

Network losses

Seminar on incentives to reduce network losses in the
Nordic countries

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27. April 2017

Icelandic DSO's

- There are **six DSO's** and **one TSO** in Iceland
- They operate subject to the Electricity Act No 65/2003 that implements directives 96/92 and 2003/54
- The third Energy Package has not yet been implemented into national law

LANDSNET

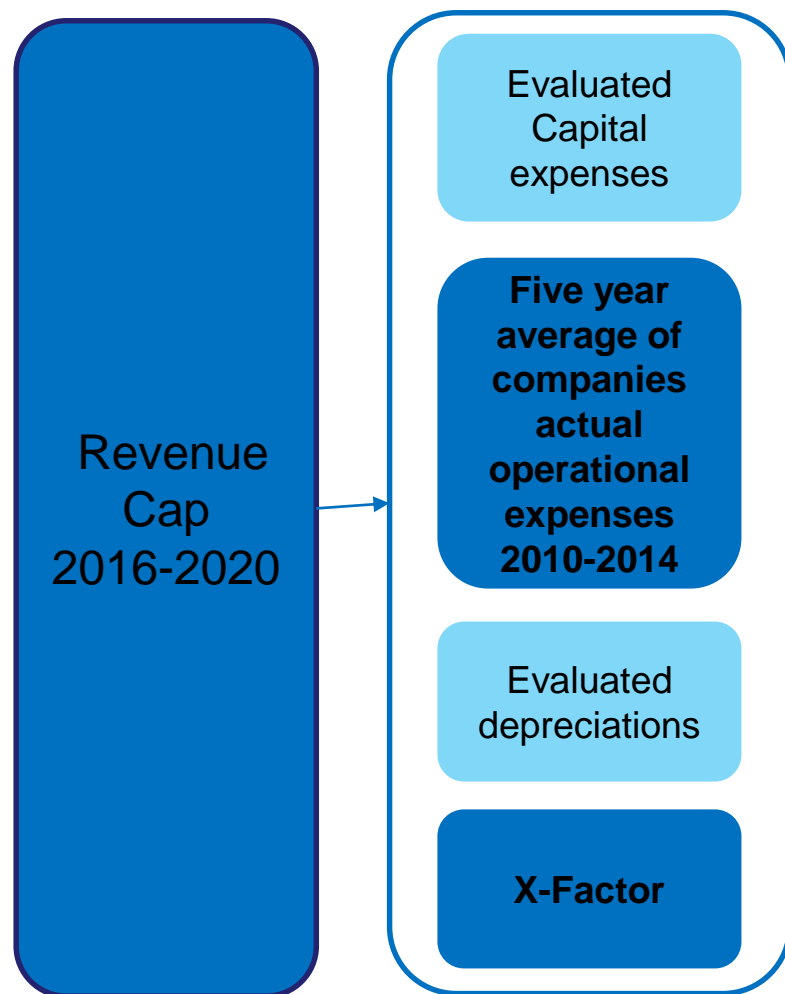


RAFVEITA REYÐARFJARÐAR



Revenue Cap

- The TSO and DSO's are both subject to revenue cap model
- Improvement factor (x-factor) and Opex are decided every five years
- Allowed revenue decision every year with a 10% accumulated surplus/deficit limit
- The **transmission losses** are outside of the revenue cap after a change in the legislation in 2011
 - The NRA was against this change
- **DSO network losses** are pass through cost



Transmission Losses

TRANSMISSION CHARGES

In-feed:

Delivery charge 5.176.725 ISK per year

Out-feed:

Distribution system operators:

Delivery charge 5.849.700 ISK per year

Capacity charge 6.006.052 ISK MW per year

Energy charge 434,90 ISK per MWh

Power intensive users

Delivery charge 50.409 USD per year

Capacity charge 29.364 USD MW per year

Energy charge 1,485 USD per MWh

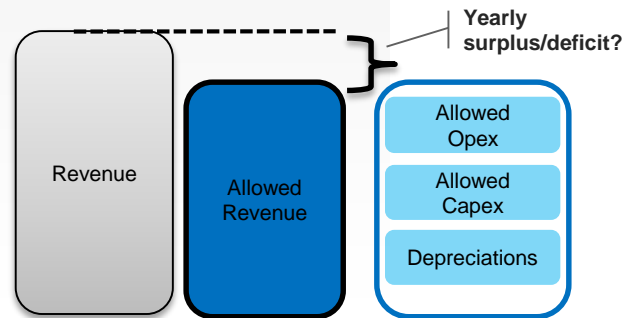
Curtable transmission:

Energy charge if use time is a minimum of 4,500 hours 472,00 ISK per MWh

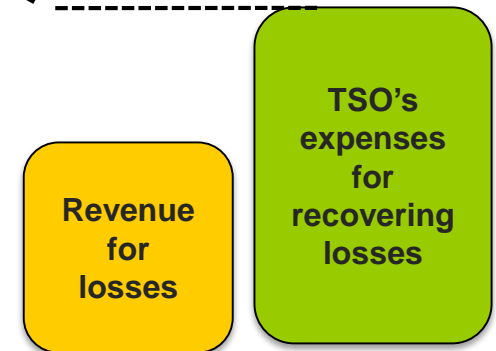
Energy charge if use time is less than 4,500 hours: ISK 1,243.00 per MWh*

TARRIFF NO. 24 - 2017

Electricity as of March 1st 2017



Network losses surplus/deficit



A discount will be given to end users that have a utilization time of less than 4500 hours/year. This discount is 47% from January 1st 2014 – June 30th 2014, 31% from July 1st 2014 – December 31st 2014, and 16% from January 1st 2015 – June 30th 2015. From July 1st 2015 this charge will be fully effective.

Charge for Ancillary Services and transmission losses

Ancillary services 48,71 ISK per MWh

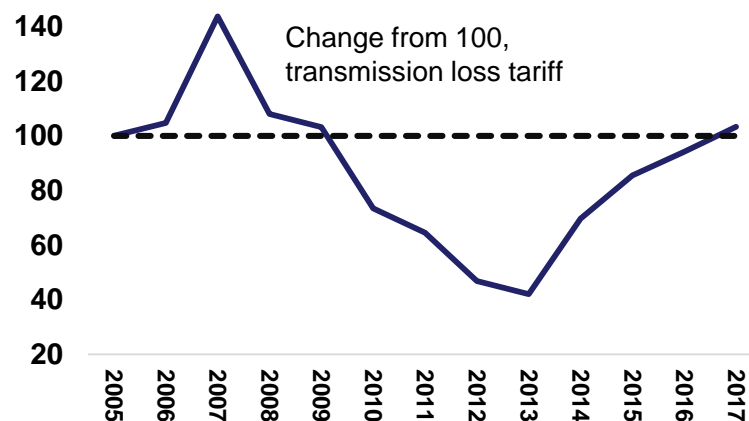
Transmission losses 108,74 ISK per MWh

Change in tariffs

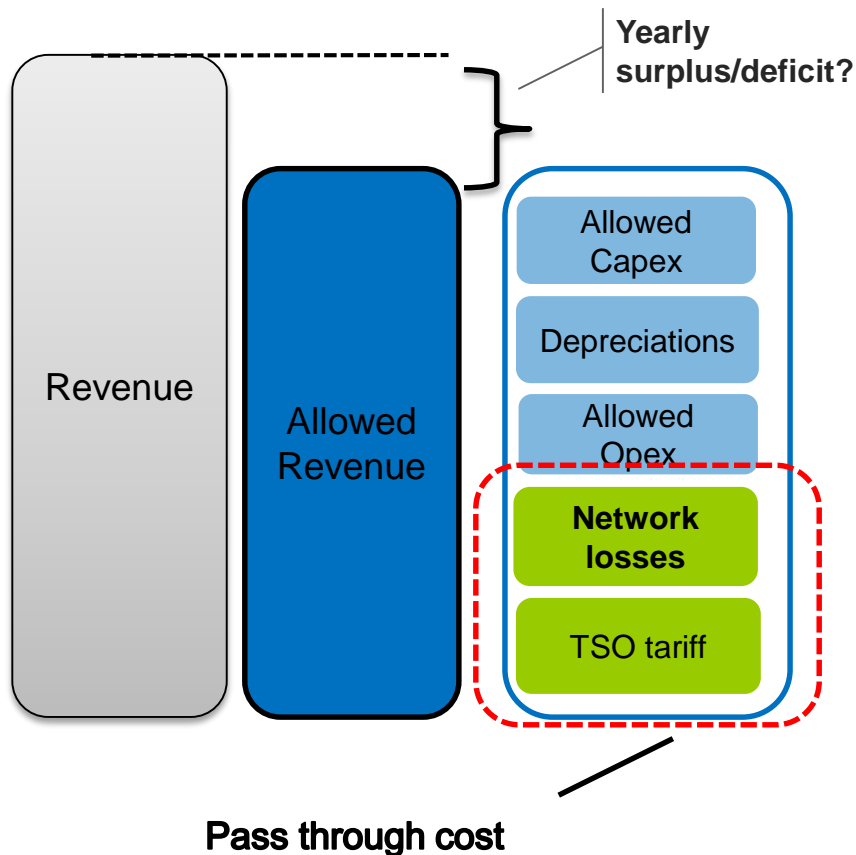
- All change in tariff should be reported to the NRA with 4 weeks notice
- The loss component in the TSO tariff is decided at least once a year after an open auction has been held, with the producers willing to participate
- When there is change in the tariff due to the transmission loss component, the NRA always asks for a meeting with the TSO where the last auction is disguised as well as the NRA may ask for further argument for the change.

Transmission Losses

- Transmission losses are
 - 13-15% of the transmission bill for energy intensive users
 - 6-8% of the transmission bill for DSO's
- The transmission component in the TSO tariff is decided at least once a year after an auction with the producers
- Concerns
 - The price has been going up again
 - Not enough bids
 - Oligopolistic behaviour?
 - Has demand reached supply?
- Solution
 - Producers are rather willing to sell short term
 - Auctions for transmission losses are now being held every 3 months



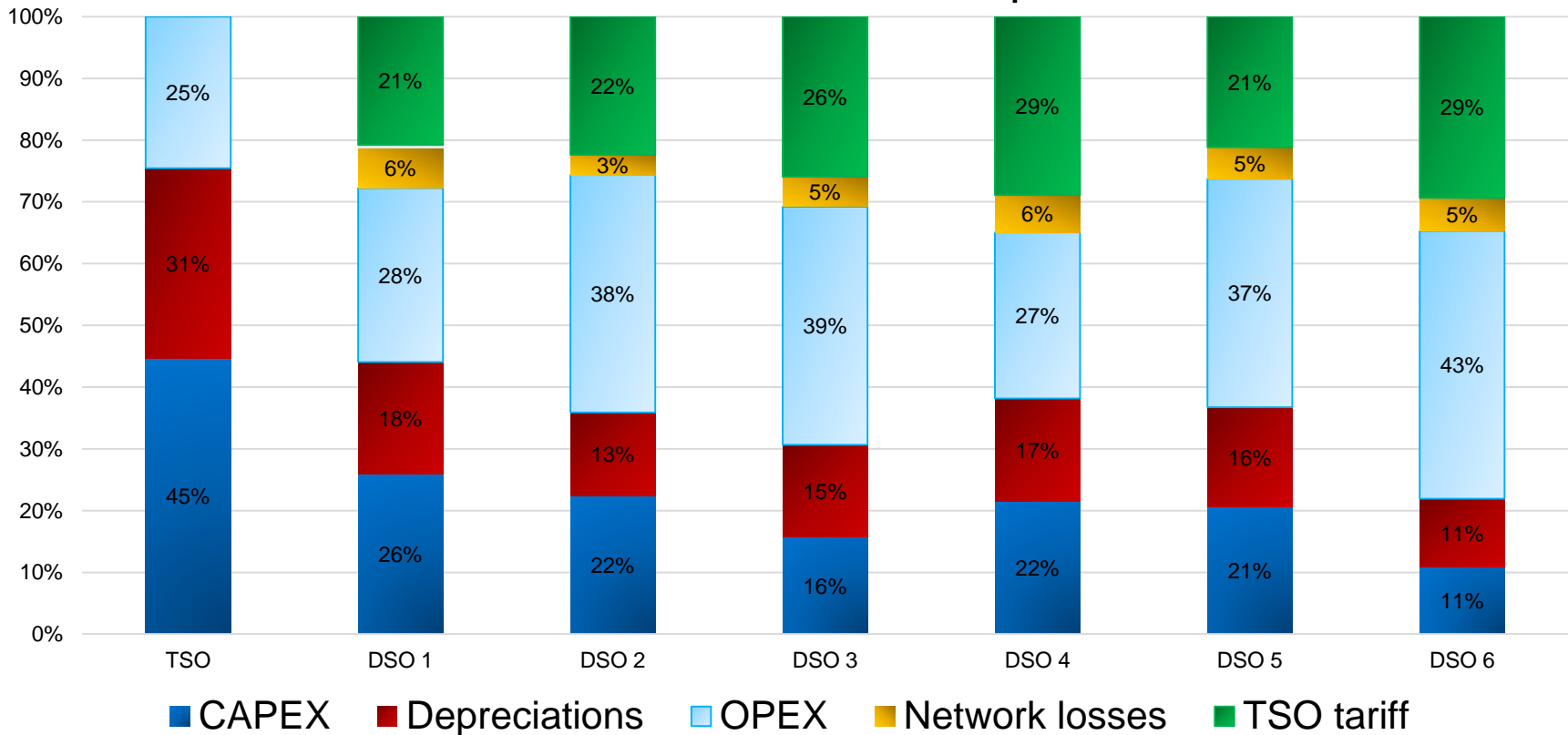
DSO network losses



- DSO network losses are a pass through cost
- The NRA receives information on how much energy and power is lost every year and how much the DSO has paid for that
- The DSO's are responsible for buying the energy needed to recover the network losses

Allowed Revenue from 2015 TSO and DSO

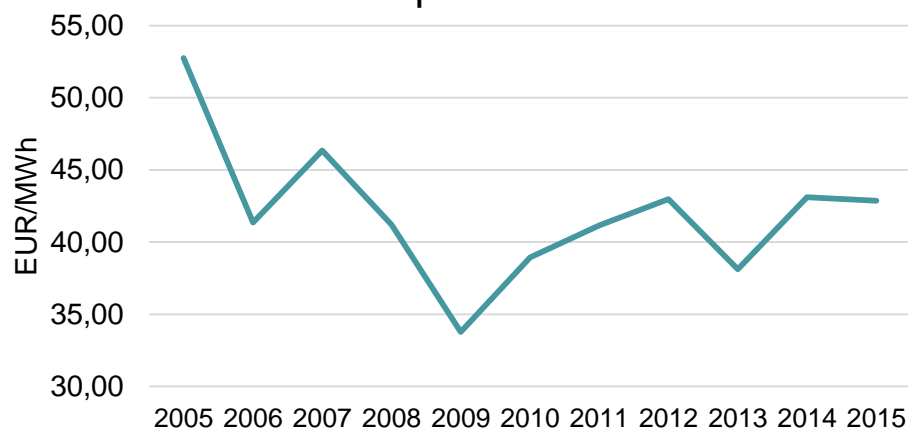
TSO and DSO's revenue cap 2015



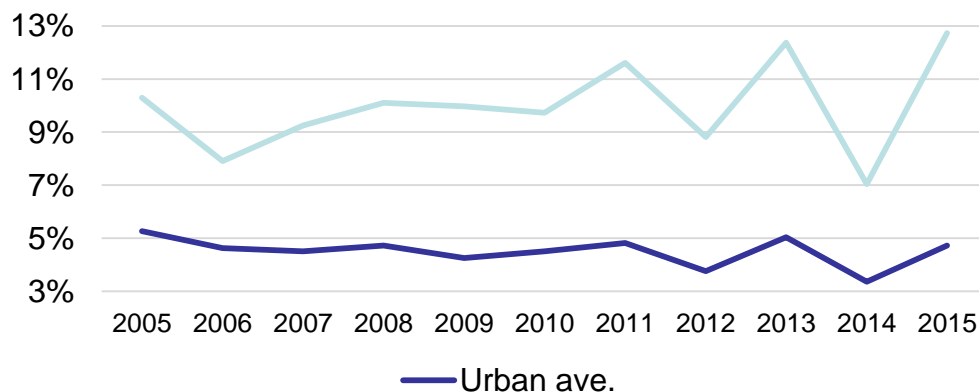
DSO network losses

- DSO network losses are about 3-6% of the allowed revenue
- Concerns
 - Little incentive for DSO's to get the best price
 - Network losses are bought on the energy market and go straight in to the DSO tariffs
 - Market price is thus affecting monopoly based tariffs
- Solution
 - Monitor network losses carefully
 - Discussion

Average price for network losses in the revenue cap Six urban DSO's



DSO Network Losses
Percentage of MWh lost in the network





Thank you 😊