



Bundesnetzagentur

# Bundesnetzagentur update for investors on the new regulations for electricity TSOs

21 January 2026

# 1 | Organisational matters

Disclaimer:

All information relates to an ongoing process.  
This presentation does not represent any decisions  
and is subject to change.  
(As at 21 January 2026)

# Data protection

- The Bundesnetzagentur's general information about data protection is available on its website.
- If you use the video function, you will be visible during the Webex meeting.
- All the presentations and chat messages will be published on the Bundesnetzagentur's website following the webcast.
- The chat messages from the meeting will include the names and organisations of the participants writing the messages.

# Participation in the webcast

- **Please use the chat function** for your questions and comments.
- Chat contributions will be incorporated into the discussion as and when time allows and may therefore be grouped and summarised.
- During the Q&A we will accommodate active contributions in the webcast as and when time allows and will invite participants to present their questions.
- Chat contributions that are not addressed during the webcast will still be taken into account in the subsequent process.
- **Please provide your name and organisation by right-clicking and editing your display name in the list of participants.**

# What is the purpose of the webcast during the consultation process?

- The webcast serves to ...
  - ... **provide an overview** of the draft determination for electricity TSOs;
  - ... **elaborate on individual aspects of the determination**;
  - ... **explain the deliberations** that led to the arrangements in the determination;
  - ... **clarify questions** concerning the draft and **gain a better understanding** of stakeholders' information needs.
- Participation in this webcast **does not replace the formal consultation** on the draft determination. All comments and opinions must be submitted in writing as part of the process.
- This webcast is **not intended to provide scope for an in-depth discussion** of positions. This distinguishes it from the expert dialogues within the NEST process. Expert dialogues may be held in due course if appropriate.


# Agenda, 21 January 2026

- 10:00 – 10:05      Organisational matters  
(Gregor Glasmacher, Head of the Coordination Office)
- 10:05 – 10:15      Welcome and introduction  
(Klaus Müller, President of the Bundesnetzagentur)
- 10:15 – 11:00      German TSOs' investment programme - the network development plan  
in a nutshell - presentation and Q&A  
(Joshua Leßmann, Senior Expert, Electricity Transmission Network Development Unit)
- 11:00 – 11:45      The new TSO regulatory framework in general - presentation and  
Q&A (Karsten Bourwieg, Chair of Ruling Chamber 8)
- 11:45 – 12:00      - Break -
- 12:00 – 12:45      The new TSO regulatory framework - deep dive into the TSO WACC -  
presentation and Q&A (Karsten Bourwieg)
- 12:45 – 13:00      The road to 2029

## 2 | Welcome and introduction

Klaus Müller,  
President of the Bundesnetzagentur

3 | German TSOs' investment  
programme - the network development  
plan in a nutshell

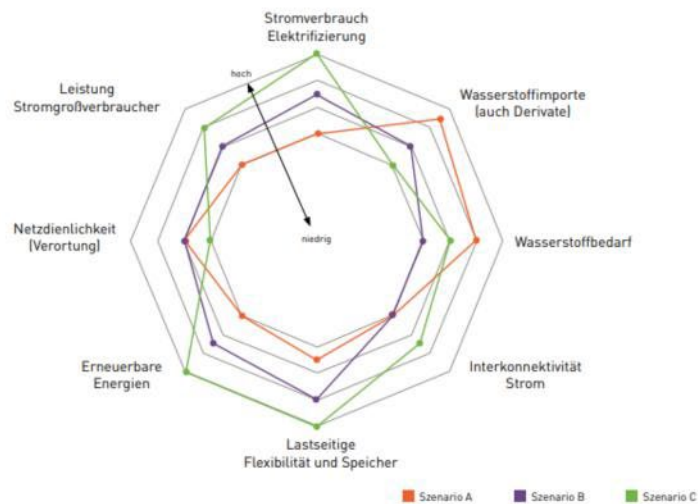
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# Network development planning process: scenarios



Forecast of future developments in the energy sector

- Timescale 2037/2045
- Incorporating energy and climate policy goals
- Three scenarios
- Close coordination with gas/hydrogen scenarios



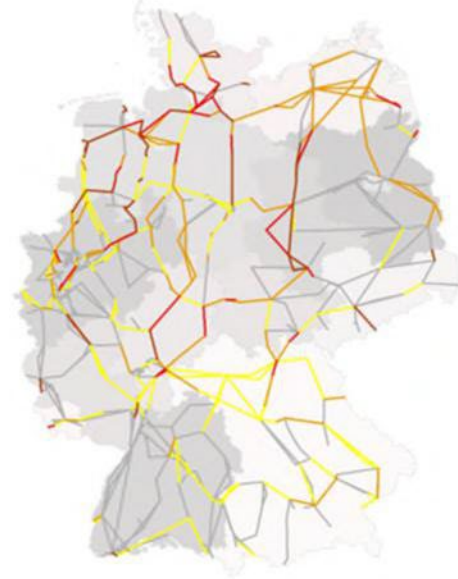
Quelle: Übertragungsnetzbetreiber

# Network development planning process: NDP



## Identifying demand for power grid expansion

- Timescale 2037/2045
- Objective: project-specific definition of TSOs' general expansion requirements
- Basis: load flow calculations
- Result: confirmation of the necessity of projects





# Key facts: investment volume

## NDP 2023-2037/2045

- Total investment volume according to TSOs: approx €440bn (current estimate)
- Previously estimated at approx €320bn



■ Start grid    ■ Expansion grid

## NDP 2025-2037/2045

- Total investment volume according to TSOs:  
approx €360bn (Scenario A)  
approx €390bn (Scenario B)



■ Start grid (A45)    ■ Expansion grid (A45)

**Large part of the necessary investments are covered up to 2037**



■ Investments A37    ■ Investments A45

# Key facts: NDP 2023-2037/2045

- 7 HVDCs confirmed for the first time
- 192 out of 215 AC projects confirmed
  - Review of AC measures based on the 2037 scenarios
  - Iterative review of AC measures
- Annual calculations based on the N-1 principle for each project
- Congestion index as a basic evaluation criterion



# Key facts: first draft onshore NDP 2025-2037/2045



- Significantly lower expansion (ie HVDC lines) despite increased transport demand
- 120% to 245% more congestion, depending on the scenario
- Onshore investments according to TSOs

	A 2037	B 2037	A 2045	B 2045
Start grid	€113.7bn	€113.7bn	€113.7bn	€113.7bn
Expansion grid	€68.6bn	€72.7bn	€95.1bn	€101.4bn
<b>Total</b>	<b>€182.3bn</b>	<b>€186.4bn</b>	<b>€208.8bn</b>	<b>€215.1bn</b>

# Key facts: first draft offshore NDP 2025-2037/2045

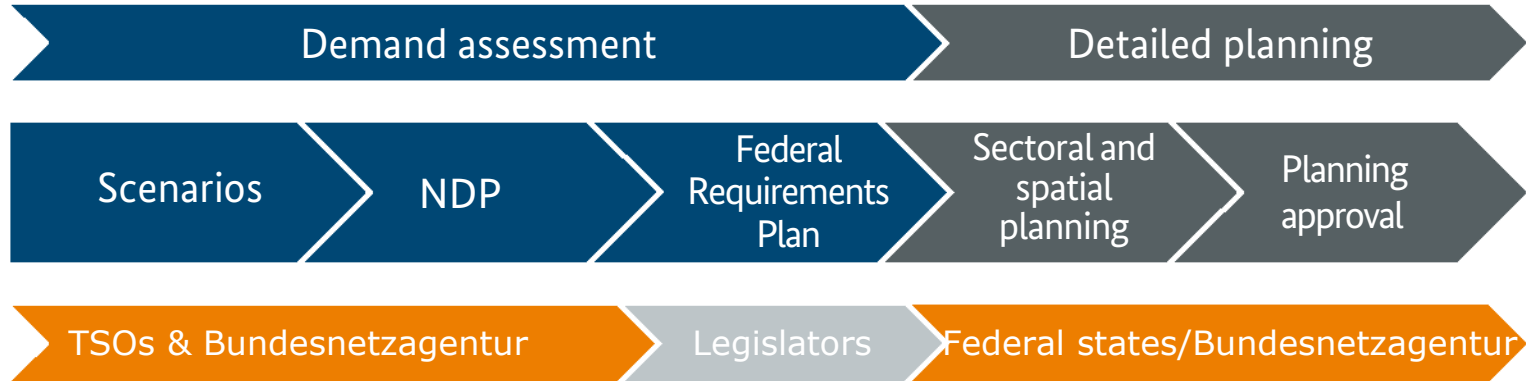
## Offshore investments according to TSOs

	A 2037	B 2037	A 2045	B 2045
Start grid Baltic Sea	€6.7bn	€6.7bn	€6.7bn	€6.7bn
Start grid North Sea	€58.2bn	€58.2bn	€58.2bn	€58.2bn
Expansion grid Baltic Sea	€0.0	€0.0	€0.0	€0.0
Expansion grid North Sea	€35.6bn	€48.6bn	€88.4bn	€106.4bn
<b>Total</b>	<b>€100.5bn</b>	<b>€113.5bn</b>	<b>€153.3bn</b>	<b>€171.3bn</b>

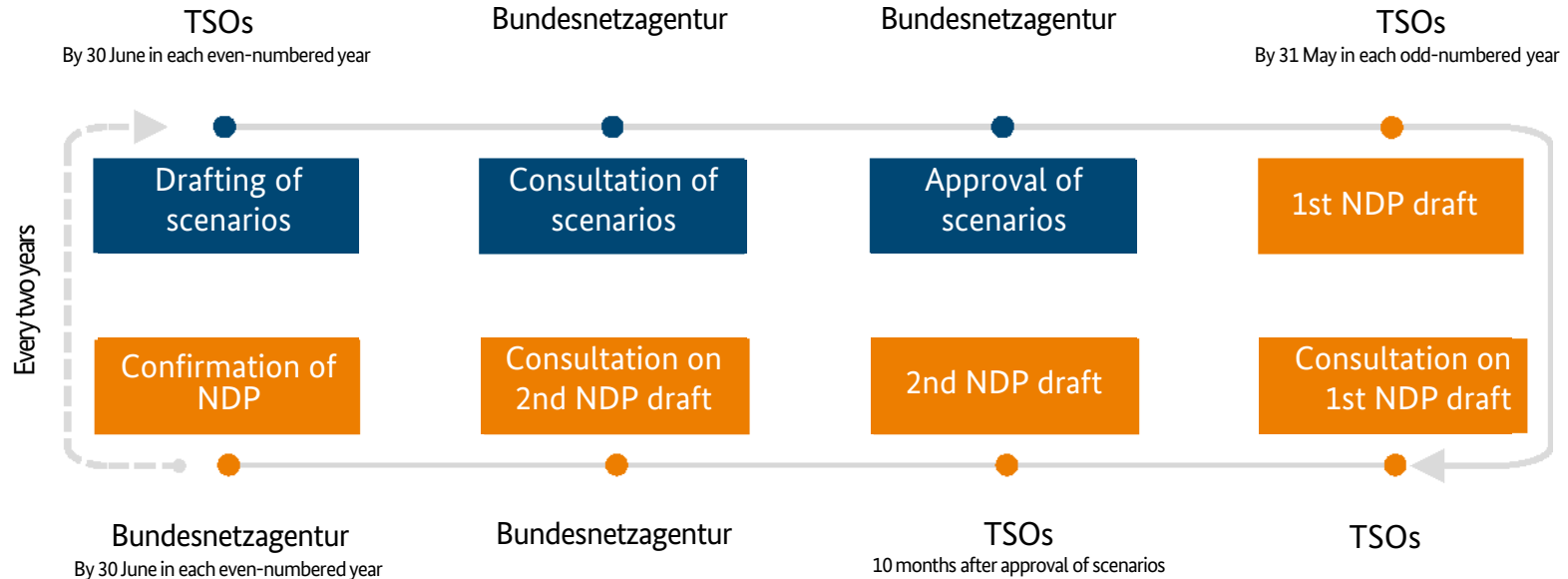
# Key facts: what is coming?

	Start grid	Expansion grid
	NDP 2023-2037/2045	NDP 2023-2037/2045
Onshore:	6,950 km	12,700 km
Offshore:	1,185 km	14,910 km
	NDP 2025-2037/2045	NDP 2025-2037/2045
Onshore:	10,049 km	8,392 km – 9,168 km
Offshore:	4,570 km	6,558 km – 7,979 km

# Network development planning process: from demand assessment to construction



# Network development planning process: recurring demand assessment



Further information: <https://www.bundesnetzagentur.de/DE/Fachthemen/ElektrizitaetundGas/NEP/Strom/start.html>

# Network development planning process: current debates



## **Overhead lines vs underground cables**

- Political decision
- Time savings vs financial savings

## **Federal Requirements Plan**

- Revision after NDP 2023-2037/2045 pending

## **Offshore**

- Offshore optimisation

Pylons



*Any questions?*



*3 | German TSOs' investment programme -  
the network development plan in a nutshell*

## 4 | The new TSO regulatory framework in general

The slide features a solid blue background. In the bottom right corner, there are two thin, white, diagonal lines that intersect each other, creating a stylized graphic element.

## 4.1 | The current TSO framework



## Incentive regulation & network tariffs per customer:

-  Cost allowance (photo year)
-  Inflation adjustment
-  Reduction of volume risks
-  ① Efficiency benchmark
-  Immediate CAPEX remuneration
-  Pass-through system services costs
-  ROE approach
-  COD on actual basis (photo year)



## Cost-plus regulation & offshore network surcharge:

Annual cost review with (efficient) planned costs & subsequent post-settlement for CAPEX & OPEX



Ordinances do not provide the required level of independence for Bundesnetzagentur  
**Current framework in place until 2028** to ensure planning certainty  
**New framework starting in 2029**, currently under development

## 4.2 | The new transition-oriented TSO framework

# Principles of new regulatory TSO framework



Transparency



Efficiency



Incentives



Affordability



Risk minimisation



Stability



Investability

# Stability and transparency

## Long-term clarity & stability (operative part 18\*)

- Bundesnetzagentur aims to build a stable und trustworthy framework
- Re-evaluation of new core elements no earlier than mid-2030s
- Bundesnetzagentur historically always allowed for transition periods

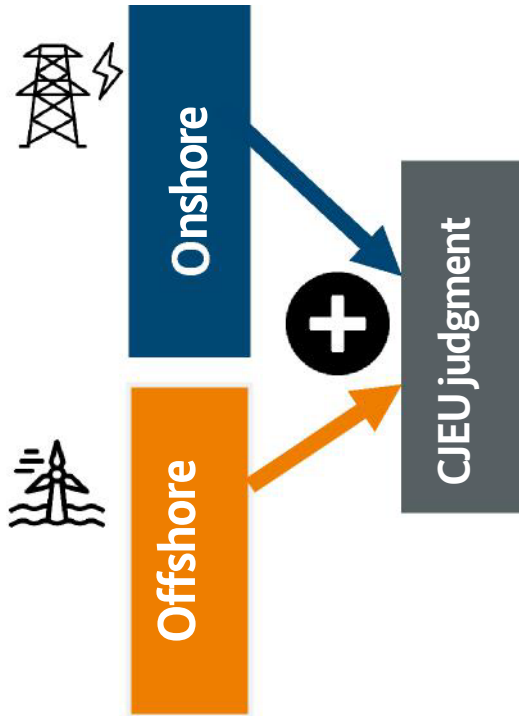
## Transparency

- Each determination is publicly consulted
- Harmonisation of onshore and offshore regulation
- More generalisation and international approaches (eg WACC)



\*Reference to the relevant operative part in the draft determination

# Stability and transparency



- Joint methodology for onshore and offshore regulation
- Specific methods could differ for onshore and offshore if necessary (eg costs for the procurement of loss energy)
- Determination does not apply to independent operators of cross-border electricity interconnectors



# Investability (operative part 9)

## **WACC approach**

- Introduction of a WACC approach for more clarity and international comparability
- Enables optimal capital structure
- Adequate ROE
- No risks on cost of debt

## **Regulatory asset base**

- Immediate compensation for investments based on annual adjustments according to forecast
- Construction in progress and payments on account are taken into account

# Minimising operative risks

## **Cost-plus approach** (operative part 2)

- Cost-plus approach for both
  - **OPEX** (especially congestion management)
  - **CAPEX**  
based on **annual forecast - actual** assessment (no photo year)
- Inflation adjustment is **inherent** in a cost-plus system

## »**No volume risks**«

- **For DSOs: regulatory account**
- **For TSOs: annual settlement of budgeted & actual** revenues

# Planned costs and ex-post cost examination

## Network development plan

- **Full regulatory cost recognition** of the confirmed projects in the network development plan
- **Long-term** planning horizons and mitigation of **risk of stranded assets**

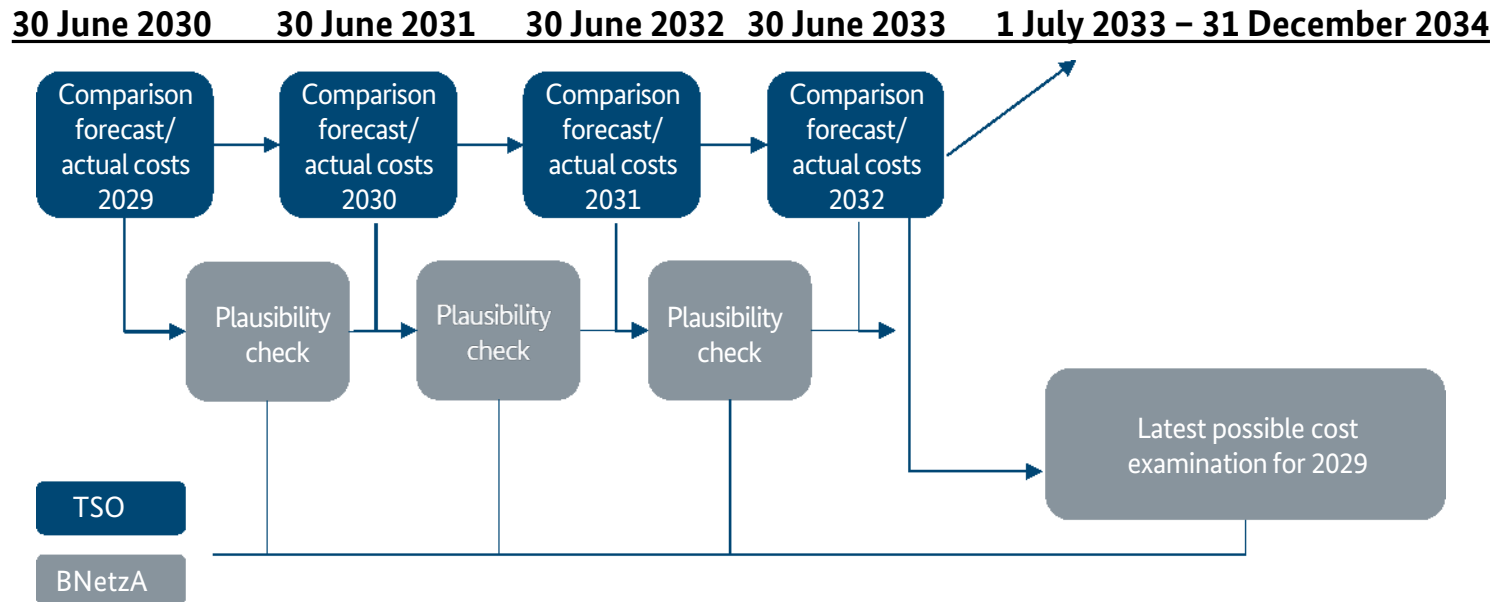
**Detailed standards** are established to ensure that planned costs for new projects are less likely to be cut in a subsequent cost review (operative part 2.2)

Five years after the end of a calendar year, approval will be assumed (operative part 2.4)

## **Not planned, but actual: trade tax (operative part 10)**

- The calculation of the TSOs' network costs uses the actual trade tax under commercial law

# Planned costs and ex-post cost examination for 2029



# Creating upsides

## **Accelerating network expansion**<sup>1</sup> (operative part 14)

Additional bonus system for reducing redispatching volumes

Incentive to accelerate network expansion where it delivers the largest impact

## **R&D costs**<sup>1</sup> (operative part 15)

Recognition for R&D costs

## **Outperformance system costs** (operative part 13.2)

Opportunity to outperform costs for ancillary services and to generate additional returns

<sup>1</sup> Mechanisms, particularly for monetisation, are to be established.

# Demanding efficiency (operative part 13)

## **Efficiency**

From a regulatory point of view, the cost-plus approach is an unsatisfactory approach

Efficiency measures will therefore be established  
(eg benchmarking, activity-based costing)

## **However:**

Efficiency elements are more future-oriented

There will be specific methodological determinations that can be anticipated



*Any questions?*



*4 | The new TSO regulatory framework in general*

# 5 | The new TSO regulatory framework - deep dive into the TSO WACC

The slide features a solid blue background. In the bottom right corner, there are two thin white lines that intersect and extend towards the top right edge of the frame, creating a dynamic geometric pattern.

# Imputed return on total capital (operative part 9)

## WACC approach

*WACC = return on equity \* tax rate \* equity ratio + cost of debt \* debt ratio*

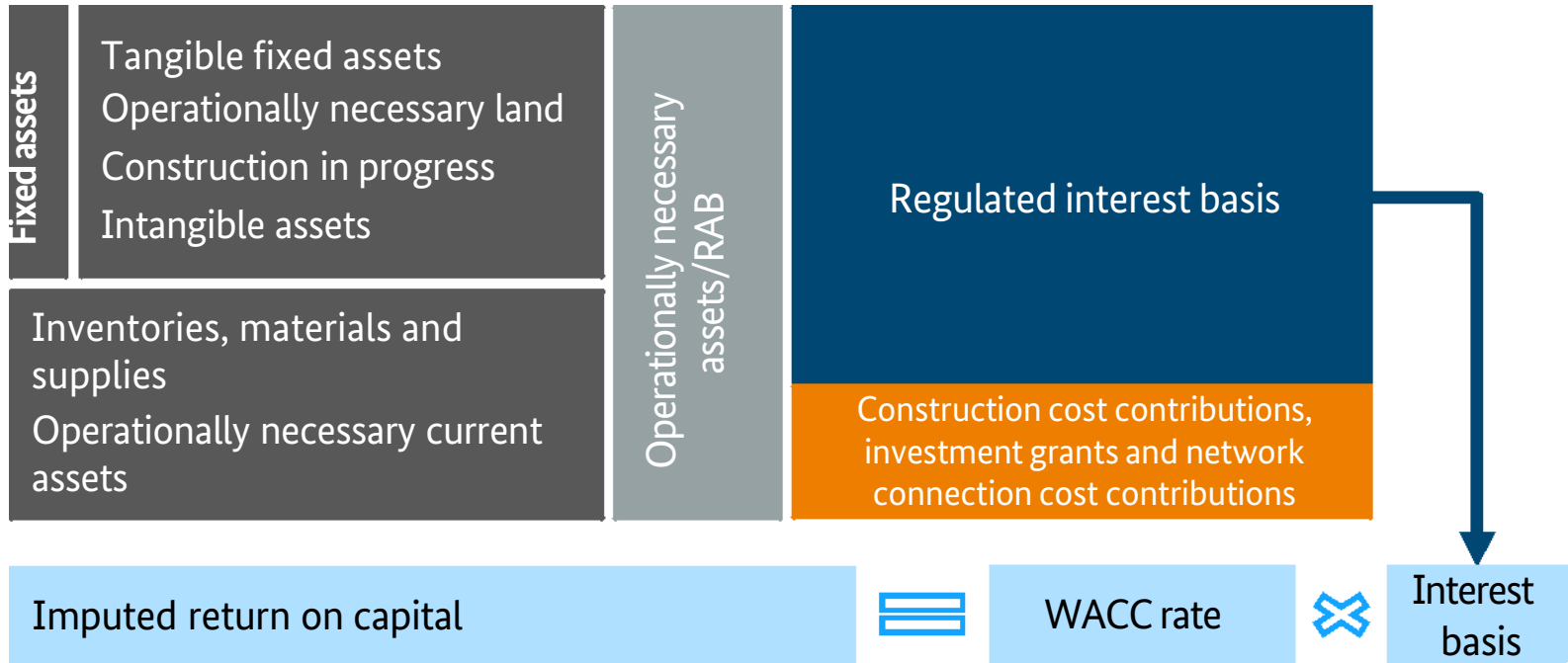
**Interest basis:** operationally necessary assets of a TSO from which the remainder of construction cost contributions, investment grants and network connection cost contributions is deducted

**Gearing ratio:** 40% equity and 60% debt

**Return on equity:** based on CAPM approach

**Cost of debt:** yearly assessment with TSO-specific adjustments

# Interest basis/RAB



# One ROE (TSOs and DSOs) based on CAPM approach (operative part 9.4)

- **Risk-free rate:**

- AAA German government bonds or AAA EU bonds
- Maturity: 10–20Y
- Averaging: 5Y (not 10Y)

➤ Clear **increase**, as the years of low interest rates are barely considered

- **Equity risk premium:**

- Use of arithmetic mean (AM)
- Historic excess returns

➤ **Increase**, no “mean of AM and GM”

$$r_E = r_{f1} + \beta^* \underbrace{(r_M - r_{f2})}_{\text{equity risk premium}}$$

$r_E$  return on equity  
 $r_{f1}$  and  $r_{f2}$  risk-free rate  
 $r_M$  market return

# Cost of debt (operative part 9.5)

- **Yearly assessment** based on a **bond index**:

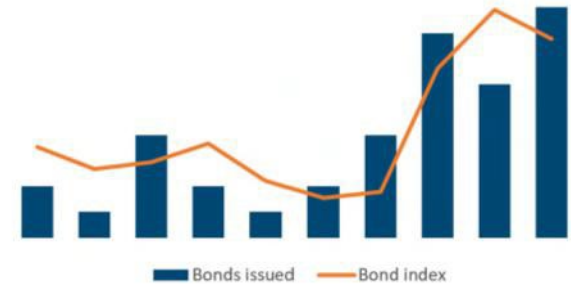
- Maturity: approx 10Y
- Sector-specific
- Averaging all years depending on issued active bonds

- **TSO-individual adjustments**:

- Credit risk rating of the individual TSO
- Weighted average based on the bonds issued by the individual TSO

- **Debt-associated costs** considered annually; no standard markup for ancillary financing costs

Illustration cost of debt weighting





*Any questions?*

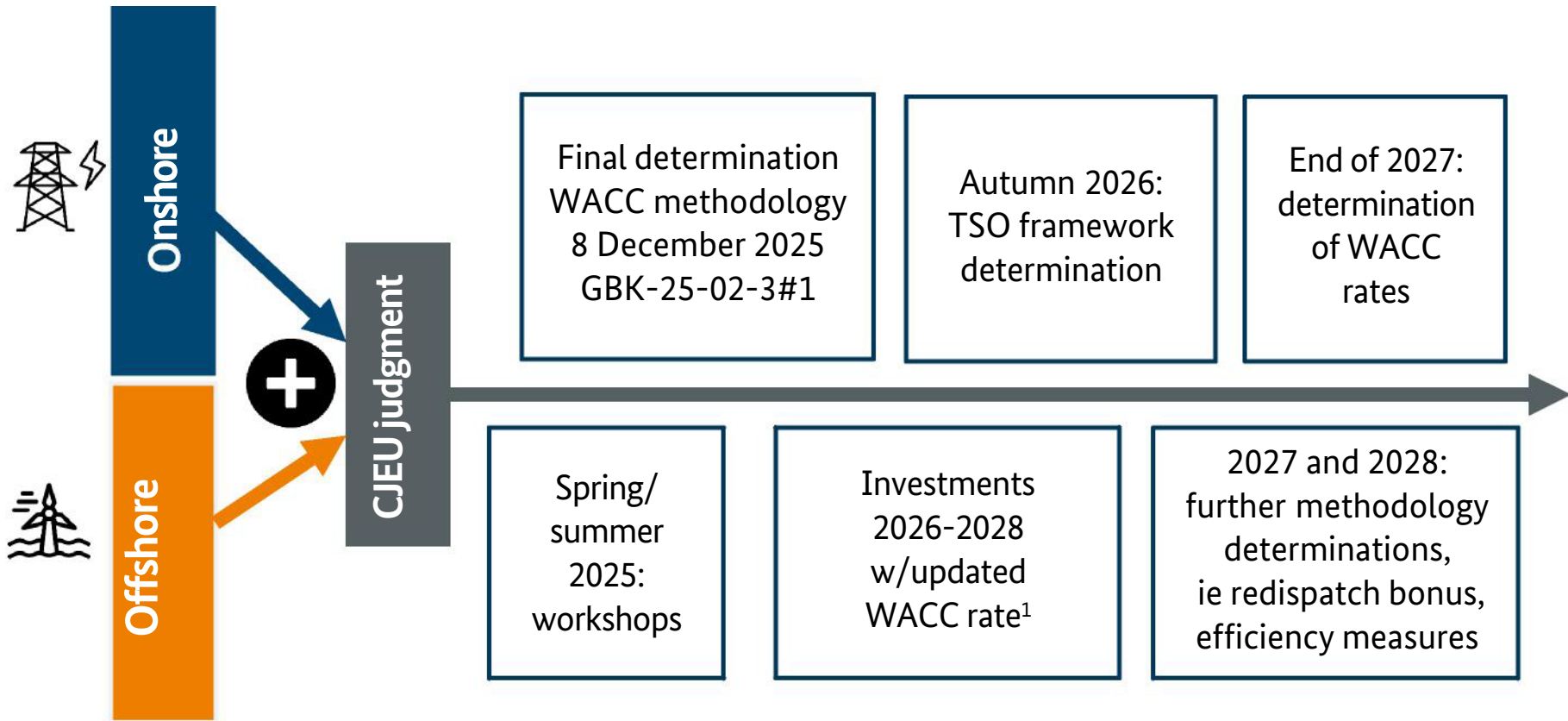


*5 | The new TSO regulatory framework:  
deep dive into the TSO WACC*

## 6 | The road to 2029

Please note:

We actively encourage you to take part in the consultations to ensure that your point of view is also taken into account.



Final determination  
WACC methodology  
8 December 2025  
GBK-25-02-3#1

Autumn 2026:  
TSO framework  
determination

End of 2027:  
determination  
of WACC  
rates

Spring/  
summer  
2025:  
workshops

Investments  
2026-2028  
w/updated  
WACC rate<sup>1</sup>

2027 and 2028:  
further methodology  
determinations,  
ie redispatch bonus,  
efficiency measures

<sup>1</sup>Updated WACC rates in the capex markup (KKA)

# Ongoing consultation on the draft determination and the final determination on the WACC methodology

We invite you to participate in the consultation:

[Bundesnetzagentur - Rahmenfestlegung ÜNB](#)

Draft determination in English:

[GBK-25-01-1x2 FL-Entwurf UENB DL EN.pdf](#)

**→ Please submit your responses by 30 January 2026**

Link to the final determination on the WACC methodology  
(GBK-25-02-3#1, 8 December 2025) :

[Bundesnetzagentur - Methodenfestlegung zur Kapitalverzinsung](#)

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