customers measured **individual** use of power and energy

Connection fee: The customers **subscribed** maximum demand (normally a metering fuse)



New network tariffs in Sweden – Proposed power tariff

- **Fixed charge** SEK/month (specific cost per customer and ground cost for the network)
 - Also seasonal users should pay the ground costs for the network
 - One low level for apartments and one or two higher levels for other customers (≤ 63 A)
- **Monthly power charge for utilized power** SEK/kW, month (some capacity cost)
 - Same charge for all hours during the month – incitement too even out the power
 - One low level for apartments and one higher level for other customers (≤ 63 A)
 - Highest hourly demand each month – the same definition in all companies
 - Eventually time differentiated for different month
- **Distribution charge for used energy** öre/kWh (some capacity cost is converted to this energy charge because of the good coincidence factor for these customers)
 - The same level as in today's fuse tariffs – smooth transition to the new power tariff
 - Eventually time differentiated during the year, the week and/or the day
- **Larger part influenceable cost** - but more varied and less predictable costs/revenues
- **More flexible with three charges** - but more complex and a new unknown charge
- **More cost reflective** - less need for special tariffs