

An aerial photograph of a city, likely Stockholm, Sweden, showing a dense urban area with a river winding through it. The image is overlaid with a semi-transparent blue filter. The text is centered on the left side of the image.

# Economic and regulatory incentives for Swedish DSO's to engage in demand response

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# Existing incentives for Swedish DSO's to engage in demand response (DR)

## Economic incentives

- Efficient utilization of electricity networks

## “Regulatory” incentives

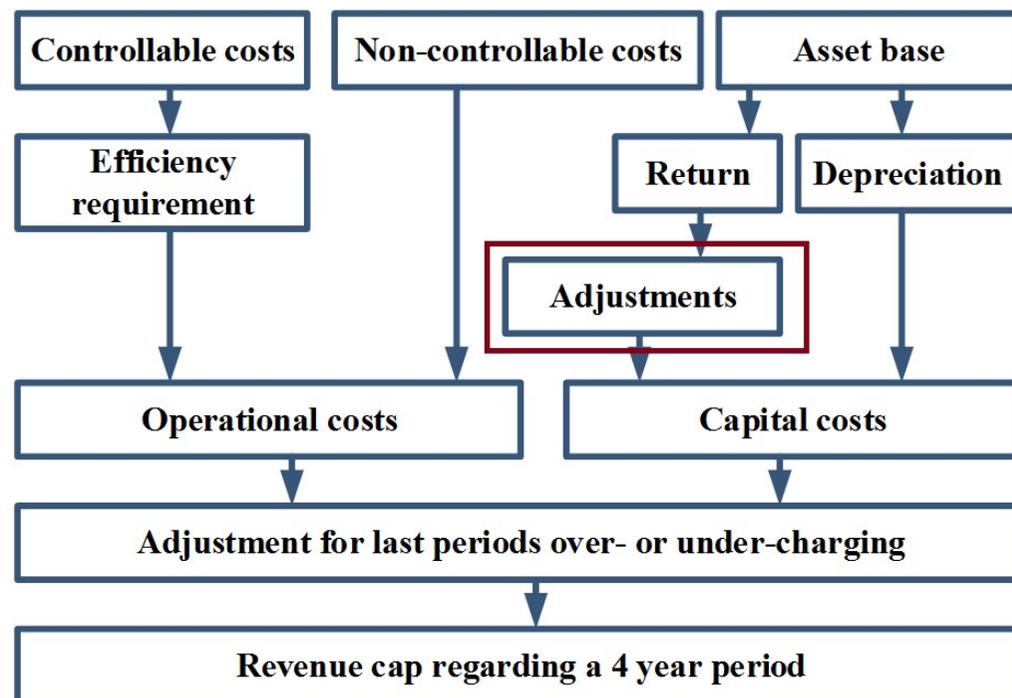
- DSO's are not allowed to put regulatory requirements that is detrimental to demand response service providers



# Economic incentives

- Adjustment component determined by
  - Network losses
  - Efficient network utilisation
  - Quality of supply

Max  $\pm$  5 % of TOTEX

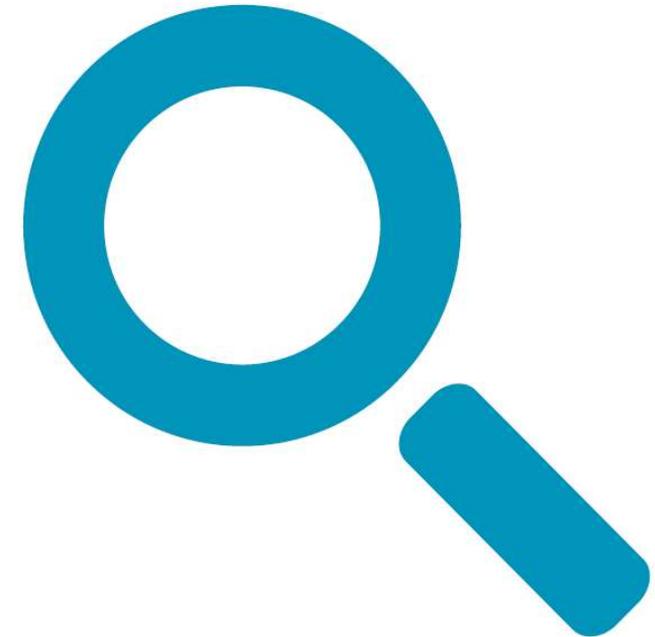


## Economic incentives, cont.

Objective	Indicator	Monetized	Reward/penalty
<b>Network losses</b>	Change in network losses across regulatory periods	Average price per megawatt hour during the regulatory period	Reward/penalty 50 % sharing rule
<b>Efficient network utilisation</b>	Decrease in total feeding grid fee to upstream network across regulatory periods	Total feeding grid fee = f(load factor, distributed energy, grid fee/MWh)	Reward Sharing rule based on average load factor, e.g. 80 %

# “Regulatory” incentives

- Monitored by Ei through annual surveys
  - DSO's
  - Demand response service providers
  - Electricity suppliers



# What can be improved?

- **Expand regulatory compensation for local network benefit to include demand response (not only generation)**
  - Network benefit defined as reduced network losses and grid fee to upstream network
- **Requirement for network operators to inform customers about tariffs and other opportunities for cost savings**
- **Ei has asked for a mandate to develop instructions on cost reflective network tariffs**
- **Allow gradual introduction of new tariff design (pilot projects)**

## Wrap up

- Currently small and uncertain economic incentives in place for DSO's to engage in demand response
- The simpler the better... Predictability and simplicity of existing incentives can be improved upon
- New economic and "regulatory" incentives are being developed
- Balancing the economic incentives for DSO's to invest in CAPEX and OPEX is a regulatory challenge ahead