Bundesnetzagentur

Presentation of current status of AgNes process [GBK-25-01-1#3]

Grand Ruling Chamber for Energy

WebEx, 27 May 2026

Organisational matters

[Gregor Glasmacher]

(5 minutes)

Agenda I

- **Organisational matters**
- **Starting point & objectives**
- **A look at the process**
- **Overview of core elements**
- **Presentation of regulatory proposals as at 1 January 2029**
  - Basic model & prosumers
  - Basic model
  - Cost cascading
  - Producers
  - Storage facilities
  - Electrolysers

- break -

Agenda II

- **Presentation of analyses and considerations**
  - Basic model
  - Basic model for low voltage and prosumers
  - Cost cascading
  - Producers
  - Storage facilities

- break -

- **Addressing questions**
- **Outlook**

Starting point and objectives

[Klaus Müller]

(8 minutes [not including A look at the process])

Situation at the start of the second stage of the energy transition

- Large part of renewables expansion still to come
  - Grid expansion catching up but considerably delayed
  - Volatility increasing, with prices frequently below €0 or over €300/MWh
    - Players should and will respond
    - Storage facilities must and will come
    - Increasing risk of even more congestion
- Strong growth in new users due to transformation processes in large-scale industry, more data centres (to be) connected, sustainable heat for industry and households, increasing electromobility, greater use of electricity to produce hydrogen
  - Consequences:
    - Scarcity for connection and in the network
    - High network costs
    - Critical willingness to pay on part of network users reached

Volume of network costs & proportion of tariffs in electricity price

	2026 (€mn)
DSOs revenue cap, whole of Germany*	21,972
TSOs revenue cap	11,719
Total revenue cap, whole of Germany	**33,691**
+ offshore network surcharge	3,260
Network costs, whole of Germany	**36,951**

*not including upstream network costs

Up to now, network costs have been borne **exclusively by consumers**

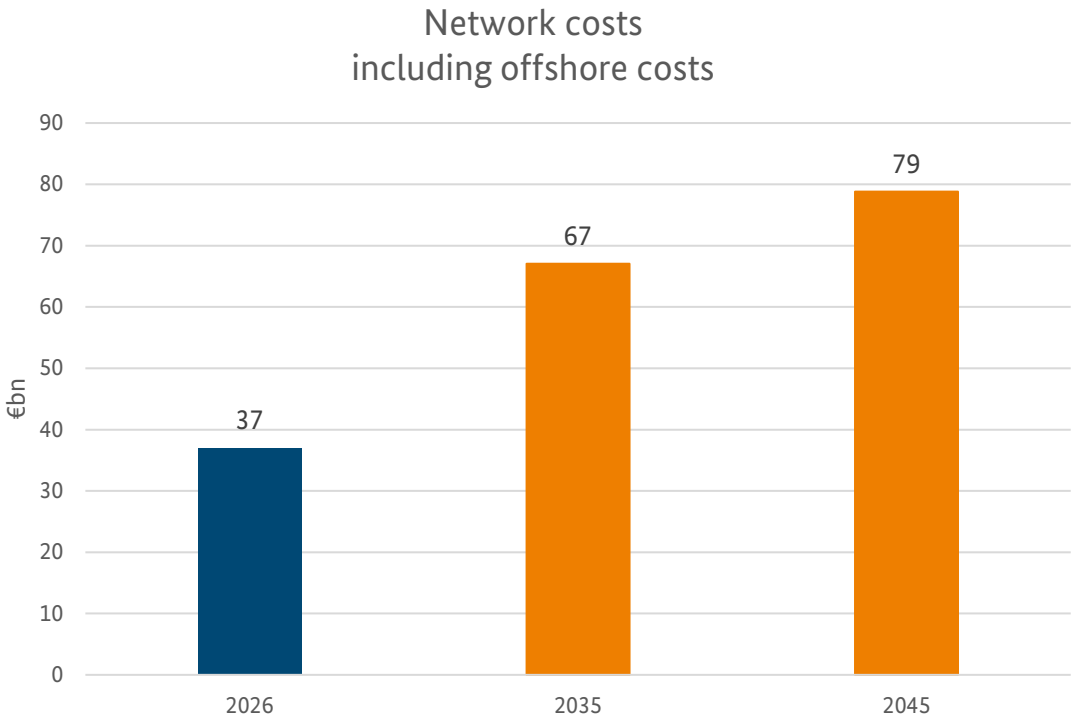
Network costs **trending upwards** due to **great need for investment and improvement** at all network levels for *expansion* as well as for *modernisation* and *digitalisation*

Share of tariffs in electricity price (April 2026):	Net network tariff inc metering (ct/kWh)	Total electricity price net (ct/kWh)	Proportion network tariffs (%)
Customer group			
Industrial customers (24 GWh, MV)	**3.1**	15.14	**20%**
Household customers (2,500 – 5,000 kWh)	**9.3**	29.32	**32%**

Development of need for investment

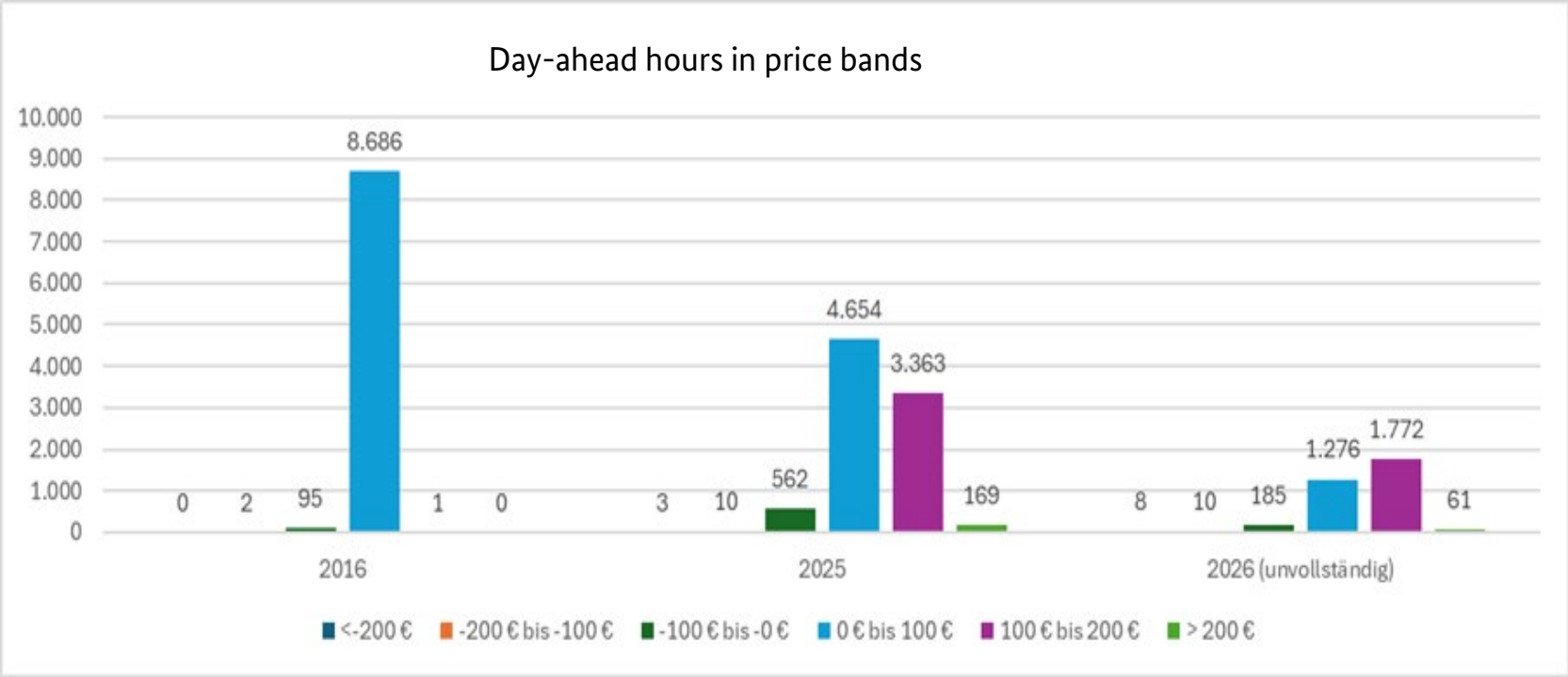
- Considerable **need for investment:**
  - In the 2nd draft of the NDP 2025, TSOs estimate need for €365-392bn of investments by 2045, €149-167bn of which is for offshore network connections.
  - Large DSOs estimate need for about €207bn of investments for grid expansion by 2045 (without 1:1 replacement).
- Digitalisation and better service will initially cause more costs.
  Construction and infrastructure operation as a whole is getting more expensive.
- The network will be expanded to accommodate **larger transport volumes** in future:
  - This will expand the basis among which network costs can be distributed.
  - But the route of the volume increase is still highly uncertain.
  - The important point is that all users – including new ones – participate in the financing of the networks.

Development of network costs



Sources:
2026: includes onshore network costs of TSOs+DSOs as well as offshore costs of TSOs;
onshore costs: revenue cap adjustments 2026 of TSOs+DSOs under responsibility of Bundesnetzagentur (inc delegated resp);
net revenue caps 2026 (without double counting of upstream network costs); scaled up to whole of Germany
offshore costs: Netztransparenz.de
2035+2045: indication of possible network cost trends; Bundesnetzagentur's own calculation based on assumptions

Development of electricity price volatility: development of day-ahead price distribution



Source: SMARD, accessed 18 May 2026

Congestion management in 2025

Frequency:

- Congestion management measures were taken on **all 365 days** of the year.
- The average duration of congestion management measures was about **4 hours.**

Volume:

- Volume of measures was **30.3 TWh** (positive and negative redispatching and countertrading)
  - of which **24.3 TWh** in the transmission network, **6 TWh** in the distribution network.
- The peak was about **17 GW** of curtailments in an hour.

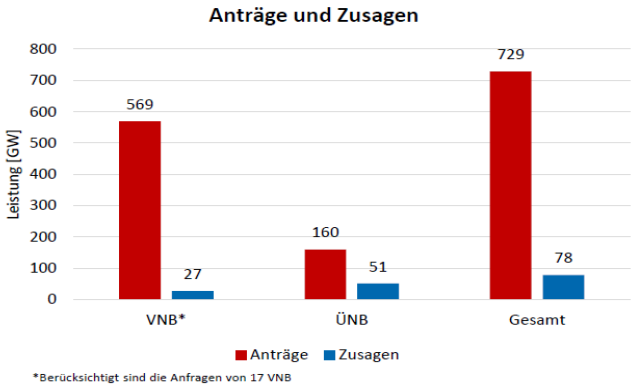
Costs:

Total costs of congestion management amounted to about **€3.06bn**:

- **€0.66bn** for redispatching with renewables and compensation to balance responsible parties
- **€0.10bn** for countertrading measures
- **€0.95bn** for redispatching with conventional operational power plants
- **€1.35bn** for contracting and deploying reserve power plants

Network connection requests – example of storage facilities

Netzanschlussanfragen und -zusagen von Speichern



- Weiterer starker Zuwachs an Anschlussbegehren in 2025 gegenüber 2024
- Verbindlichkeit der Anfragen sehr unterschiedlich
- Netzanschlusszusagen entsprechen mehr als 50% der laut NEP in 2037 erforderlichen Prognose an Batteriespeichern im gesamten Netz (Übertragung und Verteilung)
- Mindestens 50% werden nicht realisiert aufgrund von Mehrfachanfragen oder Spekulation
- Bisher nur wenige Netzanschlusszusagen

The example of storage facilities is well-documented due to network operators' concerns.

Connection requests are also **rising** for

- industrial transformation processes,
- data centres,
- heat pumps for industry and households,
- electromobility and
- electrolysers.

In summary I

Challenges

- Network connection requests for storage facilities, the transformation in heat generation and data centres are leading to greater need for grid expansion
- Greater risk of more congestion
- Delayed grid expansion is pushing up congestion management costs
- Volatility is increasing considerably and, consequently, so are the demands on the flexibility of the system
- Costs need to be borne and fairly shared

In summary II

Objectives

- Collect costs where they are incurred
- Put a price on scarce capacity
- Finance network operation and expansion securely
- Avoid congestion management costs
- Support flexibility
- Optimise system, send locational signals and reduce network expansion

A look at the process

[Barbie Haller]

(3 minutes)

AgNes process – a look at the milestones

- Publication of **discussion paper** – 12 May 2025
- **Kick-off workshop** 2/3 June 2025, consultation of discussion paper
- Integration of **industrial network tariffs** proceedings into AgNes – 8 July 2025
- **Industry workshop** on industrial network tariffs – 30 Sept 2025 followed by consultation
- **Expert workshops** followed by consultation
  - Basic model of tariff components for interval-metered customers – 2 December 2025
  - Basic model of tariff components for low voltage – 19 December 2025
  - Dynamic network tariffs – 14 January 2026
  - Storage tariffs – 30 January 2026
  - Injection tariffs – 20 February 2026
  - Cost cascading – 10 March 2026
  - Industrial network tariffs – 30 April 2026
- **Status update** – 27 May 2026

Context of event

- Event is intended to give all stakeholders an early impression of the current **views** of the Bundesnetzagentur on the central questions and issues under discussion.
- It is neither the launch of a formal consultation nor the presentation of a finished draft determination.
- **It makes no claim to completeness.**
- Stakeholders are requested to wait to submit their responses until the consultation has been started once the whole concept has been worked out, **otherwise it will not be possible to keep to the time plan.**
- As proceedings are ongoing, **changes** to the views presented here in the draft determination to be presented in summer **cannot be ruled out**.

Overview of core elements

[Barbie Haller]

(5 minutes)

Principles of setting network tariffs

- Network tariffs will continue to be set on the basis of the **costs of the network operator in question**

  = no uniform network tariff for all of Germany at distribution network level

- Network tariffs are divided into those with a **financing function** and those with an **incentive function**
  - Network tariffs with a **financing function** serve to achieve dependable income and should have as few side effects as possible
  - Network tariffs with an **incentive function** are intended to bring about certain behaviour to benefit the network and are not planned to create income

What does the new network tariff structure look like?

Industrial network tariffs

Process steps for FCAs

Process steps for construction cost contributions

starting in parallel **asap**

Basic model low voltage & prosumers

Basic model over 100,000 kWh

Cost cascading

Financing tariffs for *new* storage facilities/producers/electrolysers

to apply **as of** 1 January 2029

Dynamic network tariffs

Further development of section 14a

Financing tariffs for storage facilities/producers/ electrolysers – *depending on grandfathering status*

to apply in stages **after** 1 January 2029

Industrial network tariffs

[Barbie Haller]

(5 minutes)

Situation of industrial network tariffs

- No change from the situation at the expert dialogue on 30 April 2026
- Principles in the AgNes framework determination
  + further details in AgNes follow-up determinations in spring 2027
- Results of ongoing pilot projects evaluated for further details
- The AgNes framework determination will provide transitional arrangements with respect to the current arrangements in place for permanent load and atypical network use:
  - Arrangements for current permanent load customers will be extended until 31 December 2031.
  - No general transition period for atypical network use:
    - Plans for the discount structure to be retained for a transitional period for major industrial atypical users with an annual consumption of > 10 GWh
    - Pumped storage stations not covered by the transitional arrangements

Industrial network tariffs – transitional arrangements re section 19(2) StromNEV

1. The provisions of section 19(2) **sentences 2 to 4** StromNEV will apply until 31 December 2031 for final consumers that have an effective individual network tariff agreement within the meaning of section 19(2) sentence 2 StromNEV in place by 31 December 2028.
   The individual network tariff agreement must have been properly notified to and, where necessary, approved by the competent regulatory authority.

2. The provision of section 19(2) **sentence 1** StromNEV will apply until 31 December 2031 for industrial final consumers that have an effective individual network tariff agreement within the meaning of section 19(2) sentence 1 StromNEV in place by 31 December 2028 and whose consumption at the withdrawal point for which the agreement applies exceeds 10 GWh on average in the years 2024 to 2028. The individual network tariff agreement must have been properly notified to and, where necessary, approved by the competent regulatory authority.

Industrial network tariffs – flexibility incentive for industrial final consumers

- The Grand Ruling Chamber will determine a special network tariff to incentivise more flexible use of electricity-intensive industrial operations in a follow-up determination.
- The incentive will be in the form of a percentage discount on the general network tariff calculated in accordance with the basic model.
- To get the discount, such consumers must meet the flexibility criteria set out in the methodology determination.
- When calculating the discount, other changes in the network tariff caused by the capacity-based price system and the changes to the cost-cascading system as well as the extent of flexibility provided by the consumers must be appropriately taken into account.

Dynamic network tariffs

[Barbie Haller]

(10 minutes)

Last updated: 24 May 2026

Tariff component with an incentive function
– Dynamic network tariffs I –

Objective:

- Internalisation of the effects of network users' usage behaviour on the network – reduction of congestion management costs

Design:

- Time-variable (15 minutes) and location-variable ***energy-based price***
- Different price signals in front of and behind the location of congestion
- Positive and negative price signals
  - Incentive to reduce feed-in through a higher network tariff
  - Incentive to increase feed-in through a negative price = payment from the network operator to the user
- Publication of the price signal on the platform before the day-ahead auction
- The level of the price signal is based on the congestion management costs and the efficiency of the incentives set

Tariff component with an incentive function
– Dynamic network tariffs II –

Where possible from	
2027	Further development of the modules in the determinations relating to section 14a EnWG as an opt-in for consumers at low voltage level
2027	Additional quantitative analysis, additional expert report
2028	Follow-up determination on introducing dynamic network tariffs for storage facilities
2029-2031	Launch of a platform for congestion transparency
2029-2031	Determination of network tariff signals at network levels 1 & 2
2030-2033	Introduction of tariffs for storage facilities at network levels 1 to 5
2030-2032	Follow-up determination on introducing dynamic network tariffs for producers
2032-2035	Introduction of tariffs for producers (excluding offshore)

If a time span is given, the first year is the earliest envisaged year and the second year is the latest target year.

Presentation of key content of the AgNes framework determination applicable as of 1 January 2029

[Vice Chairs of the Grand Ruling Chamber for Energy]

Basic model ≤ 100,000 kWh (low voltage)

[Alexander Lüdtke-Handjery]

(5 minutes)

Problems and objectives at the low-voltage level

Current problems:

- Disadvantage of the energy-based price: self-generation reduces consumption from the network, and thus financing contributions, but does not bring down network costs
- The constant security of supply provided by the network is not appropriately rewarded
- The imposition of standing charges is neither compulsory nor standardised. Comparable network users are treated very differently in different network areas.

Objectives:

- To take account of necessary work and benefit in **mass market**
- Comprehensibility and simplicity
- No incorrect incentives for the short-term use of flexibility
- Energy-based price to create incentive for energy efficiency
- Energy-based price to benefit consumers with low levels of consumption (often at low-voltage level)

Proposal

- Distinction of customer groups at the LV level will remain at a consumption of 100,000 kWh/year
- Basic model with compulsory standing charge plus an energy-based price will apply to all LV consumers with an annual consumption of up to 100,000 kWh
- Network operators will apply a standing charge in €/a and an energy-based price in ct/kWh
- Network operators will charge prosumers a premium of 70-90% of the standing charge (€/a)
- The share of revenue of the standing charge *including the premium* will be 20-40% of the network operator's revenue to be achieved from this customer group at LV
- Special tariffs for controllable consumer devices pursuant to section 14a EnWG will continue to apply and will be further developed

Definition

Prosumer:

“Prosumer” within the meaning of this determination is a final consumer at the low-voltage level that consumes or stores electricity that it has generated itself as well as the electricity it draws from the network.

Not included in this definition are plug-in solar panels within the meaning of section 3 para 43 EEG in conjunction with section 8(5a) sentence 1 EEG in the version of 18 December 2025 (Article 23 of the Act of 18 December 2025 (Federal Law Gazette 2025 I No 347).

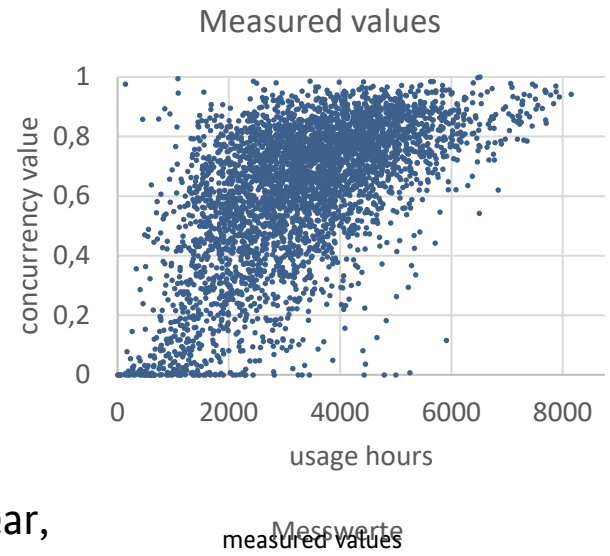
Basic model for consumers (capacity/energy-based price)

(medium voltage upwards)

[Alexander Lüdtke-Handjery]

(10 minutes)

Problems and objectives



- The concurrency function from Annex 4 StromNEV can no longer reliably be used in the methodology for the calculation of the power-based price.
- The current pricing of the individual annual peak load inhibits consumers' flexible consumption behaviour. This results in a strong incentive, rising throughout the year, not to exceed the previous individual annual peak load.
- Objectives
  - Secure, practicable financing instrument
  - Reduction of barriers to flexibility
  - Options for consumers
  - A price on scarce connection capacity

Proposal I

- Basic model for consumers connected to the network above the LV level or with consumption > 100,000 kWh/a connected to the LV level:

  tariff on ordered capacity (capacity-based price) + energy-based price

- Network operators apply a capacity-based price in €/kW and an energy-based price in ct/kWh divided into two levels
- The capacity-based price relates to a capacity (kW) ordered in advance by the consumer (or alternatively determined for the consumer)
- The standard energy-based price (AP1) applies to volumes consumed within the ordered capacity
- A higher energy-based price (AP2) applies to volumes exceeding the ordered capacity

Proposal II

- Requirement: AP2 is at least 200% and no more than 350% of AP1
- Requirement: 30-60% (depending on the network level) of the expected revenue of a network operator for consumers in the basic model results from the standard energy-based price
- The consumer can order capacity each year once the network operators have published their price sheets
- The capacity ordered may be no higher than the contractually agreed network connection capacity
- Requirement: the capacity ordered by each consumer is at least 10% of the individual annual peak load of the year preceding the order

Proposal III

- If a consumer has not ordered any capacity by 1 January, the network operator calculates capacity based on the available load profiles of the network user
- If a new network connection is added during the year and the final consumer does not order any capacity for the first use of the connection, the network operator to whose network the consumer is connected undertakes an ex post optimisation of the capacity order
- No subsequent regulations are planned for the following network tariff elements:
  - Pancaking
  - Monthly power-based price – no need for it due to possibility to select less capacity
  - Grid reserve capacity – single peak load will no longer cause inappropriate costs once there is no power-based price

Cost cascading between network operators

[Karsten Bourwieg]

(10 minutes)

Problems and objectives

- Treating network operators like “end-customers” is not objectively justified
- Reinforcing cost reflexivity – the current cascading is only based on metered consumption from the upstream level
  - Weakening of the disproportionately low participation of network operators with a large amount of distributed generation in upstream network costs even though they continue to use the infrastructure and services of TSOs and also upstream DSOs
- Reducing tariff anomalies – network tariffs are currently often lower in downstream network levels than in upstream network levels
  - Incorrect incentive to select connection: lower network tariffs in the lower voltage levels can lead to technically inefficient connection decisions
- The capacity ordering model cannot be transferred to network operators: network operators cannot ensure they keep to a certain capacity and are not allowed to do so

Methodology and definition of the cascading key “withdrawn final consumption”

- Decoupling of cost cascading between network operators and network levels from the calculation of network tariffs for final consumers
- Cascading amount distributed based on “withdrawn final consumption”
- Definition
  - Total of all final consumer withdrawals from the relevant and all downstream network levels through to the low-voltage level
  - Includes both volumes in own network and in networks of downstream operators
- Upstream costs covered using the actual usage of the network
- Final consumption from self-generation is not generally metered separately and thus cannot be taken into account

Proposal: design of cascading key

- The cascading key will be based on actual values of withdrawn final consumption from the year t-2
- It will be adjusted annually
- “Hardship rule” if there is reliable evidence of very significant changes in the cascading key
  - In that case, it will be possible as an exception to take account of current consumption volumes
  - The amount of the relevant deviation still has to be determined
- The cascading key (t-2) is to be applied to the cost unit accounting of the revenue cap of the year t

Proposal: calculation of the cascading key

The cascading key will be calculated for each level for each of the following “groups of cost bearers”:

- final consumers directly connected to the level
- customers of the operator’s own downstream levels
- customers of connected redistributors

The cascading key will be calculated in two steps:

Step 1: calculation of total withdrawn final consumption for each of these groups of cost bearers

Step 2: cascading key of a cost bearer group is derived from the following ratio:

$$= \frac{withdrawn\ final\ consumption\ of\ the\ cost\ bearer\ group}{total\ withdrawn\ final\ consumpion\ of\ all\ cost\ bearer\ groups}$$

⇒ share of the costs of the level that the group has to bear

A specific calculation rule will be imposed for more complex network situations

Proposal: dealing with volumes consumed by customers with special tariffs and storage facilities

- The withdrawn final consumption of customers with special tariffs within the meaning of the current section 19(2) will be applied fully in the calculation of the cascading key
  - Special tariffs will be settled subsequently via the surcharge for special network use
- Withdrawn final consumption of storage facilities will initially not be included in the calculation of the cascading key
  - The high loads caused by storage facilities repeatedly re-charging cannot be properly reflected in this way
  - Another divergence of upstream network costs and financing sums should be avoided

Cost centres – proposal

- The applicable provisions of annex 2 StromNEV (there are seven network and transformation levels, network tariffs and cascading sums are calculated separately for each of them) will continue to apply for now
- The possibility of merging cost centres will be re-evaluated once the AgNes determination is in force ~~and~~ but no earlier than 1 January 2035

Injection tariffs with a financing function

[Achim Zerres]

(10 minutes)

Problems and objectives

- Networks are now increasingly dominated by feed-in.
  Feed-in is one of the key drivers of network expansion.
  ⇒ Significant increase in network costs
- Producers are currently exempted from paying general network tariffs, although they also use the network infrastructure and cause network costs.

- A cost-reflective participation of producers in the network costs will secure a broader base of cost bearers and relieve the burden on consumers.
- Injection tariffs have effects on electricity trading markets and must be designed appropriately.
- The introduction of injection tariffs enables network tariffs with an incentive function at a later date.
- Injection tariffs with a financing function incentivise realistic capacity demand and do justice to the scarce network connection capacity.

Proposal I Principle and scope

1. Initially only an injection tariff with a financing function will be charged; tariffs with an incentive function will be introduced later through an additional determination.
2. Only generating installations with an installed gross capacity of more than 30 kW (according to the core energy market data register – MaStR) will be required to pay the tariffs.
3. An annual capacity-based injection tariff will be charged as from 1 January 2029; there will be no energy-based tariffs.
4. The tariff charged will be based on the contractually agreed network connection capacity.
5. The capacity-based tariff will cover half of the TSOs' annual ancillary service costs for balancing energy and loss energy plus €0.50/MWh for general network costs.
6. The injection tariff will be recalculated on a rolling basis.
7. The tariff will be charged to an installation operator by the network operator to whose network the installation is physically connected.
8. The connection network operators will pass on the tariffs collected to the TSOs.

Proposal II Annual calculation and publication

1. The TSOs will jointly calculate a **uniform nationwide** capacity-based price each year. The price must be listed as a separate item on the TSOs' price lists and published by 15 October of the year before it applies.

2. The price will be calculated using the following formula:

$$\frac{\sum_{i=t-6}^{t-2}(GK_i + 0.5 * RE_i + 0.5 * VE_i)}{\sum_{i=t-6}^{t-2} C_i}$$

   Injection tariffs will be in the **range** of €4/kW to €7/kW.

3. Capacity-based price = sum of the cost basis for the years t-6 to t-2 divided by the sum of the contractually agreed capacity for the years t-6 to t-2.

   To **stabilise** the tariffs, the capacity-based price will be calculated on the basis of the arithmetic mean of the actual figures for the previous five calendar years (rolling calculation). The oldest calendar year will be replaced each year by the most recent year for which actual figures are available.

Proposal III Cost basis, distribution basis, data reports

4. Cost basis (numerator)

a) Basic component **(GK_i)**: annual feed-in volume (MWh) from all installations (including grandfathered installations) for which tariffs are payable, multiplied by €0.50/MWh

b) 50% of the total costs incurred by the TSOs for balancing energy (**RE_i**)

c) 50% of the total costs incurred by the TSOs for the procurement of loss energy for losses in the transmission network **(VE_i)**

5. Distribution basis (Ci) (denominator)

Sum of the contractually agreed feed-in capacity for all installations (including grandfathered installations) for which tariffs are payable

6. Data reporting

The DSOs will report the following to the TSOs responsible for the control areas each year on 31 May of the year t-1 (aggregate totals for the network and transformation levels as at 31 December of the year t-2):

a) the contractually agreed feed-in capacity (kW),

b) the installed gross capacity (kW) and

c) the annual feed-in volume (kWh).

Grandfathering protection from network tariffs with a financing function (protection of legitimate expectations) I

- Grandfathering will apply to all generating installations which **have been put into operation** before the entry into force of the AgNes determination and all installations for which a final investment decision has been made before the entry into force of the AgNes determination and which are put into operation by 4 August 2029.
- A final investment decision is considered to have been made when binding orders for components covering approximately half of the investment volume have been placed and it is not possible to withdraw from the corresponding contracts concluded without significant financial damage and when a binding network connection offer has been made.
- In the case of auctions, the date after which it is no longer possible to withdraw a bid submitted is taken to be the date of the final investment decision. If an auction procedure allows for a longer implementation period, the implementation date set is taken as the commissioning date.
- The commissioning date for installations for which no date is set or which have not participated in an auction is taken to be 4 August 2029.

Grandfathering protection from network tariffs with a financing function (protection of legitimate expectations) II

- Grandfathering will be for a **limited period**. Grandfathering will apply to an installation for a **maximum period of 20 years** from the time the installation was first put into operation. After this period, capacity-based tariffs will be payable for the installation as with new installations.
- The question of grandfathering protection from injection tariffs for prosumers does not arise because **prosumers** (installations < 30 kW) will **not be required to pay injection tariffs in the future either**.

Grandfathering protection from network tariffs with a financing function (protection of legitimate expectations) III

Explanation

- Transfer of the legal assessments from section 118(6) EnWG to producers.
- Installations which have participated in an auction are subject to a state-sanctioned implementation obligation. The Bundesnetzagentur does not want to significantly worsen the calculation basis for these investments retrospectively with the new tariff rules.
- To avoid distortions of competition, grandfathering will be extended uniformly to all existing installations/producers.
- The Bundesnetzagentur is protecting a 20-year refinancing period.

Storage network tariffs with a financing function

[Achim Zerres]

(10 minutes)

Problems and objectives

- Storage facilities have high levels of consumption and output that they use several times a day
  - ➡ Potential for rising network costs
  - ➡ Large number of planned storage facilities makes connection capacity scarce for other players
- Storage facilities currently make little to no contribution to the financing of network costs; they receive no incentives for use in a way compatible with the network
- Storage facilities are very important for flexibility in a volatile energy system, which can either increase or reduce the strain on the network
- Network tariffs affect the business model of storage facilities and their function in the energy industry and must be adequately designed

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- Network tariffs with a financing function for storage facilities serve to broaden the base of cost bearers; network tariffs with an incentive effect can avoid additional costs for consumers
- Tariffs with a financing function incentivise realistic capacity demand and do justice to the scarce network connection capacity

Proposal: tariffs with a financing function I

1. **Grid-connected** electricity storage facilities will participate in network financing via a capacity-based tariff
2. The capacity-based tariff will be based on the contractual network connection capacity of the electricity storage facility
3. There will be no energy-based tariffs
4. The capacity-based tariff will not be imposed twice when electricity is fed into and withdrawn from the network
5. The size of the capacity-based tariff will correspond to the size of the capacity-based tariff for producers including with respect to stability due to rolling calculation
6. The capacity-based tariff will apply across the whole country and all voltage levels
7. The capacity-based tariff will not be paid by DSOs to TSOs

Proposal: tariffs with a financing function II

8. For network tariffs, **co-located** electricity storage facilities will be treated together with the final consumption or generating installation to which they are connected
   1) Only the full capacity-based tariff due for the withdrawal or injection point will be charged
   2) Storage facilities and consumers will be considered together as far as the withdrawn energy is concerned
   3) Volumes withdrawn from the general supply network by a co-located storage facility and then fed back in again will be exempt from the energy-based prices. This will require the installation operator to install a metering system that enables the volumes fed back in to be recorded separately

9. Storage tariffs will not be imposed on storage facilities in prosumer installations (< 30 KW)

Grandfathering protection from network tariffs with a financing function I

- Grandfathering will apply to storage facilities which
  - have been put into operation within 18 years after 4 August 2011 **or**
  - for which a **final investment decision (FID)** was made before the entry into force of the AgNes determination
  - **and** which are **put into operation** by 4 August 2029.

    An FID is considered to have been made when binding orders for components covering approximately half of the investment volume have been placed and it is not possible to withdraw from the corresponding contracts concluded without significant financial damage and when a binding network connection offer has been made.
- Grandfathering will not apply to storage facilities put into operation before 4 August 2011 or whose full exemption for 10 years from the start of operations following an expansion has already expired.

Grandfathering protection from network tariffs with a financing function II

- Grandfathering will be for a **limited period**.
  a) Grandfathering for newly installed storage facilities will apply under the conditions in 1. for a **maximum period of 20 years** from the time the installation was first put into operation

  b) Grandfathering for expanded pumped storage facilities will apply under the conditions in 1. for a **maximum period of 10 years** from the time the installation was first put into operation

- The question of grandfathering protection from storage tariffs for prosumers does not arise because prosumers (installations < 30 kW) will not be required to pay storage tariffs in the future either.

Grandfathering protection from network tariffs with a financing function III

Explanation

- The Bundesnetzagentur will respect the legal assessments from section 118(6) EnWG.
- The relevant requirements must be met.
- The investment decision must have been firmly made by the time the AgNes determination enters into force.
- Mere projects do not enjoy grandfathering protection.

Network tariffs for electrolysers [Achim Zerres]

(5 minutes)

Problems and objectives

- Electrolysers are electricity consumers; they use the network and cause costs
- Depending on their allocation and operation, electrolysers may have a positive, negative or neutral effect on costs
- Electrolysers do not currently participate in the financing of the networks
- Green and low-carbon electrolysers are intended to make a significant contribution to accomplishing the energy transition
- Electrolysers are one of the customer groups that determine the level of demand in the hydrogen core network; the planned ramp-up of electrolysers there and in the National Hydrogen Strategy is ambitious

---

- The aim is to integrate electrolysers into the new network tariff system so that they
  - share in the **costs**
  - but are not inhibited in their **function** for the energy system as a whole
  - and the operational restrictions set out in the **European legislation** on the production of green and low-carbon hydrogen are taken into consideration

Proposal: network tariff with a financing function

- Electrolysers making **green and low-carbon hydrogen** will pay a special network tariff
- This special network tariff will consist of a purely capacity-based price based on the amount of the financing tariffs for producers.
  There will be no energy-based price
- **Other electrolysers** making hydrogen that does not contribute to the targets set out in Germany's National Energy and Climate Plan (NECP) will be subject to the basic model for consumers
- Electrolysers making hydrogen that does not contribute to the targets set out in the German NECP are free to apply the industrial network tariff system or any transitional arrangements for atypical network use provided they fulfil the requirements to do so

Grandfathering protection from network tariffs with a financing function

- Grandfathering will apply to electrolysers which
  - have been put into operation within 18 years after 4 August 2011 **or**
  - for which an **FID** was made before the entry into force of the AgNes determination
  - **and** which are **put into operation** by 4 August 2029.

    An FID is considered to have been made when binding orders for components covering approximately half of the investment volume have been placed and it is not possible to withdraw from the corresponding contracts concluded without significant financial damage and when a binding network connection offer has been made.

Reasoning

- The possibility of special treatment for electrolysers arises from Article 18(2)(f) of Regulation (EU) 2019/943:

  Tariff methodologies [...] contribute to the achievement of the objectives set out in the integrated national energy and climate plans [and] reduce the environmental impact

- Certain electrolysers for green and low-carbon hydrogen are specifically mentioned in the German NECP

  → Aim of the national NECP: to become leading provider of hydrogen technologies

  → The flexibility of electrolysers as variable and system-beneficial stabilisers plays a major role both for the electricity markets and for the networks (p 174)

  → Sunk costs of the hydrogen core network differentiate between green and other electrolysers

- Operation of electrolysers is already restricted by the electricity consumption criteria set out in the delegated Regulations (additionality, temporal/geographic correlation and GHG thresholds)

  ⇨ Tariff components with an incentive function have to take this into account; their introduction for consumers at the voltage levels of electrolysers is not currently up for debate

break

(10 minutes)

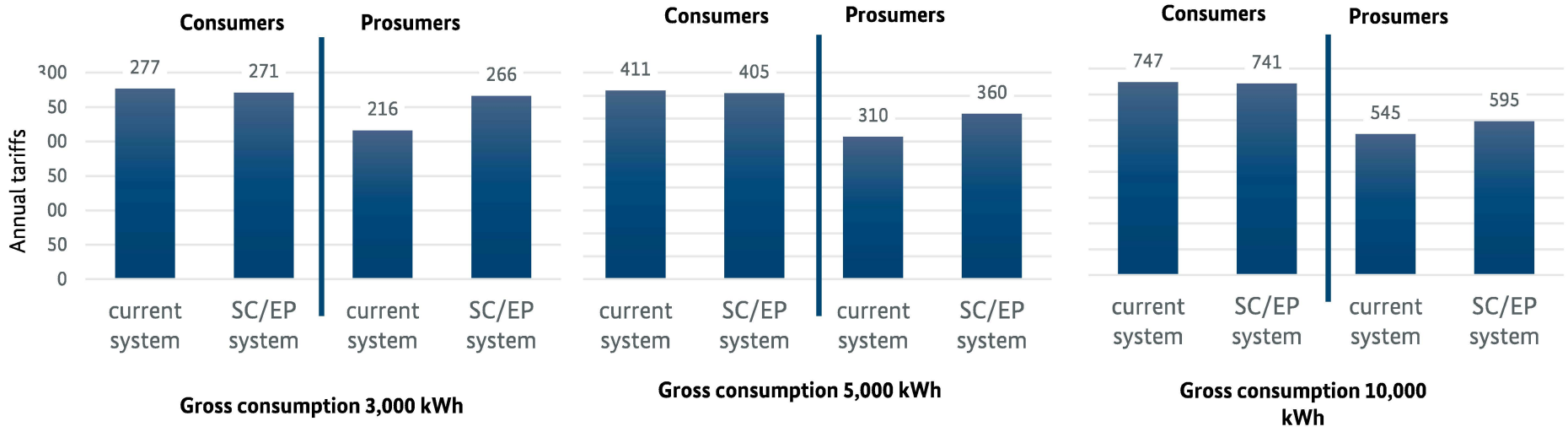
Presentation of analyses and considerations

[Stefan Albrecht and Vice Chairs of the Grand Ruling Chamber for Energy]

(60 minutes)

Basic model ≤ 100,000 kWh

Effects: comparison of annual tariff for pure consumers and prosumers in the target model with the status quo



Effects with same proportions of standing charge & energy-based price in revenue

- All prosumers will participate more in network costs thanks to premium on standing charge
- All consumers will pay less on average thanks to lower standing charge compared to status quo
- Effect of standing charge premium will reduce as consumption rises
- The additional costs for prosumers are likely to stay under €100 a year, with local variation
- Plug-in solar operators (up to 2 kW of installed power) will not count as prosumers to reduce implementation effort

Effects: harmonisation of standing charge/energy-based price revenue shares

- Compulsory standing charge within specified range will harmonise distribution effects in the network areas
- Standing charges currently make up between 0% and 60% of revenue*
- The proportion of the standing charge as a weighted average is about 30%*
- The harmonisation will lead to changes of the energy-based price by network operators currently outside the planned range of 20-40%:
  - Higher proportion of standing charge in revenue: energy-based price will fall, small amounts of consumption will be charged more and large ones less
  - Lower proportion of standing charge: energy-based price will rise, small amounts of consumption will be charged less and large ones more

Additional limitation of distribution effect on large consumers

- The basic model (capacity-based/energy-based price) will apply to above 100,000 kWh consumption a year to ensure cost-reflective pricing for large consumers at the low-voltage level and avoid strong distribution effects

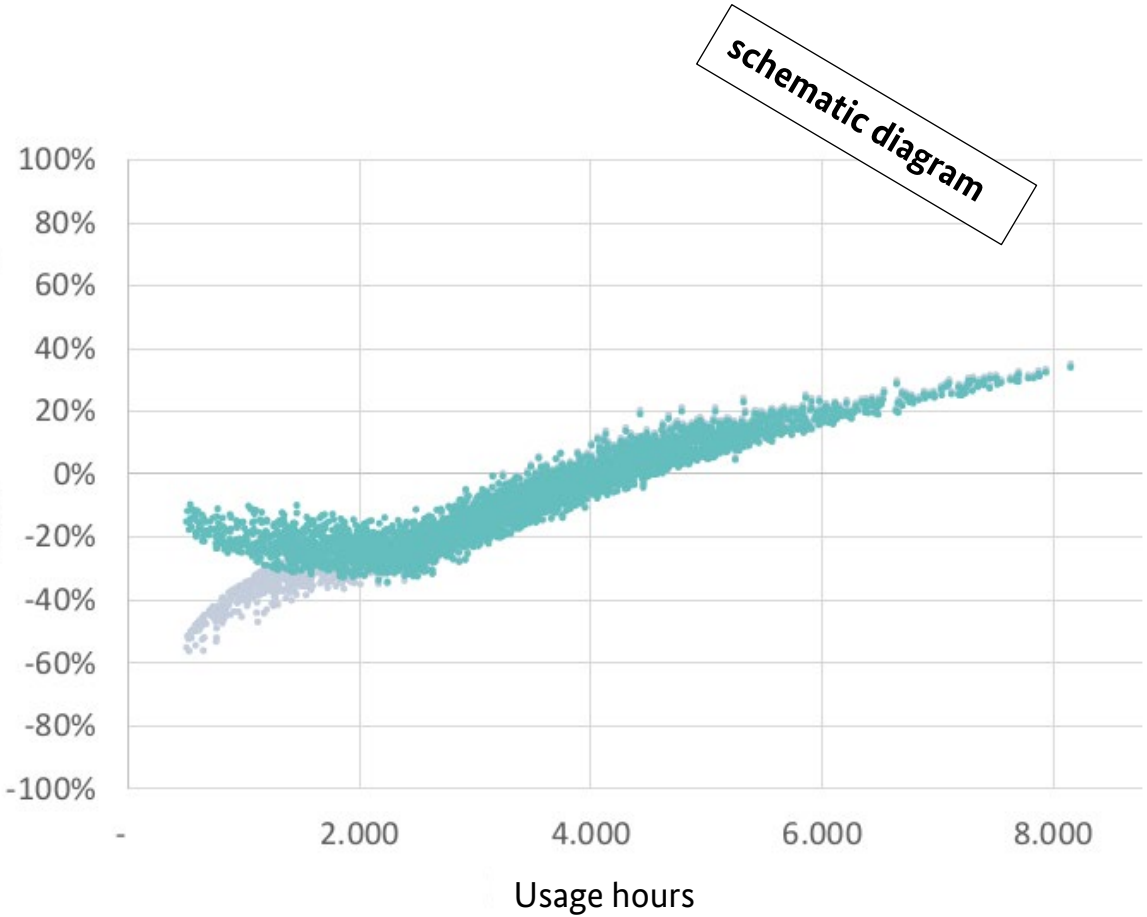
*Bundesnetzagentur evaluation of 170 network operators for 2026

Technical implementation

- Low-effort implementation as only the consuming market location withdrawing energy from a generating market location (>2kW) behind a network connection (network location) has to be identified
- No identification of names necessary
- DSOs have the necessary data even for more complex cases (landlord-to-tenant electricity/joint building supply); these can and must be merged by 2028
- Forwarding to suppliers via market communication
- Supplier is required to make prosumer status clear on the bill from 2028 onwards - informs consumers and simplifies supplier switching
- Comparison portals will be able to reflect this differentiation

Basic model for consumers (capacity/energy-based price)

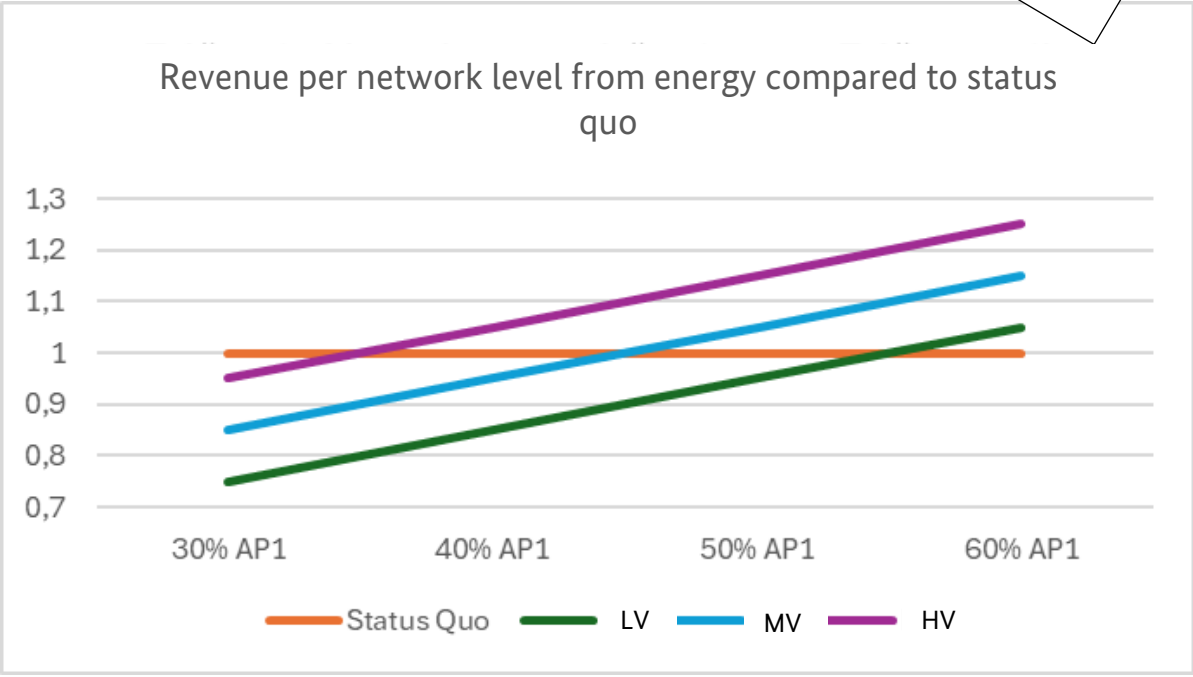
Effects



The introduction of a minimum capacity of **10%** (turquoise) leads to a reduction in the distribution effect **as opposed to no** introduction of minimum capacity (grey) compared to the status quo in the range of low hours of use

Effects

schematic diagram

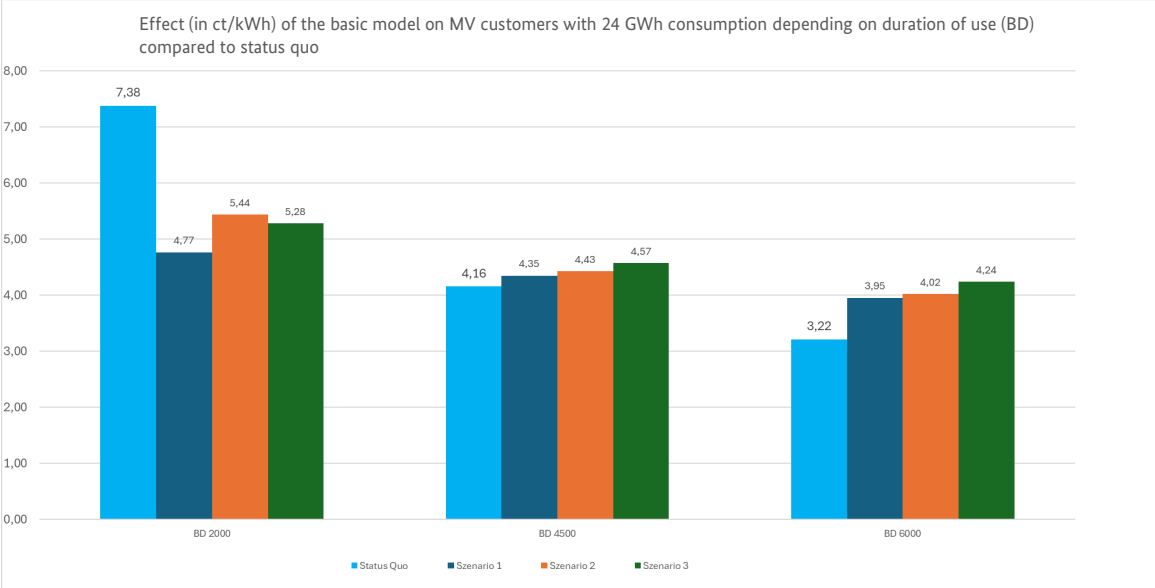


Network operators are to be allowed to set the proportion of revenue for energy within a range of 30-60% of the revenue to be generated.

The proportion of revenue from energy-based tariffs compared to final consumers also varies in the current system depending on the network level. It rises especially in the lower network levels due to the greater mix.

To achieve comparable revenues from energy-based tariffs from final consumers compared to the status quo, our evaluations show that a lower proportion of revenue from energy at higher network levels would be sufficient.

Effects:



Scenario	1	2	3
AP2/AP1	3,5	3,5	2,5
energy revenue share	30%	40%	50%
minimum capacity	0,1	0,1	0,1
capacity-based price (€/kW)	180	140	120

Example calculations of the effect of the introduction of the basic model (capacity/energy-based price) for

- three abstract customers (with 2,000, 4,500 and 6,000 hours of use)
- in three scenarios (assuming choice of different revenue shares from energy by DSOs)
- based on synthetic medium-voltage load profiles with 24 GWh annual consumption
- status quo: municipal utility price sheet 2025

The calculation shows the effects of switching the current power/energy-based price model to a capacity/energy-based model. It depends on which proportion of income results from the energy-based price (as decided by the DSO) and how many hours an annual consumption of 24 GWh refers to.

Cost cascading

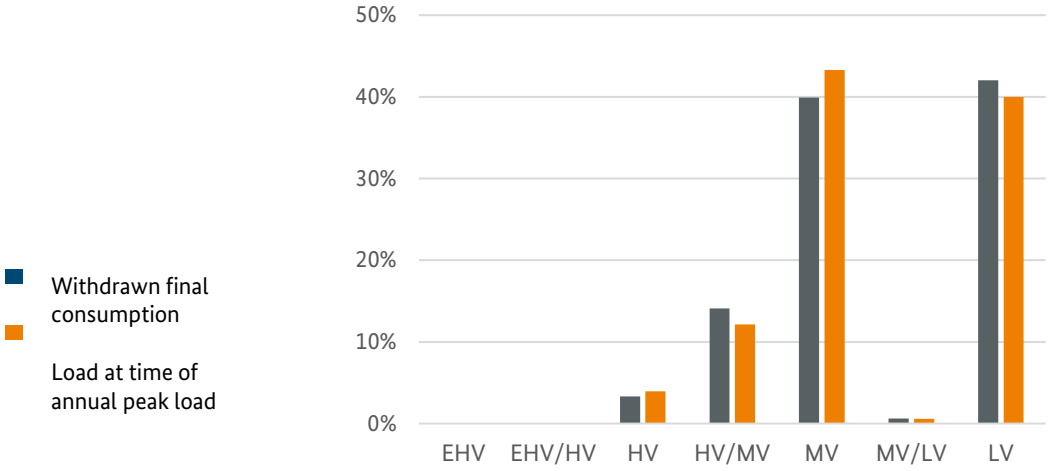
Reasoning: cost cascading – problems of the current system

- Lack of cost reflexivity → the current cascading is only based on metered consumption from the upstream level
  - Network operators with a large amount of distributed generation make a disproportionately low contribution to upstream network costs even though they continue to use the infrastructure and services of TSOs and also upstream DSOs
- High likelihood of tariff anomalies → network tariffs are lower in downstream network levels than in upstream network levels
  - Leads to incorrect incentives when selecting network connection
- End to power-based/energy-based price system → transferring the new capacity-based basic model of the network tariff structure to cost cascading is not considered a sensible alternative as no incentive is possible or necessary for network operators

⇒ Largely consensus on need to reform

Reasoning: cost cascading – options discussed

- Decoupling the cost cascading from the structure of the standard network tariffs
  - Key based on contractual or technical network connection capacity not practicable
  - Key based on contribution to annual peak load discussed in expert workshop
    → follow-up questions on complexity
  - But: strong correlation with withdrawn final consumption allows approximation of significant driver of the network costs of withdrawn final consumption

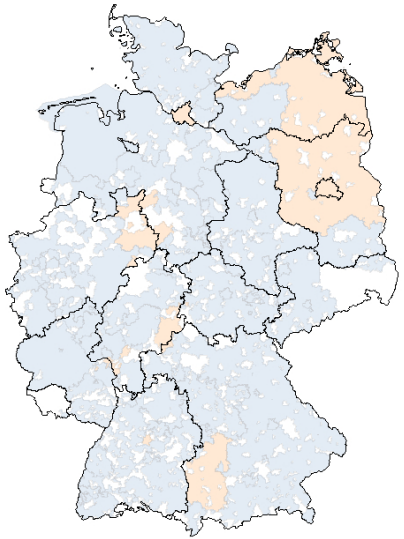


Reasoning: advantages of withdrawn final consumption

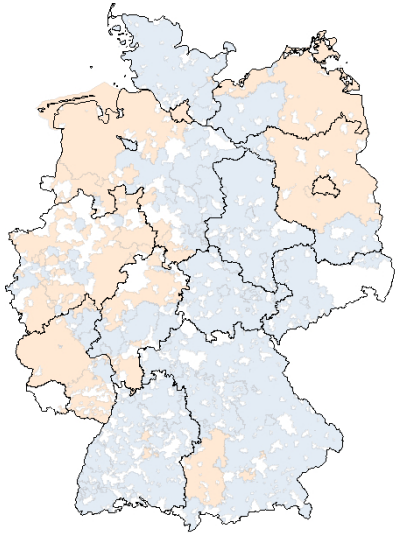
- Clearly definable → can be derived on the basis of available data and measured values
- Enables balanced cost allocation due to:
  - independence from scope of distributed generation and
  - low sensitivity to peak loads
- Appropriate participation in costs for ancillary services and use of upstream infrastructure
  - including for transport of renewable volumes and during dunkelflaute periods
- Consumers with a similar annual electricity consumption anywhere in the country make almost the same specific contribution to financing (ct/kWh)
- Independent of development of distributed generation
- Reduction of tariff anomalies
- No additional rules for pooling and pancaking necessary for network operators

Effects: changes in costs for final consumers (status quo to new cascading)

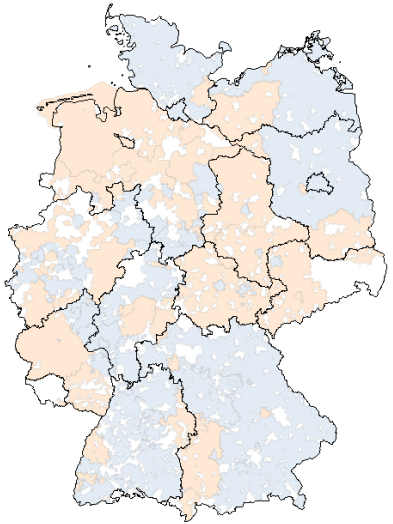
High voltage



Medium voltage

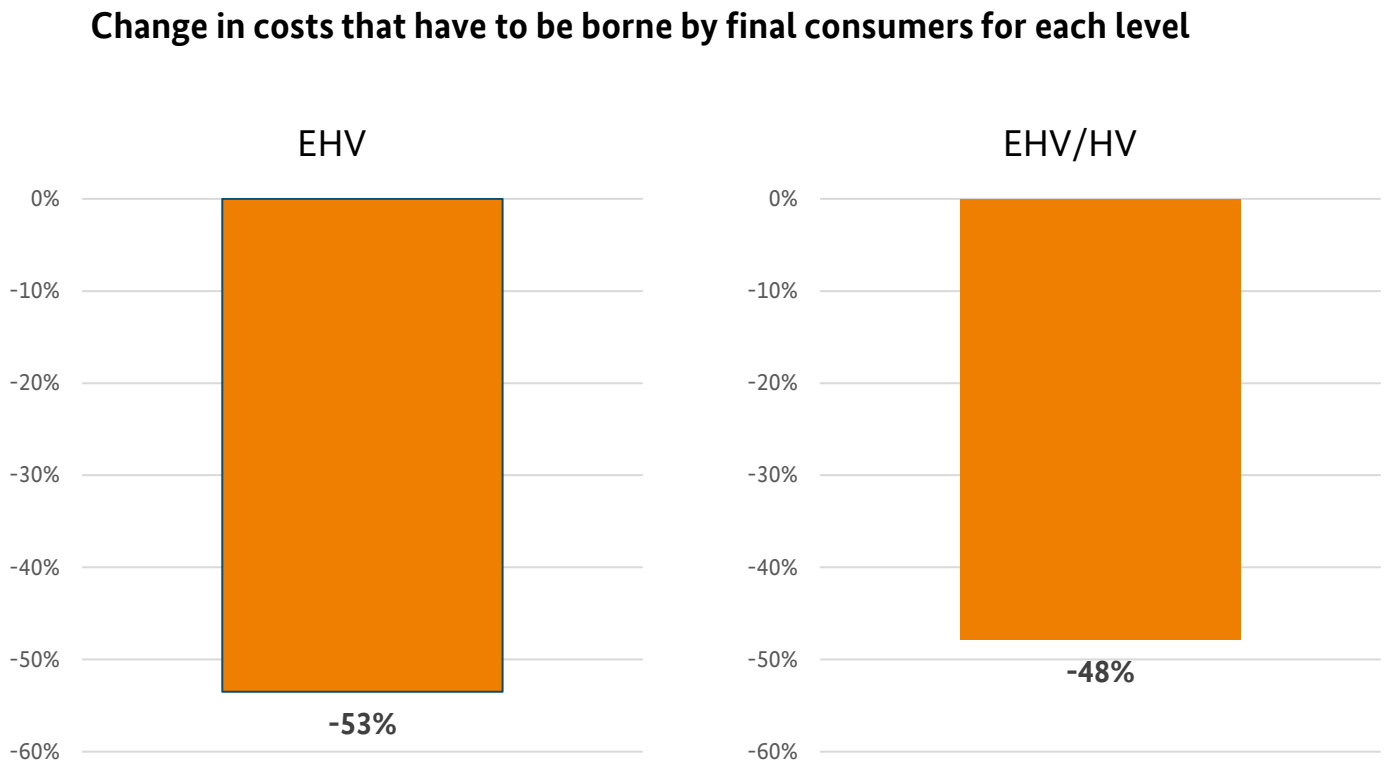


Low voltage

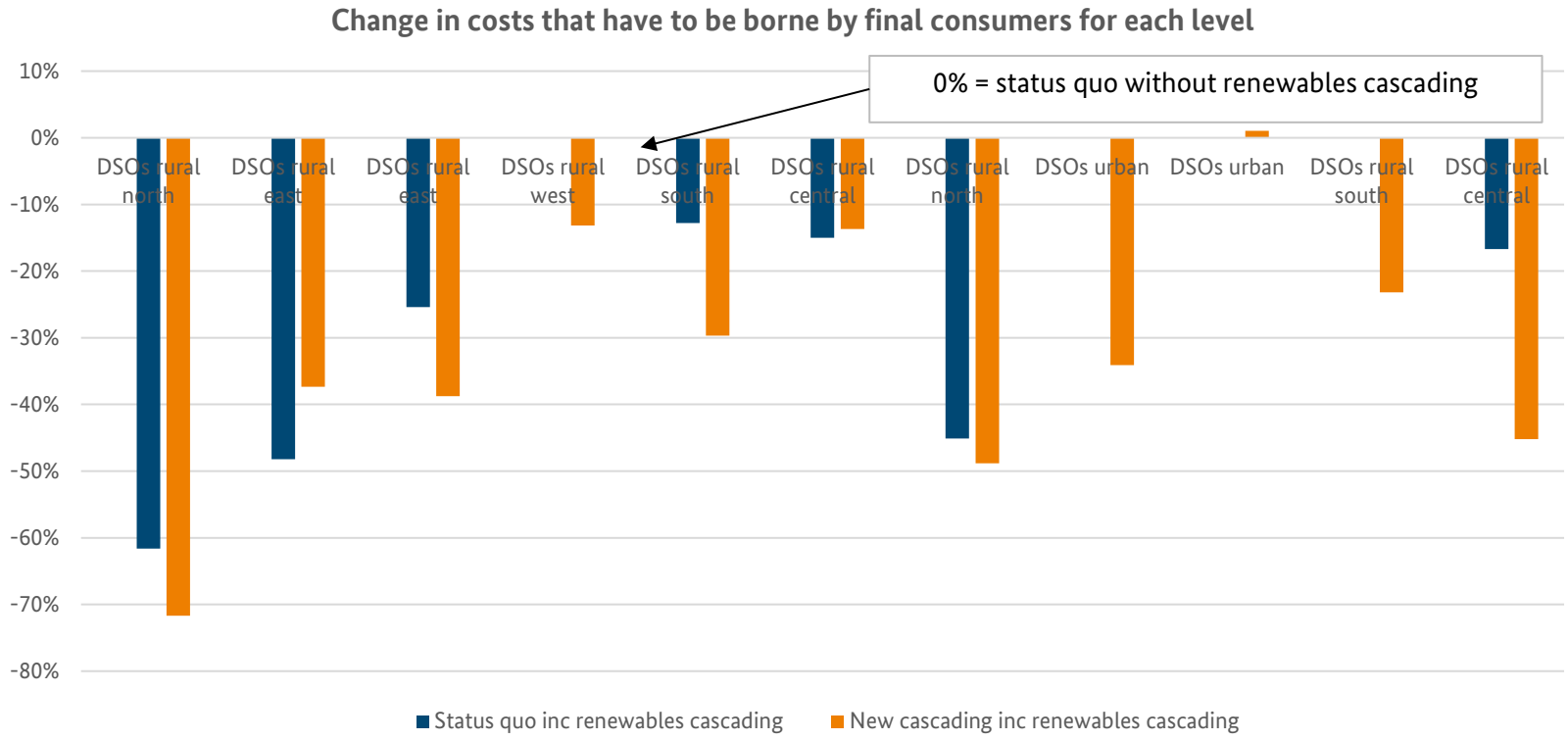


Cost reduction
Cost increase

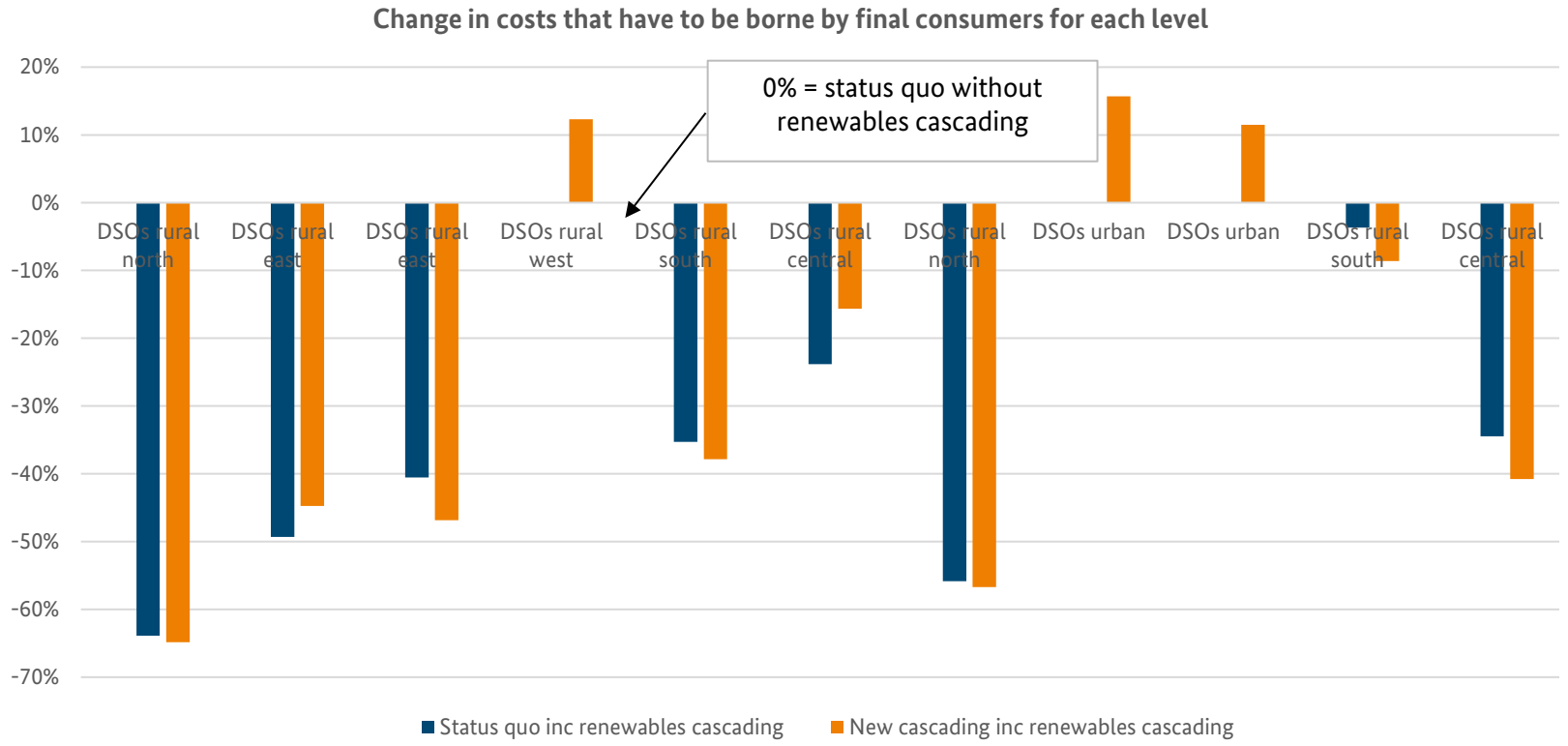
Change in costs for final consumers in the transmission network



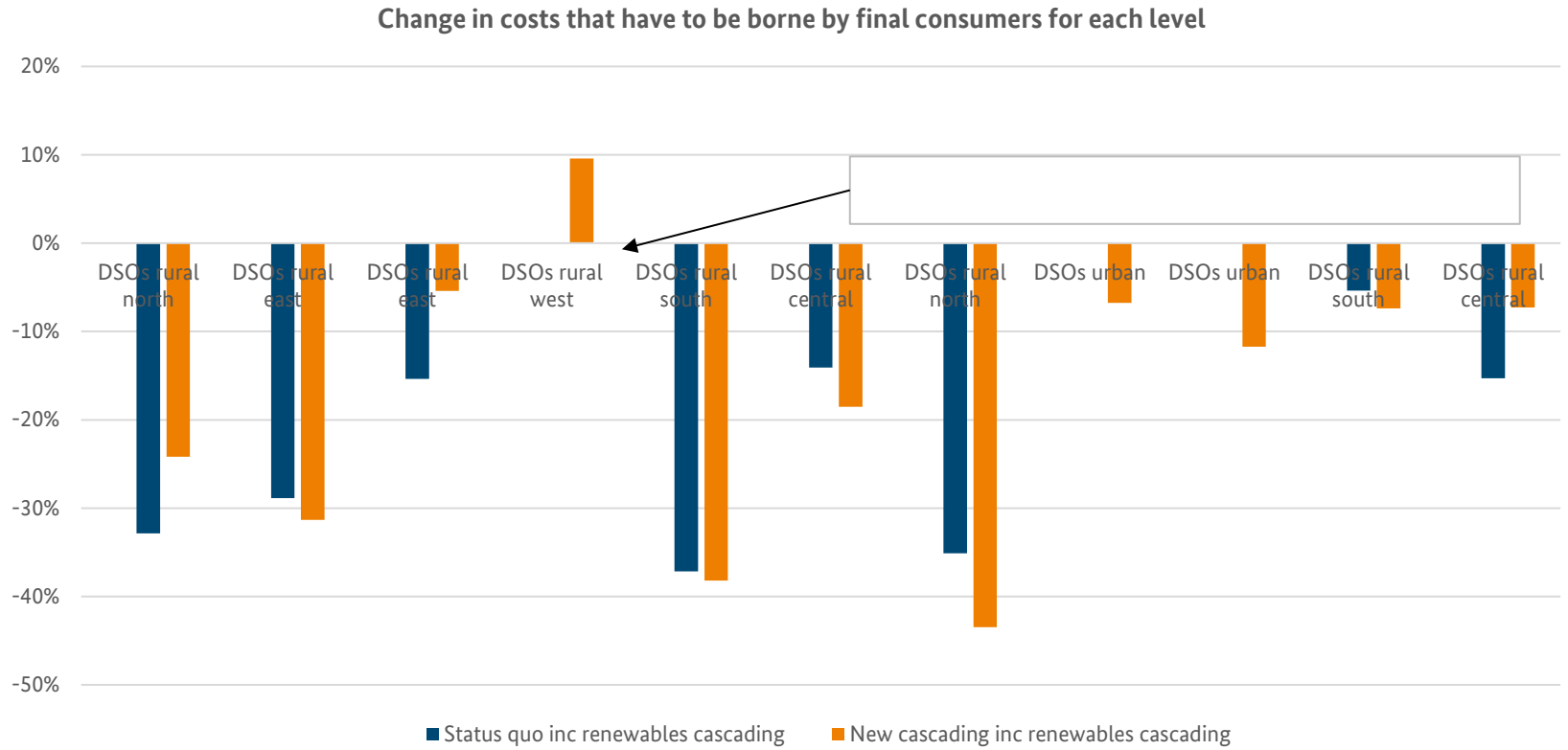
Effects: new cascading as “complement” to renewables network cost cascading (HV level)



Effects: new cascading as “complement” to renewables network cost cascading (MV level)



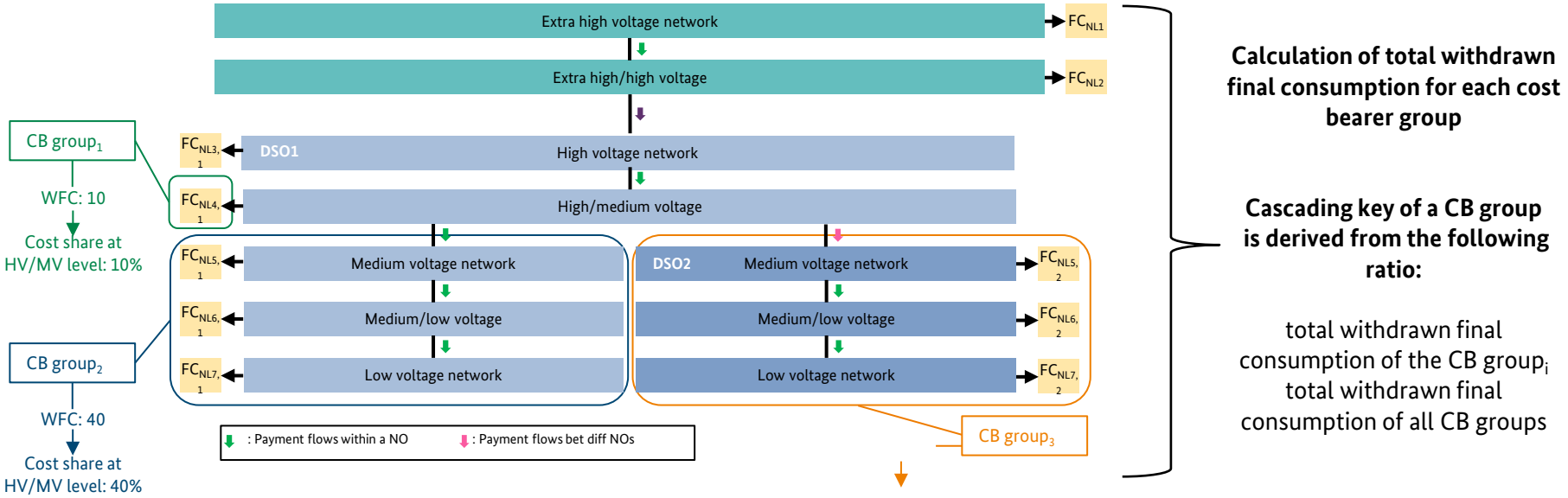
Effects: new cascading as “complement” to renewables network cost cascading (LV level)



Calculating the cascading key

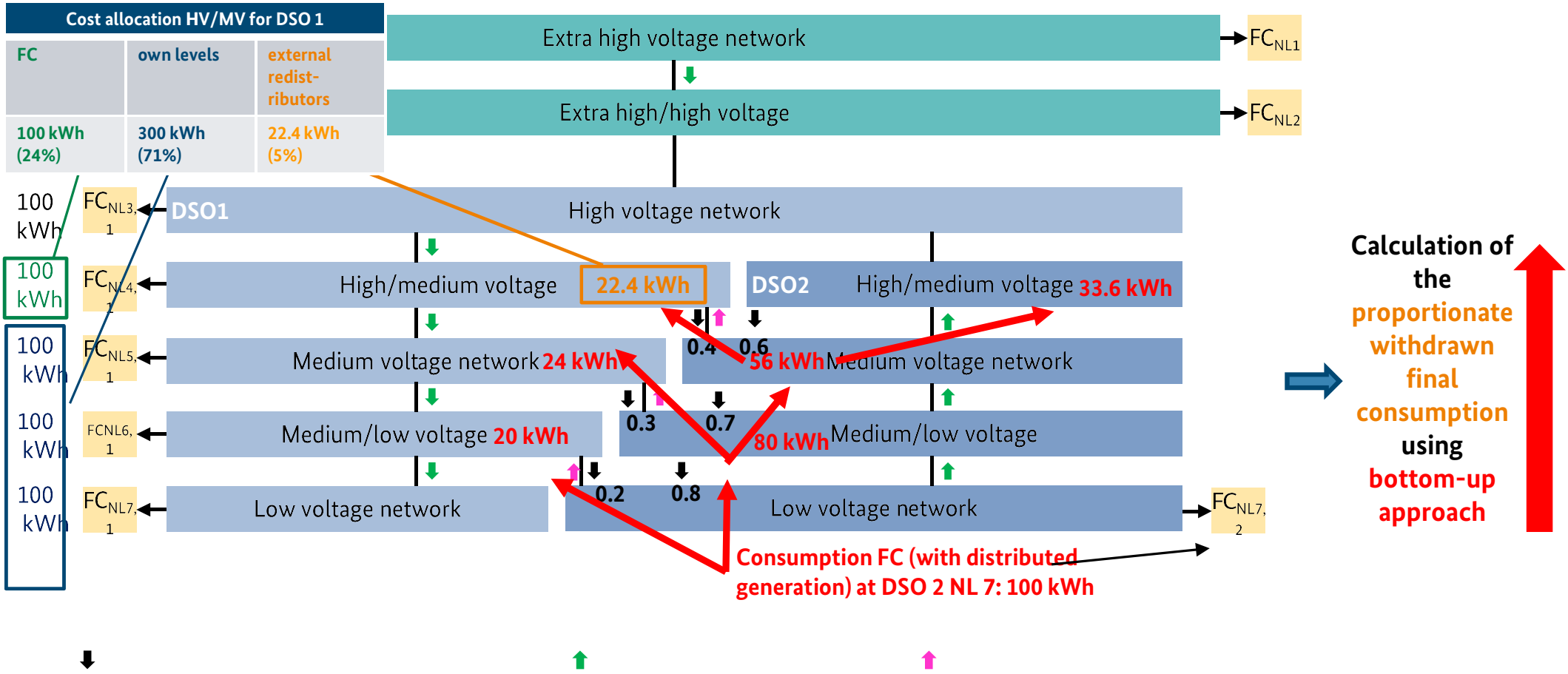
The cascading key for each network level results from distributing the respective withdrawn final consumption to the following "cost bearer groups" (eg for HV/MV_{DSO1}):

- final consumers directly connected to the level ($FC_{NL4,1}$),
- customers of the operator's own downstream levels (MV_{DSO1} to LV_{DSO1} -> $FC_{NL5,1}$ to $FC_{NL7,1}$) and
- customers of connected redistributors (DSO2) (MV_{DSO2} to LV_{DSO2} -> $FC_{NL5,2}$ to $FC_{NL7,2}$)



Source: Consentec/Bundesnetzagentur

Calculating the cascading key in more complex network situations



A specific calculation rule will be imposed for more complex network situations

Context in the overall model

- There is no contradiction in network operators introducing cascading by withdrawn final consumption while a capacity-based tariff will be applied for final consumers in the newly proposed basic model
  - For individual network users: the cost allocation can be related well to the network capacity to be kept available and the resulting maximum transport capacity
  - For network operators: costs are driven strongly by structural properties (eg distribution of network connection points across the area) or the resilience of structures connecting to the upstream network
- Capacity is not a better key than energy, especially as network operators have no incentive to order an economically optimal amount of capacity

Injection tariffs with a financing function

Composition of the cost basis (numerator)

The following actual figures make up the annual cost basis:

- Basic component **(GK_i)**: an amount that is calculated by multiplying the annual feed-in volume (MWh) from all installations (including grandfathered installations) for which tariffs are generally payable with a fixed rate of €0.50/MWh on the basis of the upper limit set in Part B(3) of Regulation (EU) 838/2010 for injection tariffs at the transmission system level
- Share of costs for balancing energy (**RE_i**): 50% of the total costs incurred by the TSOs
- Share of costs for loss energy **(VE_i)**: 50% of the total costs incurred by the TSOs for the procurement of loss energy in the transmission network

Composition of the distribution basis (denominator)

- The distribution basis is capacity-based **(Ci)** and is the sum of the contractually agreed feed-in capacity for all installations (including grandfathered installations) for which tariffs are generally payable.

Data reporting

Annual data reporting by the DSOs

The electricity DSOs are required to report to the TSO responsible for their control area by 31 May of each calendar year (year t-1) the figures for the year t-2 that are needed to calculate the capacity-based injection tariffs.

Content of the reports

The DSOs are required to report to the TSOs the following figures as at 31 December of the year t-2 for the generating installations (including grandfathered installations) identified as generally subject to the tariffs: the contractually agreed feed-in capacity (kW), the installed gross capacity (kW) and the annual feed-in volume (kWh). The figures must be reported as the aggregated totals for each network and transformation level. The figures for grandfathered installations are to be listed clearly and separately in each case as sub-totals of the totals.

Explanation I

- A clear argument in favour of a capacity-based model is its marginal cost neutrality. The tariff has no effect on the variable costs of generation. The merit order in the electricity market therefore remains undistorted.
- For the proper allocation of costs, it is important to exclude prosumers, who will already make an appropriate financial contribution by paying tariff components with a financing function in the basic model. This is the case at least for prosumers at low-voltage level paying a higher standing charge.
- By contrast, up until now operators of generating installations – real, conventional producers with or without any technically required self-consumption – have largely made no contribution to financing the network costs.
- Producers listed in the core energy market data register (MaStR) as partial feed-in generating installations because of technically required self-consumption, for example, are not prosumers within the meaning of these rules but come under the group of producers required to pay the tariffs, provided that their installed gross capacity is greater than 30 kW. This distinction serves to make a clear separation between “real” power plants and prosumers.

Explanation II

Uniform nationwide capacity-based prices based on the TSOs' costs

- The deliberate exclusion of the DSOs' costs for loss energy is a matter of practicability. In addition, it would take considerable effort to justify ~~charge~~ a uniform nationwide tariff to cover these costs because of the very heterogeneous distribution network structures.
- Congestion management costs are excluded from the financing function. Half of these costs will be included as a dynamic steering signal in the tariffs with an incentive function to incentivise network-beneficial operation, and inflexible financing tariffs would conflict with this.

Investment certainty through smoothing mechanisms

- To ensure planning certainty for investors, the model is based on calculations using a rolling average. This lessens sudden, short-term changes in prices and thus changes in the economic calculations for installation projects.

Explanation III

Payment flows

- The administrative process requires the tariffs to be collected from installation operators directly by the operators to whose networks the installations are connected. However, to cover the costs where they arise, the tariffs paid will be passed on in full to the TSOs. The tariffs paid will then be taken into account with cost-reducing effect for all consumers when the TSOs' uniform nationwide tariffs are calculated.
- The DSOs' renewable energy-related additional costs will remain subject to the determination on renewable energy network costs.
- This is in line with the calculation methodology that is based solely on cost items in the transmission network and ensures the use of funds for the intended purpose.

Example of a calculation of the capacity-based price

	Calculation of the capacity-based price for full feed-in generating installations						
	Actual figures					Projected figures	
	2020	2021	2022	2023	2024	2025	2026
Numerator							
Basic component (€0.5/MWh * total actual generation) (€mn)	252	256	250	227	219	219	250
TSOs' balancing energy costs (50%) (€mn)	76	285	318	327	269	299	369
TSOs' loss energy costs (50%) (€mn)	214	193	286	628	779	463	415
Total (€mn)	**542**	**733**	**854**	**1,182**	**1,267**	**980**	**1,034**
Denominator							
Sum of contractually agreed feed-in capacity of producers > 30 kW installed capacity (GW) (in this case installed net rated capacity)	**155**	**160**	**168**	**178**	**189**	**203**	**203**
Annual capacity-based price (€/kW)	**3.50**	**4.58**	**5.08**	**6.63**	**6.71**	**4.83**	**5.10**
Rolling five-year arithmetic mean (€/kW)							
2020-2024			**5.38**				
2021-2025				**5.58**			
2022-2026					**5.65**		
Average of all rolling values (€/kW)							**5.54**

Storage network tariffs

Problems and objectives

- In the current system with the EnWG and StromNEV:
  - No battery storage facilities pay network tariffs in the first 20 years after being put into operation
  - Existing pumped storage facilities pay standard network tariffs
  - Expanded pumped storage facilities do not pay any network tariffs for 10 years after their capacity increase
  - After that, a special network tariff applies to the netted volumes (section 19(4) StromNEV)
- Pumped storage facilities also receive a 10 year exemption if they expand their pump or turbine capacity or their storable energy volume

  → Storage facilities make little to no contribution to the financing of network costs; they have no incentives for use in a way beneficial to the network

  → AgNes objective: appropriate contribution to financing and setting of incentives for behaviour benefiting the network by storage facilities

Definitions

1. Electricity storage facility: facility for the storage of electrical energy

2. Grid-connected electricity storage facility: electricity storage facility directly connected to the general supply network

3. Multi-use electricity storage facility: electricity storage facility with a shared network connection with at least one final consumption or generating installation

Reasoning

Tariffs with a financing function

Current model not compatible with, in particular, Article 18(1) subparagraph 2 sentence 2 of Regulation (EU) 2019/943:

> *"The network charges shall not discriminate either positively or negatively against energy storage or aggregation and shall not create disincentives for self-generation, self-consumption or for participation in demand response."*

- Storage facilities should not be treated like producers and consumers.
- In contrast to the points of orientation, no application of the basic model for grid-connected storage facilities as its flexibility-promoting effect does not work for storage facilities.
  - Storage facilities use the full capacity
  - Energy-based prices would inhibit use even if they were restricted to netted volumes

Reasoning

Tariffs with a financing function for multi-use storage facilities

- Multi-use storage facilities are still to be usable for the optimisation of load and self-consumption; in that case, they will be treated as a single unit with the installation they are connected to
  - Consumption + storage: final consumer; application of basic model with joint capacity
  - Generation + storage: producer; producer capacity-based price for the added capacity of the withdrawal points
- No incorrect incentive against arbitrage and participation in the balancing energy market is to be set. For this reason, there is to be no energy-based price provided the volumes withdrawn from the storage facility are fed back into the general supply network, as long as this is metered separately.

Effects

Financing tariffs

- The capacity-based price is based on the injection tariffs

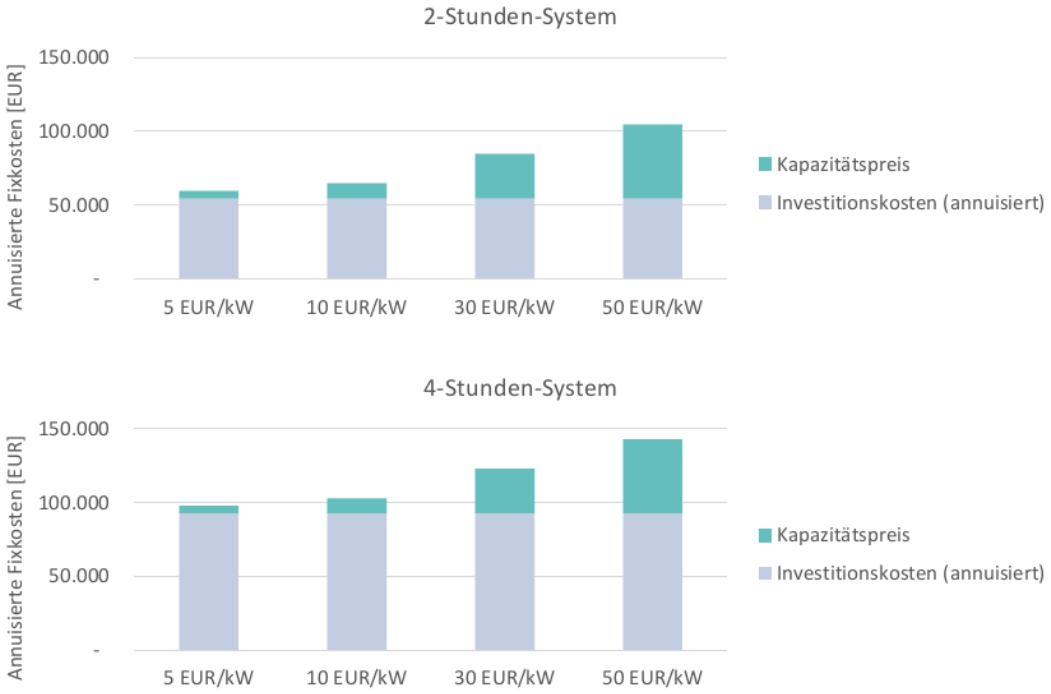
  → See example calculation of injection tariffs

2020-2024	2021-2025	2022-2026
€5.38/kW	€5.58/kW	€5.65/kW

- Moderate burden that can be taken into account in the planning of grid-connected storage facilities
- As no legitimate expectations are affected, there will be no effect on projects already completed or for which the investment decision has already been made.

Effects

Financing tariffs



Source: Consentec

Chart compares annualised investment costs in battery storage facilities and different capacity-based price burdens

The reduced capacity-based price for storage facilities is very low in comparison to the investment costs.

Effects

Incentive tariffs

- The positive or negative pricing means that if an incentive tariff for storage facilities were to be introduced, it would have a positive effect regardless of the location.
- Studies by FfE e.V. and Akaysha Energy confirm this conclusion.
- There would therefore be no question of grandfathering relating to the incentive tariffs, so an early introduction for all storage facilities is unproblematic.
- The amount of revenue for operators depends on the size of the dynamic network tariffs; rough calculations indicate a possible tariff of up to 10 ct/kWh.

Addressing questions

Everyone (10 minutes)

Outlook

[Barbie Haller]

(5 minutes)

AgNes further timeline

mid-2026	First draft of determination, formal consultation
5 June 2026	Feedback on points of orientation on industrial network tariffs closes
end 2026	Conclusion of AgNes framework determination
from 2027	Preparations start for implementation; inc preparation of market communication
	Start of AgNes follow-up determinations
	eg on industrial network tariffs, introduction of dynamic network tariff for storage facilities, further development relating to section 14a EnWG
	Start of processes on construction cost contributions and FCAs
31 Dec 2028	StromNEV ceases to be in force
1 Jan 2029	Practical application of the AgNes rules and transitional arrangements

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