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Explanation GTS Tariff Proposal 2024

February 23, 2023

Summary: proposed tariffs for 2024

- The total price is 21,7**%** lower compared to 2023.
- This is mostly due to higher revenues in 2022 which are reconciliated in the tariffs of 2024.

Total price*	2023	2024
Average	2.351	1.840
Non-storage entry	2.699	2.196
Non-storage exit	2.736	2.147
Storage entry	1.080	0.879
Storage exit	1.094	0.859

* Numbers in €/kWh/h/y, rounded to three decimals.

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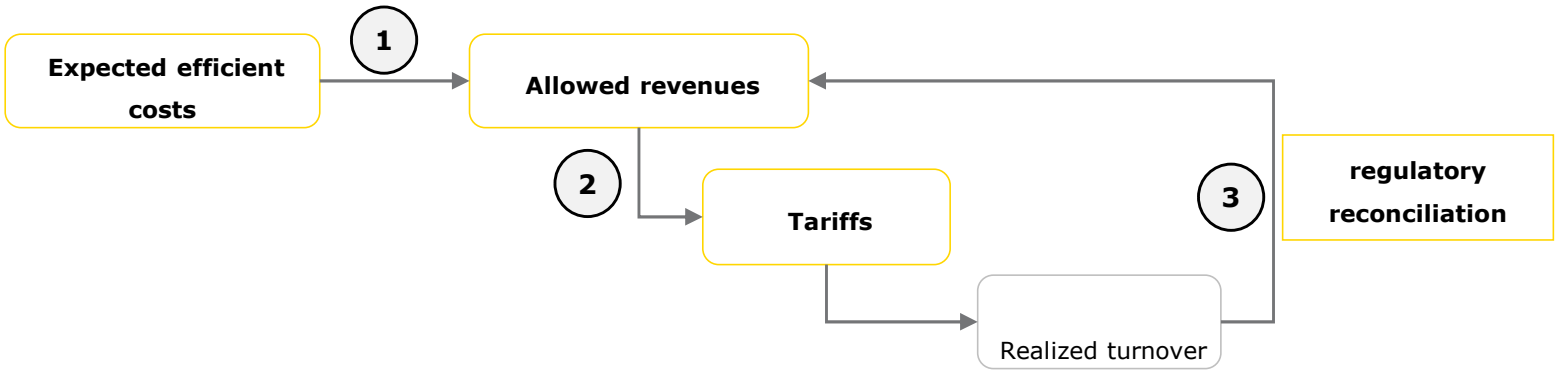
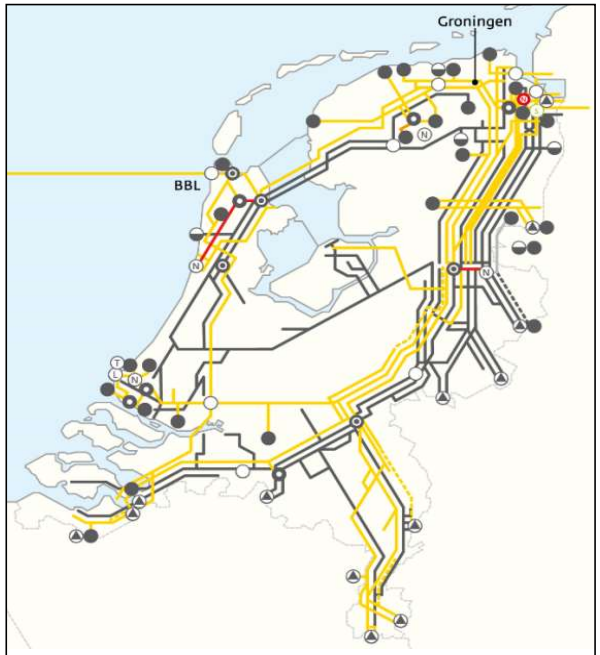
Regulatory framework in a nutshell

Regulatory method should enable GTS to recover its **efficient costs** via tariffs



1. ACM determines expected efficient costs of GTS for the regulatory period, based on historical costs. These equal the allowed revenues (method decision and x-factor decision).
2. The tariffs are calculated by dividing allowed revenues by expected sales. This is arranged in the tariff decision by ACM.
3. If the realized revenue exceeds or falls below the allowed revenues, the difference is settled with the market via the subsequent tariff decision(s).

From costs… to allowed revenues…



Total length	12,500 km
Compressor stations	11
N2 facility	1
N2 storage	1
Gas receiving stations	1,300
Transport	935 TWh

Indicative example:

1.	Return on assets	EUR	200 mln.	
2.	Depreciation	EUR	400 mln.	
3.	Operational costs	EUR	250 mln.	
4.	Energy & Nitrogen	EUR	150 mln.	+
5.	Expected costs	EUR	1000 mln.	

Current efficiency incentives

- Yearly productivity improvement (frontier shift)
- Cost benchmark to assess static efficiency

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…to tariffs.

In case of 2024 tariffs:

1.	Allowed revenues	989 mln. EUR/year
2.	Expected sales	450 mln. kWh/hour
3.	Average tariff (*excluding regulatory reconciliations & corrections*)	2.20 EUR/kWh/hour/year

4. Four different tariffs in practice:

Entry non-storage	Exit non-storage
Entry-storage	Exit-storage

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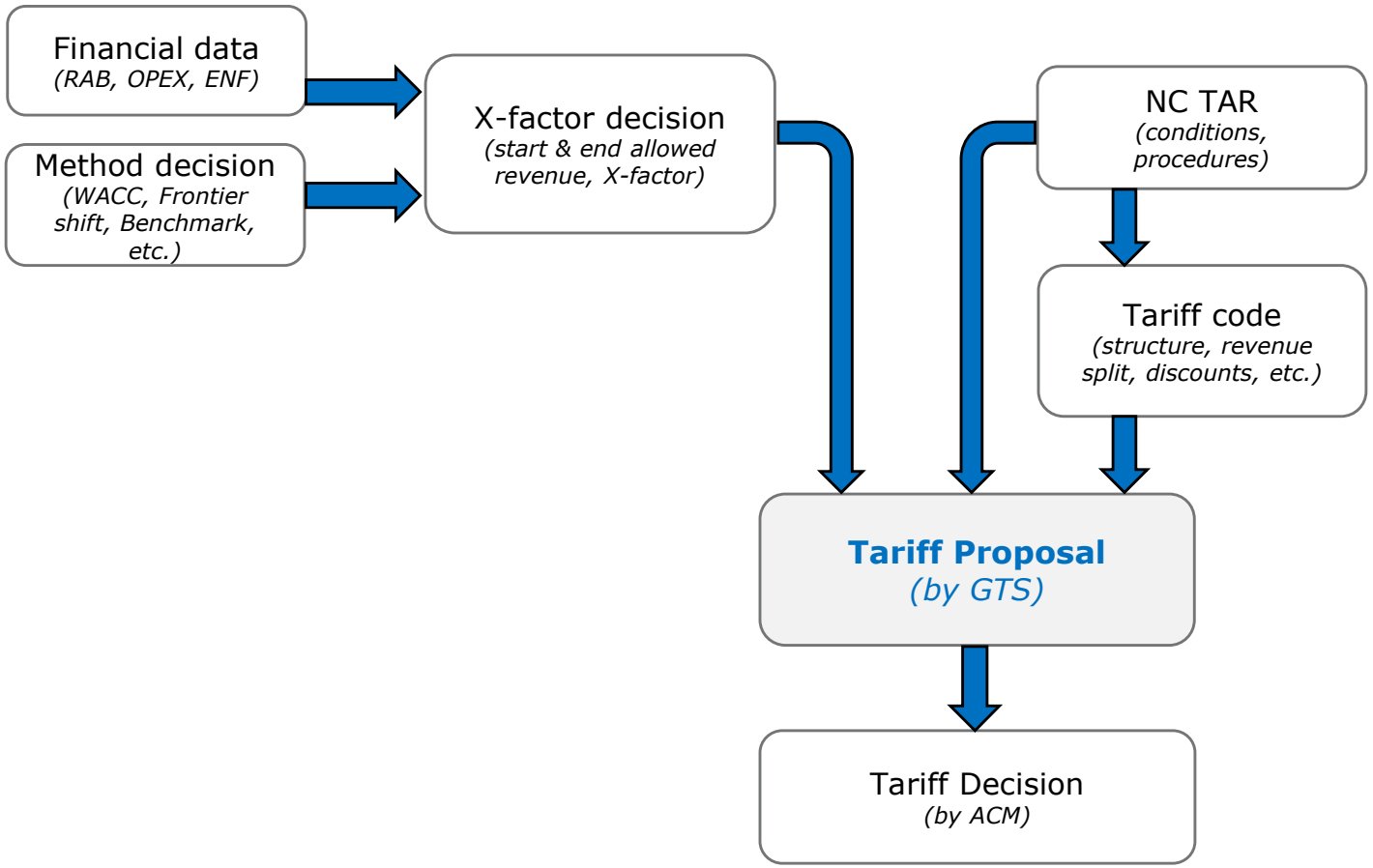
Context of the Tariff proposal



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Key elements of NC TAR agreement (in force until 2025)

Key elements	NC TAR decision
Services	All-in Transmission service (no different tariffs anymore for transport, quality conversion, balancing and connection)
Reference price Methodology (RPM)	Postage stamp
Share of allowed revenue received from entry points	40%
Share of allowed revenue received from exit points	60%
Storage discount	60%
LNG discount	0%
Multiplier for daily and within-day product	1,75
Multiplier for monthly product	1,50
Multiplier for quarterly product	1,25
Seasonal factors for non yearly products	Yes
Interruptible capacity discount	Ex ante; discount is 95,41%*
Wheeling capacity discount	94%
Shift of capacity on FCFS exit points	Only under strict conditions
Shorthaul	No longer possible
Backhaul	Replaced by regular firm or interruptible & entry or exit capacity
Diversion, ToC, ToU	Services still available, but no administrative fee anymore

- Yearly adjusted: https://www.acm.nl/en/publications/draft-code-amendment-decision-regarding-discount-interruptible-capacity-2

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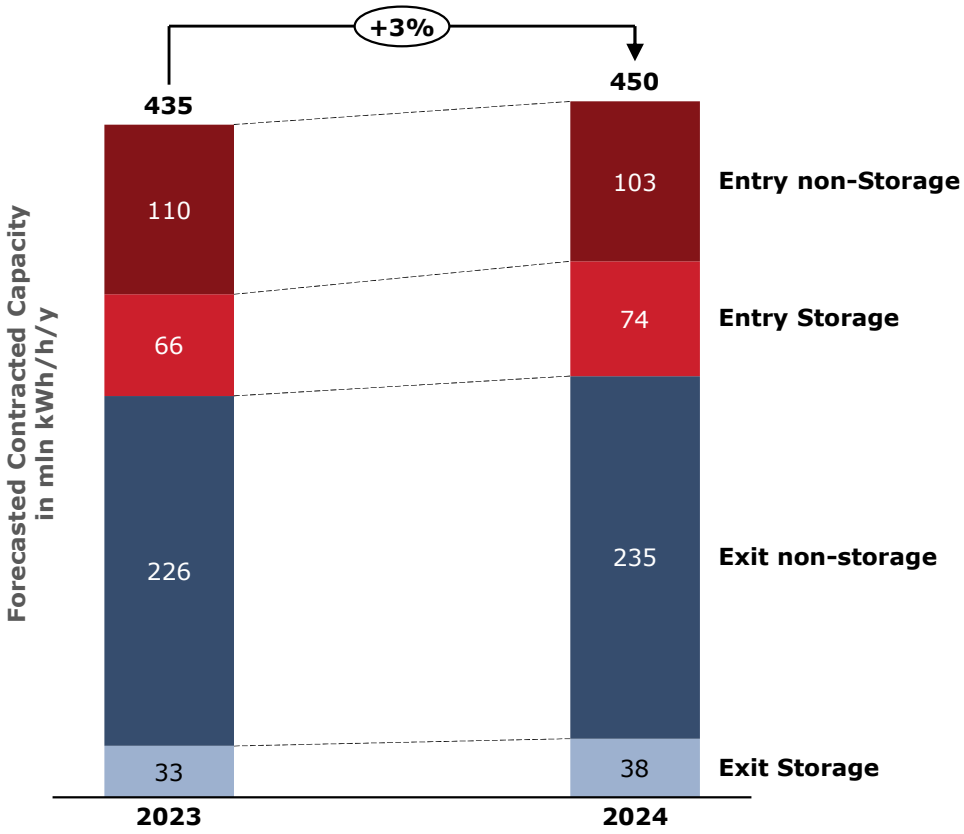
FCC: 2023 versus 2024

- Total FCC increases by 3% in 2024 compared to 2023.
- Entry capacity increases with 2 million. kwh/h/year (+1,2%)
  - Storage: +8,4 million
  - Non storage: -6,3 million
- Exit capacity increases with 12,8 mln. kwh/h/year (+5%)
  - Storage: +4,6 million
  - Non storage: +8,2 million



Explanation differences between 2023 and 2024

- Entry non-storage (-6,3)
  - Decline in entry from border points, primarily due to a decrease of Norwegian gas flows;
  - Segment production points remains stable (Groningen, Small Fields);
  - LNG capacity forecast almost doubles.
- Entry storage (+8,4)
  - Increasing bookings on storages due to short term bookings, likely as a result of increasing price volatility in gas prices.
- Exit non-storage (+8,2)
  - Rerouting of gas flows from west to east causes additional demand for capacity on border points; Decrease in segments Industry and DSO
- Exit storage (+4,6)
  - Increasing bookings on storages due to short term bookings, likely as a result of increasing price volatility in gas prices.

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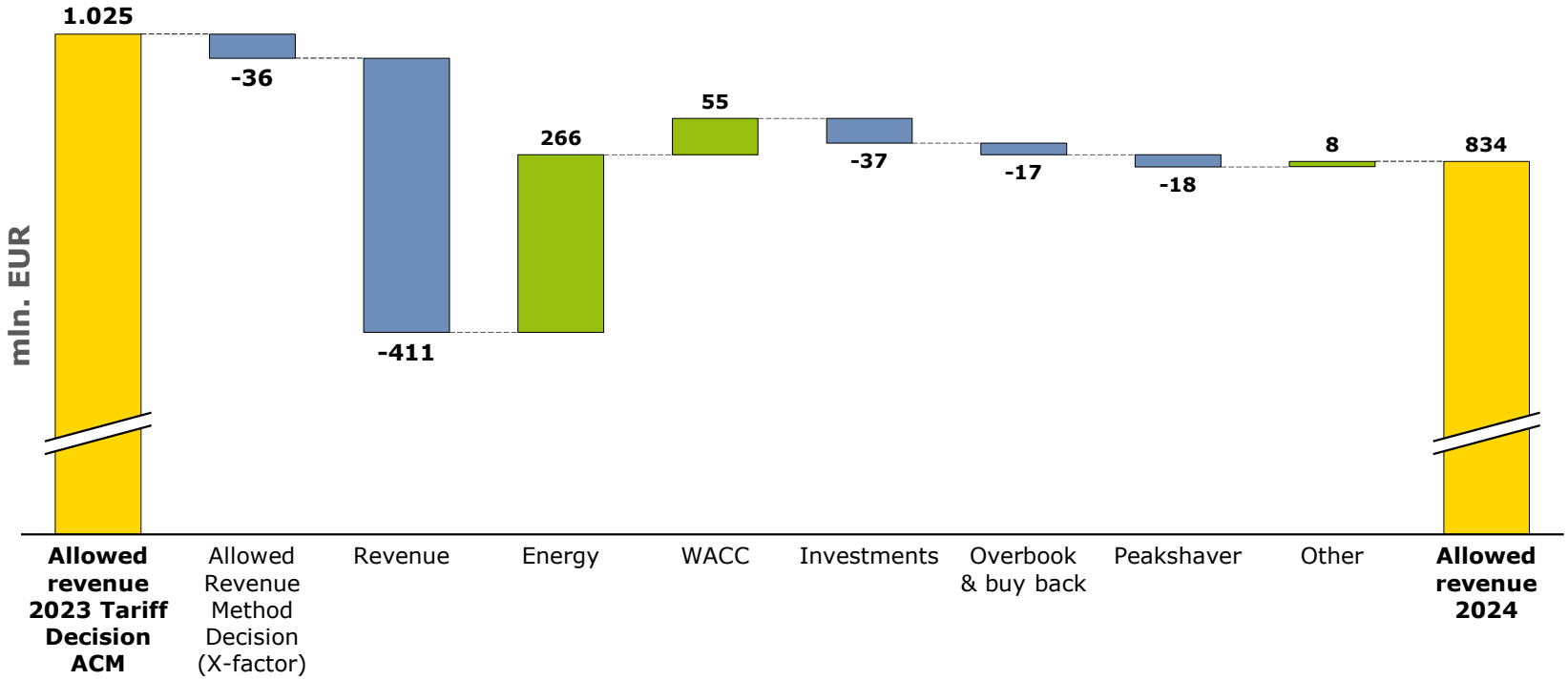
Determination of allowed revenue 2024



- GTS has realized significant additional revenues in 2022. These arose mainly from additional (interruptible) capacity bookings (EUR 346M) and higher Inter-TSO compensation received from BBL (EUR +50M).
- Due to physical congestion in its network, GTS received EUR 230M of auction premiums. For the purpose of revenue and tariff stability, reconciliation of these auction premiums is not included in tariff proposal 2024.
- As a result of the increased energy prices, GTS had considerably higher energy costs than estimated by ACM . These are expected to be reconciliated in the 2024 tariffs.

* CPI estimate of 7.6% will be updated by ACM in the tariff decision by the actual inflation of February 2023.
** See appendix 5 and 6 for a detailed overview of these corrections

Content

Input parameters for Reference Price Methodology (RPM)

Parameter	Value	Remark
Share of allowed revenue received from entry points	40%	NC TAR decision
Share of allowed revenue received from exit points	60%	
Storage discount	60%	
Allowed revenue	834M €	tariff decision by ACM, yearly
Forecasted contracted entry capacity	178M kwh/h/y	
Forecasted contracted exit capacity	272M kwh/h/y	
Forecasted contracted entry Storage capacity	74M kwh/h/y	
Forecasted contracted exit Storage capacity	38M kwh/h/y	

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Reference price calculation in four steps

Input parameters for RPM

Step 1: Determine original Reference prices
Entry: (834 M€ * 40%) / 178 = €1.879
Exit: (834 M€ * 60%) / 272 = €1.837

Step 2: Determine original storage Reference prices
Entry: €1.879 * (1 - 60%) = €0.752
Exit: €1.837 * (1 - 60%) = €0.735

Step 3:Determine rescale factor
Revenue after step 1: 834 M€
Revenue after step 2: 709 M€
Rescale factor: 834 / 709 = 1.177

Step 4: Determine Reference prices
- Non-storage entry: €1,879 * 1.177 = €2.212
- Non-storage exit: €1,837 * 1.177 = €2.162
- Storage entry: €0.752 * 1.177 = €0,885
- Storage exit: €0.735 * 1.177 = €0,865

Reference prices
- Non-storage entry: €2.212
- Non-storage exit: €2.162
- Storage entry: €0.885
- Storage exit: €0.865

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Proposed total prices 2024 versus 2023

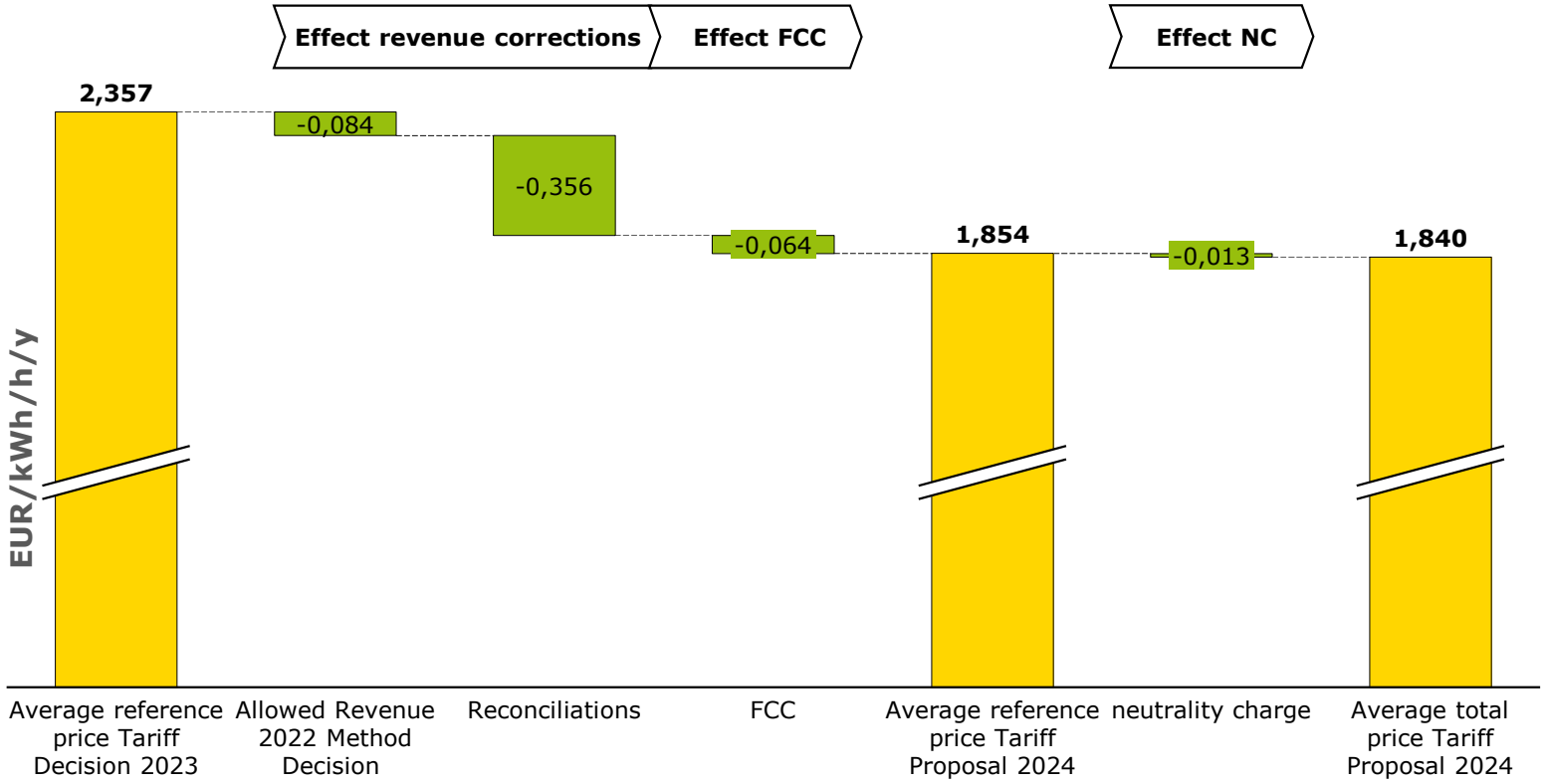
- Total price equals RPM + neutrality charge
- The average total price is 21,7% lower compared to 2023.
- The Reference price is 21,3% lower in 2024 compared to 2023. Main driver is the higher realized revenue in 2022.
- The neutrality charge equals EUR **-5.9 mln** in 2024, which leads to an 0,4%-point total price decrease.

total price*	2023	2024	Delta 2024-2023
Average[1]	2.351	1.840	-21.7%
Non-storage entry	2.699	2.196	-18,6%
Non-storage exit	2.736	2.147	-21,5%
Storage entry	1.080	0.879	-18,6%
Storage exit	1.094	0.859	-21,5%

* Prices in €/kWh/h/year

1. weighted average of the four prices, prices in €/kWh/h/year

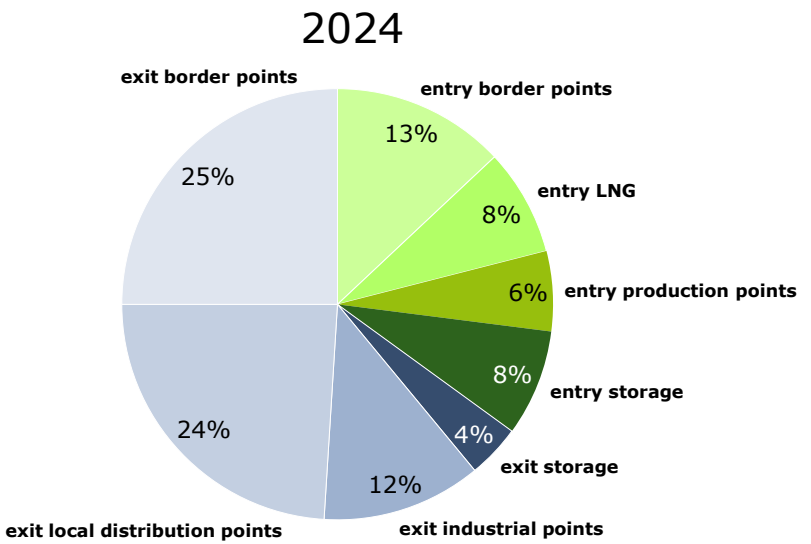
Explanation average total price decrease



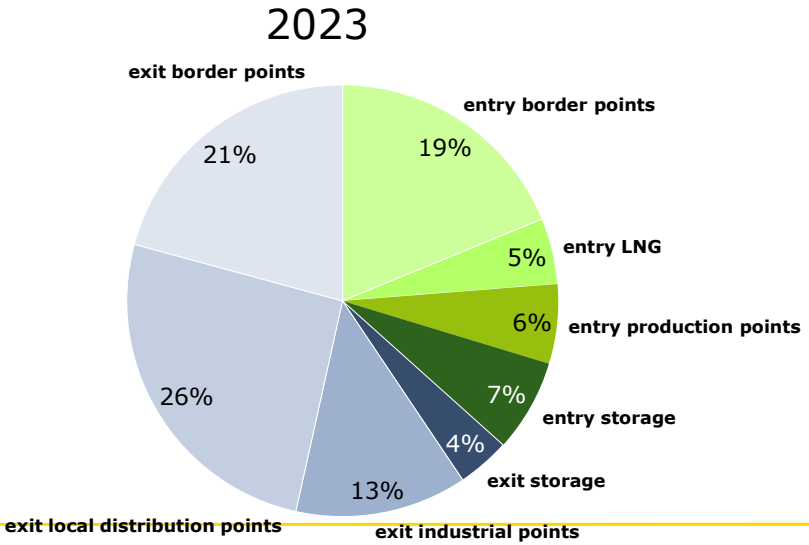
*Based on an estimated CPI of 7.6%. The final CPI will be available in April 2022 and will be applied by ACM in the tariff decision.

Expected revenue distribution per segment

Segment	FCC 2024 (mln kWh/h/y)	Expected revenue 2024 (M€)
Entry border points	51	111
Entry production points	21	46
Entry LNG	32	70
Entry storage	74	65
Total Entry	**177**	**292**
Exit border points	96	206
Exit industrial points	46	98
Exit local distribution points	93	199
Exit storage	38	33
Total Exit	**272**	**536**
Total Entry + Exit	**450**	**828**



	FCC 2023 (mln kWh/h/y)	Expected revenue 2023 (M€)
Entry border points	71	186
Entry production points	21	55
Entry LNG	18	46
Entry storage	66	69
Total Entry	**175**	**355**
Exit border points	79	210
Exit industrial points	49	130
Exit local distribution points	98	260
Exit storage	33	35
Total Exit	**260**	**635**
Total Entry + Exit	**435**	**990**



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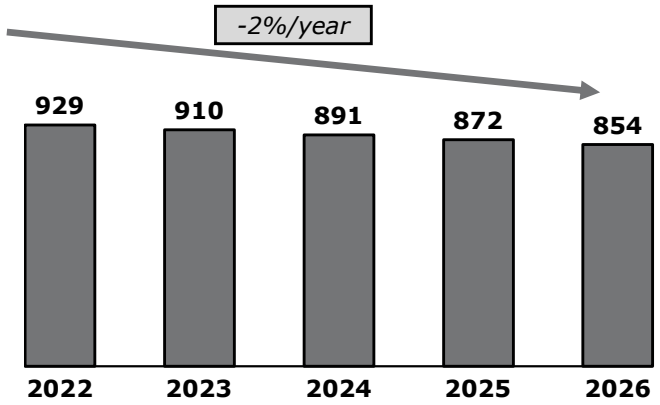
High level of new regulatory reconciliations in tariff decisions limits possibility to forecast tariffs

- Allowed revenues form the starting point for tariff calculations
- Tariffs are calculated according to the NC-TAR decision
- Every year allowed revenue is corrected for by the following reconciliations:
  - Incidental investments (like Zuidbroek nitrogen plant);
  - Revenue cap regulation;
  - Oversubscription and buy-back;
  - Auction premiums;
  - Administrative imbalance;
  - Investment costs with a depreciation period > 10y;
  - Disinvestments and revenues from disinvestments;
  - Decrease in OPEX due to disinvestments;
  - Correction in the WACC for the interest rates;
  - Other incidentals.
- Yearly, this leads to substantial deviations in income compared to the Method Decision, making a reliable tariff forecast impossible.

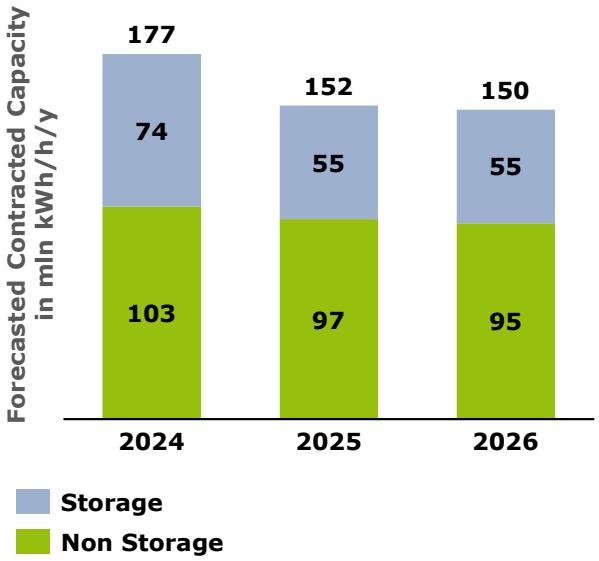
Allowed revenue following Method Decision 2022 - 2026



FCC development 2024-2026: storage bookings and exit via border points decline sharply

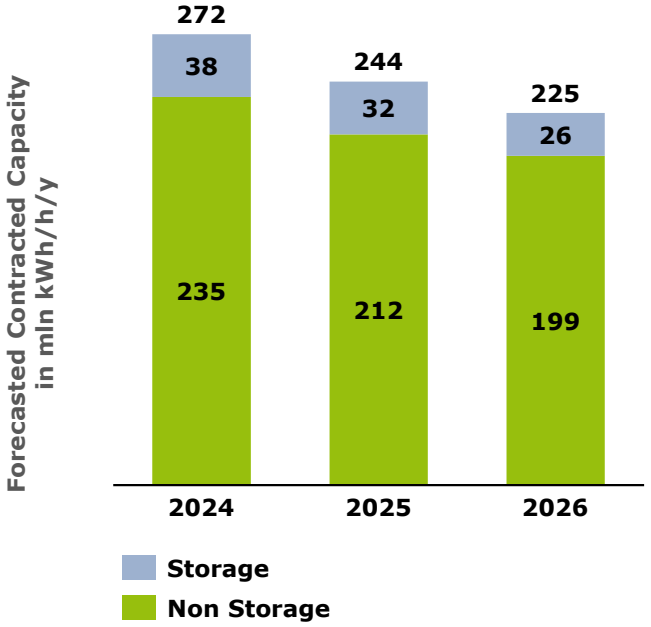
Entry
FCC decreases due to:

- Storages decrease in 2025 and 2026;
- Production further decreases;
- Border points show a stable trend;
- LNG strongly increases per 2024 and then remains stable at that level.



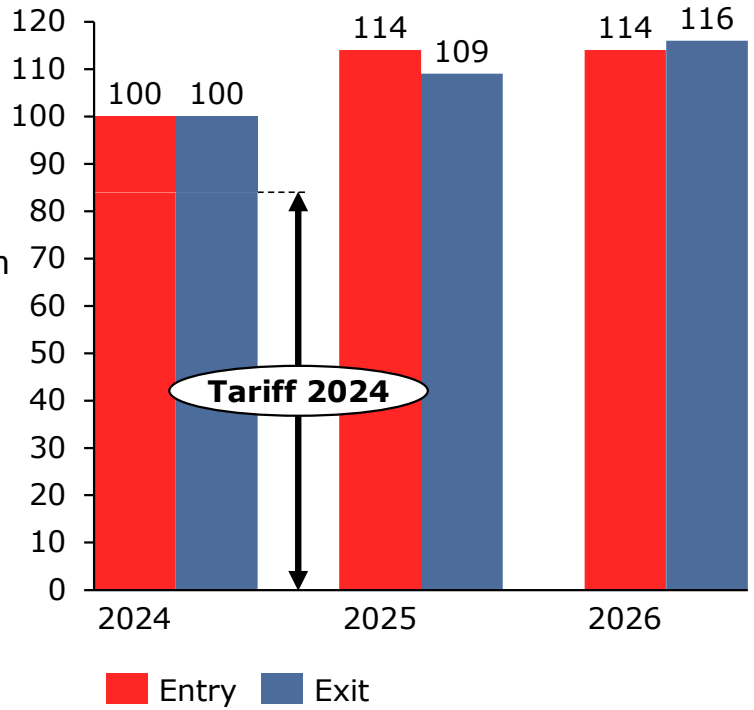
Exit
FCC decreases due to:

- Storages decrease in 2025 and 2026;
- Decrease of exit at border points;
- DSO slightly decreases;
- Industry offtake remains stable.



Tariff development 2024–2026: regulatory reconciliations do not allow for a reliable forecast

- The high level of regulatory reconciliation in the method decision substantially complicates tariff outlooks.
- The figure contains index numbers with base year 2024;
  - point of departure is allowed revenues following from x-factor decision including 1+CPI - x.
  - excluding all regulatory reconciliations;
  - allowed revenue is divided by the FCC for the respective year.
- The tariff increase due to Zuidbroek nitrogen facility is expected to be approx. 15% in 2025 and 5% in 2026.



Note: We assume the current RPM methodology under the NC TAR agreement.

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Next steps

Early March 2023

- GTS will send tariff proposal 2024 to ACM (1 March)
- ACM will publish GTS proposal on ACM website
- GTS will publish this presentation on GTS website
- Market parties can send their written view to ACM within four weeks after publication on ACM website
- GTS publishes proposed neutrality charge on GTS website

Mid-end May 2023:

- ACM determines final reservation prices in tariff decision 2024 and publishes this on ACM website
- GTS publishes final neutrality charge in parallel with tariff decision
- GTS will process tariffs 2024 in GTS ICT systems
- GTS will determine entry/exit network points and publishes this in TSC at GTS website

1 Jan 2024:

- Start of 2024 tariffs

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Thank you for your attention!

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Appendix

1. Estimation of forecasted contracted capacity
2. How to determine Reference prices
3. How to determine reserve prices
4. Overview of proposed reserve prices
5. NC-TAR agreement: Traceability of entry and exit tariffs
6. Details of regulatory reconciliation T-2 and corrections
7. Neutrality charge for balancing

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1. Estimation Forecasted Contracted Capacity 2024

What is forecasted contracted capacity (FCC)?

- We forecast the sale of our 5 standard capacity products: within-day, day, month, quarter, year
- We translate each forecasted capacity of a non-yearly product to a capacity value of the yearly product
  - using the multiplier, the seasonal factor and the year fraction for each non-yearly product (M * Sf * Yf)
- The sum of all these "yearly" capacities is the 'forecasted contracted capacity'

How do we forecast the FCC?

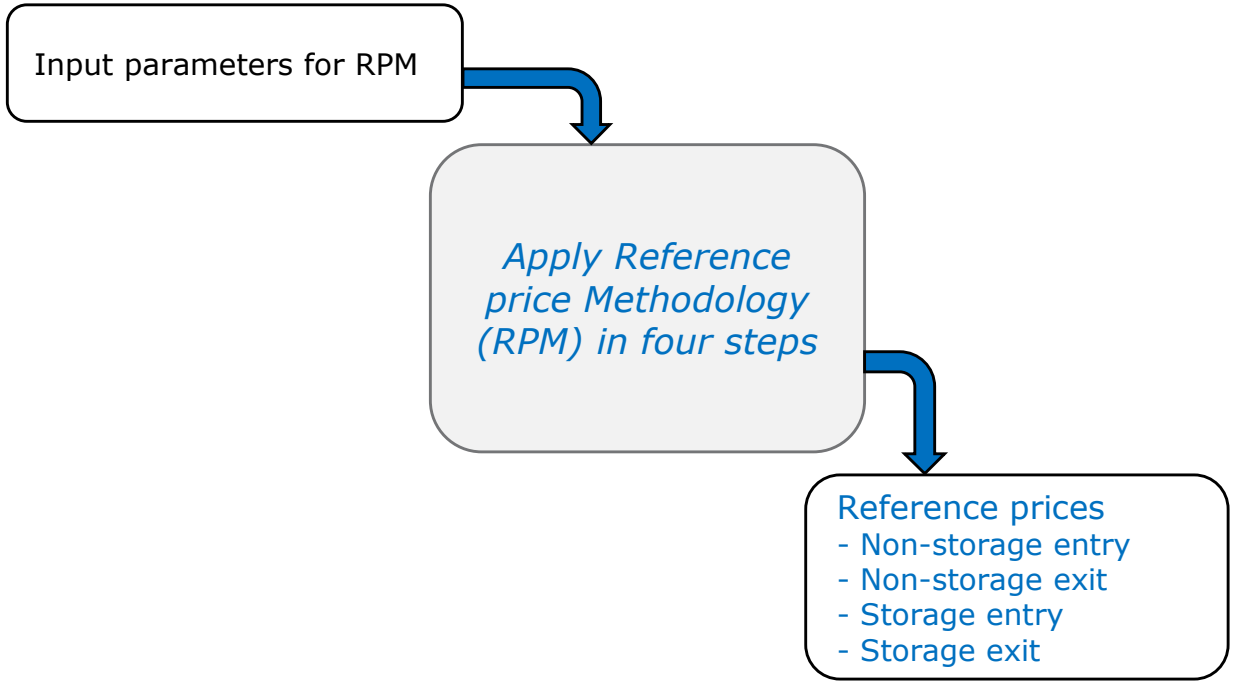
- We forecast the FCC per segment: Storage, Border points, Production points, LNG, Local distribution points, Industry
- Two types per segment: already contracted capacity + expected capacity sales
- Expected capacity sales are based on historical analysis and expectation from shippers, operators etc.

What if the realised capacity sales differ from the FCC?

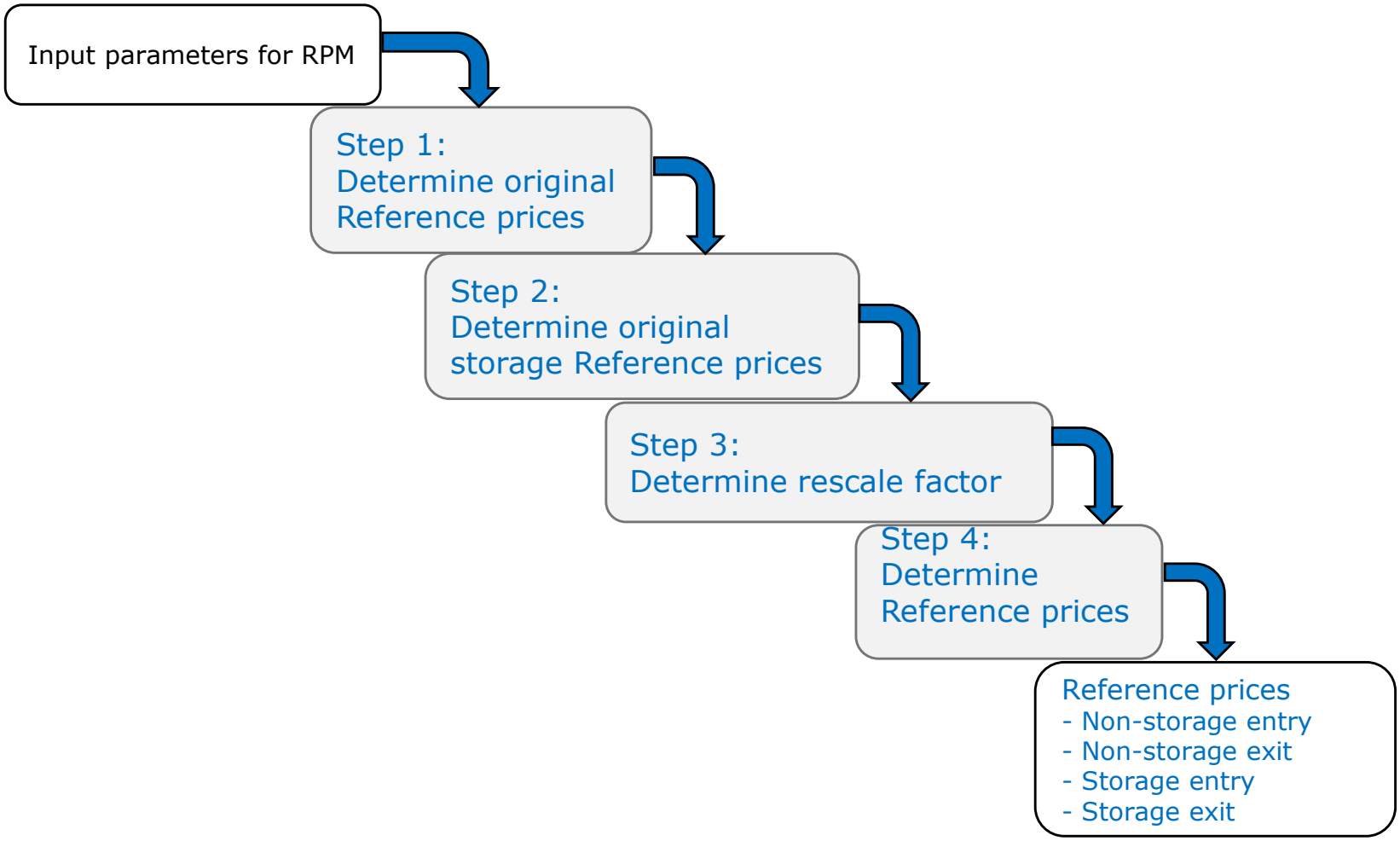
- With an accurate forecast, shippers will pay the correct tariff for the capacity products
- Realised revenue > Allowed revenue: Shippers paid too much
- Realised revenue < Allowed revenue: Shippers paid too little
- Because of revenue cap regulation differences will be reconciliated two years later
- With an accurate forecast, regulatory reconciliation in T+2 will be minimised

2. How to determine Reference prices

'Reference price' means the price for the yearly firm standard capacity product



2. Reference price methodology (RPM) in four steps



2. Step 1: Determine Original Reference prices

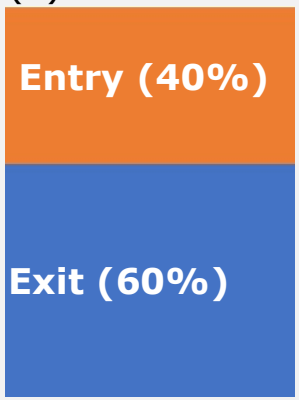
Allowed revenue,
Share of allowed revenue received from entry points,
Share of allowed revenue received from exit points,
Forecasted contracted entry capacity,
Forecasted contracted exit capacity

Step 1: Determine Original Reference prices

RPM is postage stamp methodology

- All entry points have the same original Reference price
- All exit points have the same original Reference price

Allowed revenue (€)



Divided by

Forecasted contracted Capacity (kWh/h)

Original Reference price

2. Step 2: Determine original storage Reference price

Original reference price

Storage discount (60%)

Step 2:
Determine original storage Reference price

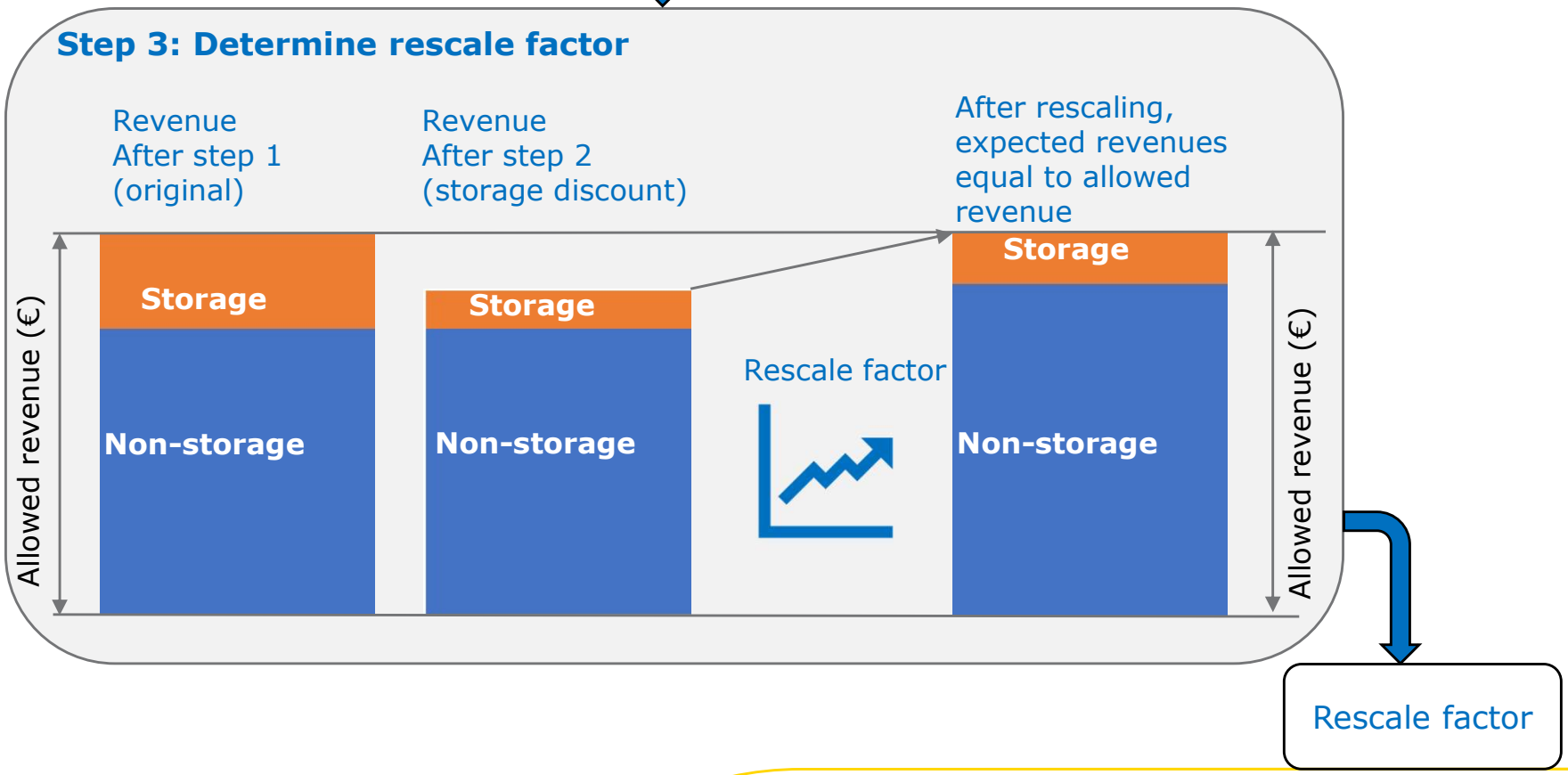
Apply storage discount to original Reference price

& Storage discount (60%)

Original storage Reference price

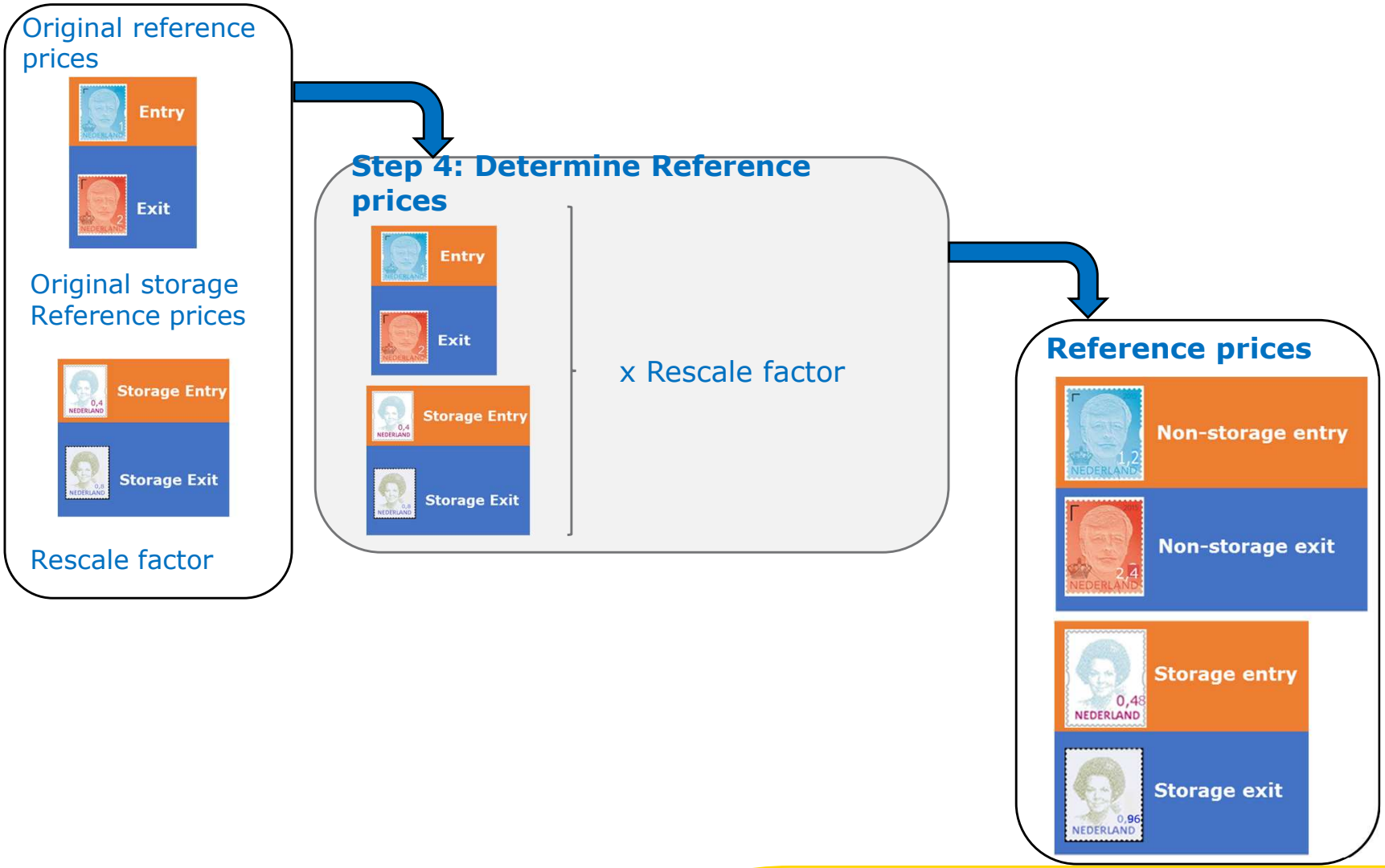
2. Step 3: Determine rescale factor

Original Reference prices
Original storage Reference prices
Forecasted contracted entry storage capacity
Forecasted contracted exit storage capacity
Allowed revenue



Rescale factor

2. Step 4: Determine Reference prices



3. How to determine reserve prices

'reserve price' means the price for a **non**-yearly firm standard capacity product

Reference prices

Multiplier
Seasonal Factors
Year fraction

Determine reserve prices for non-yearly firm standard products

*Reserve price = Multiplier * Seasonal Factor * Year fraction * Reference price*

For each product (Within-day, Day, Month, Quarter) there is a specific multiplier and a set of seasonal factors

Reserve prices for non-yearly firm standard products

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4. Overview of proposed reserve prices (1/4)

Non-storage Entry

Product ->	Year	Quarter	Month	Day	Within-day
	EUR/kWh/h/y	EUR/kWh/h/q	EUR/kWh/h/m	EUR/kWh/h/d	EUR/kWh/h/h
January	2,21199401	1,06764218	0,50164217	0,01985204	0,00082717
February			0,43825585	0,01854056	0,00077253
March			0,33920565	0,01342155	0,00055924
April		0,48947922	0,23361920	0,00955056	0,00039794
May			0,18997765	0,00751987	0,00031333
June			0,16317989	0,00667376	0,00027808
July		0,38365404	0,15597277	0,00616608	0,00025693
August			0,14838491	0,00586994	0,00024459
September			0,15610876	0,00638819	0,00026618
October		0,82221509	0,20936886	0,00829196	0,00034550
November			0,32826354	0,01342155	0,00055924
December			0,44824608	0,01773675	0,00073904

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4. Overview of proposed reserve prices (2/4)

Non-storage Exit

Product ->	Year	Quarter	Month	Day	Within-day
	EUR/kWh/h/y	EUR/kWh/h/q	EUR/kWh/h/m	EUR/kWh/h/d	EUR/kWh/h/h
January	2,16199605	1,04351013	0,49030349	0,01940332	0,00080848
February			0,42834990	0,01812148	0,00075507
March			0,33153855	0,01311818	0,00054660
April		0,47841546	0,22833868	0,00933468	0,00038895
May			0,18568356	0,00734990	0,00030625
June			0,15949151	0,00652291	0,00027179
July		0,37498226	0,15244730	0,00602671	0,00025112
August			0,14503095	0,00573726	0,00023906
September			0,15258021	0,00624380	0,00026016
October		0,80363047	0,20463647	0,00810453	0,00033769
November			0,32084376	0,01311818	0,00054660
December			0,43811432	0,01733584	0,00072233

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4. Overview of proposed reserve prices (3/4)

Storage Entry

Product ->	Year	Quarter	Month	Day	Within-day
	EUR/kWh/h/y	EUR/kWh/h/q	EUR/kWh/h/m	EUR/kWh/h/d	EUR/kWh/h/h
January	0,88479760	0,42705687	0,20065687	0,00794082	0,00033087
February			0,17530234	0,00741622	0,00030901
March			0,13568226	0,00536862	0,00022370
April		0,19579169	0,09344768	0,00382022	0,00015918
May			0,07599106	0,00300795	0,00012534
June			0,06527195	0,00266950	0,00011123
July		0,15346162	0,06238911	0,00246643	0,00010277
August			0,05935396	0,00234798	0,00009784
September			0,06244350	0,00255528	0,00010647
October		0,32888604	0,08374754	0,00331678	0,00013820
November			0,13130541	0,00536862	0,00022370
December			0,17929843	0,00709470	0,00029562

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4. Overview of proposed reserve prices 4/4)

Storage Exit

Product ->	Year	Quarter	Month	Day	Within-day
	EUR/kWh/h/y	EUR/kWh/h/q	EUR/kWh/h/m	EUR/kWh/h/d	EUR/kWh/h/h
January	0,86479842	0,41740405	0,19612140	0,00776133	0,00032339
February			0,17133996	0,00724859	0,00030203
March			0,13261542	0,00524727	0,00021864
April		0,19136619	0,09133547	0,00373387	0,00015558
May			0,07427342	0,00293996	0,00012250
June			0,06379660	0,00260916	0,00010872
July		0,14999291	0,06097892	0,00241068	0,00010045
August			0,05801238	0,00229491	0,00009563
September			0,06103209	0,00249752	0,00010407
October		0,32145219	0,08185459	0,00324181	0,00013508
November			0,12833750	0,00524727	0,00021864
December			0,17524573	0,00693434	0,00028894

5. NC-TAR agreement: Traceability of entry and exit tariffs

Obligation from NC TAR agreement	Remark
To improve the traceability of the entry and exit tariffs, GTS will, before submitting its tariff proposal to ACM, verbally explain its proposal to market parties	this session
GTS explains how it has applied the Tariff Code	slide 9, 10, 17 & 33-43
GTS shows which Reference prices will be proposed	slide 17-19
GTS makes a comparison with the prices for the previous year	slide 2, 20
GTS explains how she determines the proposed forecasted contracted capacity	slide 12-13 & 32
GTS explains which regulatory reconciliation and corrections it wishes to propose	slide 45
GTS shows the distribution of revenues per segment, whereby at least a distinction is made between interconnection points, production points, storages, LNG, local distribution points and industry and between entry and exit	slide 22
GTS will publish the oral explanation (this presentation) on its website	March 2022

6. Details of regulatory reconciliation T-2 and corrections

Regulatory reconciliation and corrections	Total *€ mln.*	Link to Method Decision 2022-2026
Energy costs	266	
Revenue-cap regulation	-411	Chapter 8.3.2
Oversubscription and buy back	-17	Chapter 8.4.3
Auction premium*	0	Chapter 8.4.2
Administrative imbalance	2	Chapter 8.3.4
Investment costs with a depreciation period > 10y	-37	Chapter 8.3.6
Disinvestments	2	Chapter 8.3.7
OPEX decrease due to disinvestments	-6	Chapter 7.3.3
WACC	55	Chapter 8.3.8
WQA	6	
Peakshaver	-18	
G-gas to h-gas conversion	2	Chapter 8.3.5
Asset transfer	1	
TOTAL (rounded)	**-155**	

*Auction premium reconciliation will be forwarded to Tariff Proposal 2025

7. Neutrality charge for Balancing

- The neutrality charge for balancing activities is an NC BAL obligation
- NC BAL states that a TSO shall not gain or lose by the payment and receipt of any of its balancing activities (article 29)
- A code change was implemented by ACM in 2020 in order to approve the methodology for the calculation of the neutrality charges for balancing activities
- The charge consists of the Linepack Flexibility Service fee (regular) and incidental balancing costs (like defaults)
- The methodology for the calculation of the neutrality charges for balancing activities is equal to the calculation method for the Reference price and the reserve prices for transmission services as set out in the NC TAR decision by ACM
- As a consequence, each capacity product (except wheeling) will have a tariff set by ACM and a neutrality charge determined by GTS
- For 2024 the neutrality charge amounts to approximately EUR -5,9 mln.

Neutrality charge calculation (using RPM method)

Input parameters for RPM

Step 1: Determine original Reference prices
Entry: (EUR -5.9 M€ * 40%) / 178 = - €0.013
Exit: (EUR -5.9 M€ * 60%) / 272 = - €0.013

Step 2: Determine original storage Reference prices
Entry: - €0.013 * (1 - 60%) = - €0.005
Exit: - €0.013 * (1 - 60%) = - €0.005

Step 3:Determine rescale factor
Revenue after step 1: - 5.9 M€
Revenue after step 2: - 5.0 M€
Rescale factor: -5.9 / -5.0 = 1.177

Step 4: Determine Reference prices
- Non-storage entry: - €0.013 * 1.177= - €0.016
- Non-storage exit: - €0.013 * 1.177 = - €0.015
- Storage entry: - €0.005 * 1.177 = - €0.006
- Storage exit: - €0.005 * 1.177 = - €0.006

Neutrality charges
- Non-storage entry: - €0.016
- Non-storage exit: - €0.015
- Storage entry: - €0.006
- Storage exit: - €0.006