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Explanation GTS Tariff Proposal 2022

24 February 2021

Summary: proposed tariffs for 2022

	Reference price (€/kWh/h/y)	Neutrality charge (€/kWh/h/y)	Total price (€/kWh/h/y)
Non-storage entry	2.201	-0.0012	2.200
Non-storage exit	2.571	-0.0014	2.570
Storage entry	0.881	-0.0005	0.880
Storage exit	1.029	-0.0005	1.028

* Numbers rounded to three decimals and four decimals for the neutrality charge.

- The total price is **17%** higher compared to 2021.
- The Reference price is 19.5% higher in 2022 compared to 2021. Main drivers:
  - The new method decision 2022-2026 results in an increase of allowed revenues of EUR 10 mln. for 2022 compared to the 2021 income after regulatory reconciliations and including neutrality charge. This leads to a tariff increase of 0.8%
  - Applying regulatory reconciliation T-2 and corrections results in a tariff change of +4.5%
  - The effect of declining capacity sales is expected to be a tariff increase of +14.1%
- The neutrality charge leads to no significant change of Reference price. Neutrality charge equals EUR -500k in 2022. This implies a very small reduction of the Reference price.

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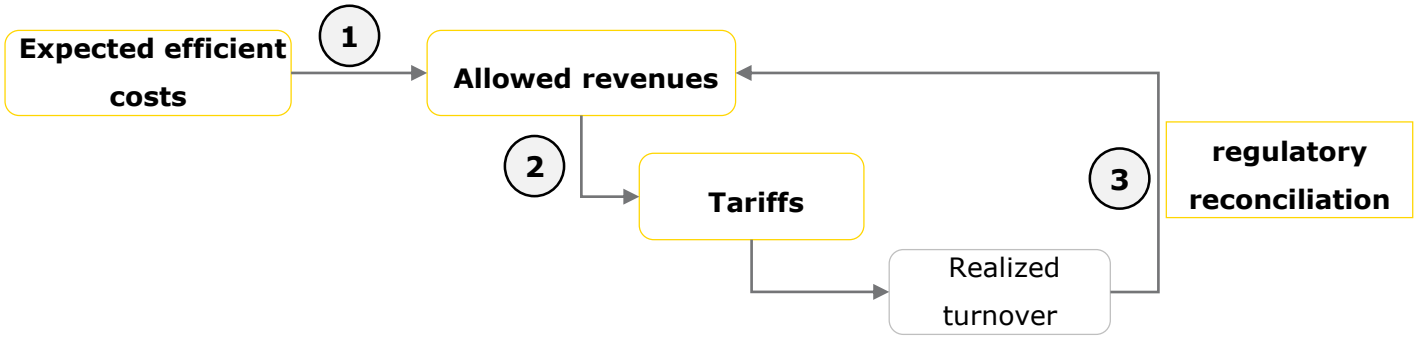
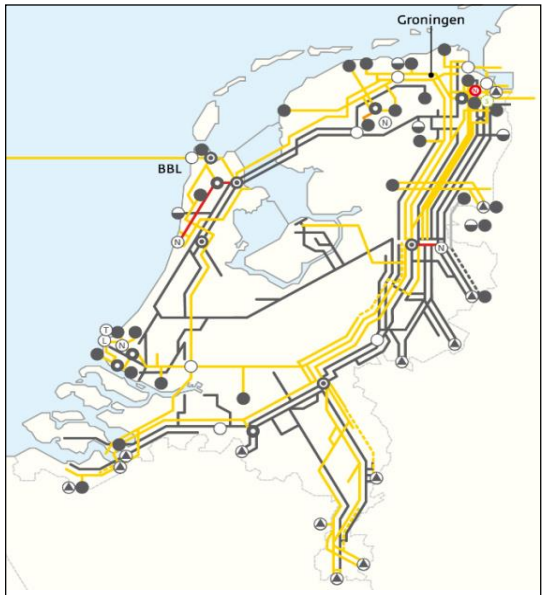
Regulatory framework in a nutshell

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 derived from the allowed revenues by dividing them by expected sales. This is arranged in the tariff decision by ACM.
3. If the realized turnover 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 6,500 mln. x 3.1%)	EUR	200 mln.
2.	Depreciation	EUR	470 mln.
3.	Operational costs	EUR	215 mln.
4.	Energy & Nitrogen	EUR	115 mln. +
5.	Expected costs	EUR	1000 mln.
	Allowed revenues 2022	EUR	929 mln.

Current efficiency incentives

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

…to tariffs.

Example calculation:

1. Allowed revenues	929	mln. EUR/year
2. Expected sales	485	mln. kWh/hour
3. Average tariff (*excluding regulatory reconciliations & corrections*)	1.92	EUR/kWh/hour/year

4. Four different tariffs in practice:

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

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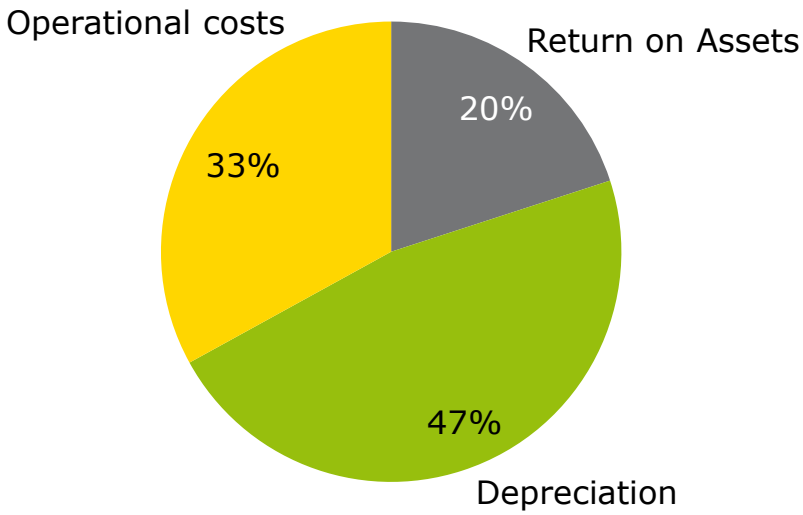
New method decision and allowed revenues for 2022-2026

- ACM performed a new TSO-benchmark to assess the efficiency of GTS; deems GTS 93.7% efficient
  - The TSO-benchmark compares the efficiency of GTS to 28 other European TSOs
  - The benchmark model compares inputs (total costs) to outputs (e.g. pipeline length, compressor power, etc.)
  - GTS is deemed over 7% more efficient than in the previous method decision. This result acknowledges the cost savings GTS has realized over the past years.
- ACM redistributes GTS's capital costs across time to anticipate declining capacity sales, using three measures:
  1. Nominal WACC
  2. Accelerated depreciation with a factor of 1.3
     (10% of the Regulated Asset Base (RAB) is excluded by ACM from this measure to account for future asset deployment for hydrogen)
  3. Removing divestments from the RAB and recover their cost via regulatory reconciliation (t+2). T+2 implies that costs are reconciliated in tariffs two years after the completion of the year. So 2020 costs are reconciled in the 2022 tariffs.

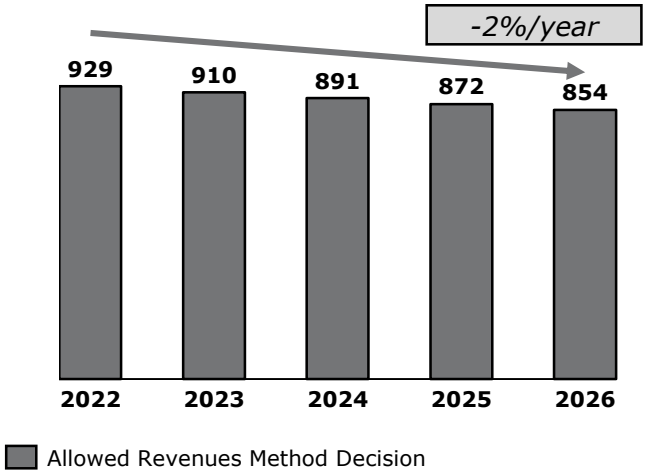
  These measures enable GTS to recover capital costs earlier in time and limit a tariff increase in the long term.

Allowed revenues decrease by 2% per year in the regulatory period, mostly as a result of a declining asset base

Cost structure in 2022



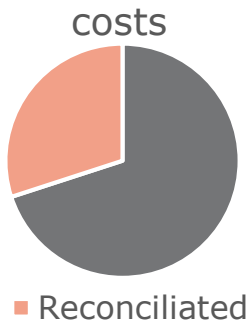
Allowed revenues 2022-2026



** Excluding regulatory reconciliations*

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
- The current method decision reconciliates allowed revenues for:
  - Energy and nitrogen costs for Quality Conversion
  - Administrative imbalance
  - Oversubscription and buy-back & auction premiums
  - Revenue cap regulation
- The new method decision also applies regulatory reconciliation to:
  - Investment costs with a depreciation period > 10y
  - Groningen investments (Zuidbroek, G- -> H-gas industries)
  - Disinvestments and revenues from disinvestments
  - Decrease in OPEX due to divestments
  - Correction in the WACC for
    - the risk free rate for the calculation of cost of equity in Capital Asset Pricing Model (CAPM)
    - The interest rate for cost of debt



- Conclusion: Over 30% of GTS's cost base in the period 2022-2026 **and** 1) Groningen investments, 2) disinvestments etc. are subject to regulatory reconciliation in the tariff decisions, making a reliable tariff forecast impossible.

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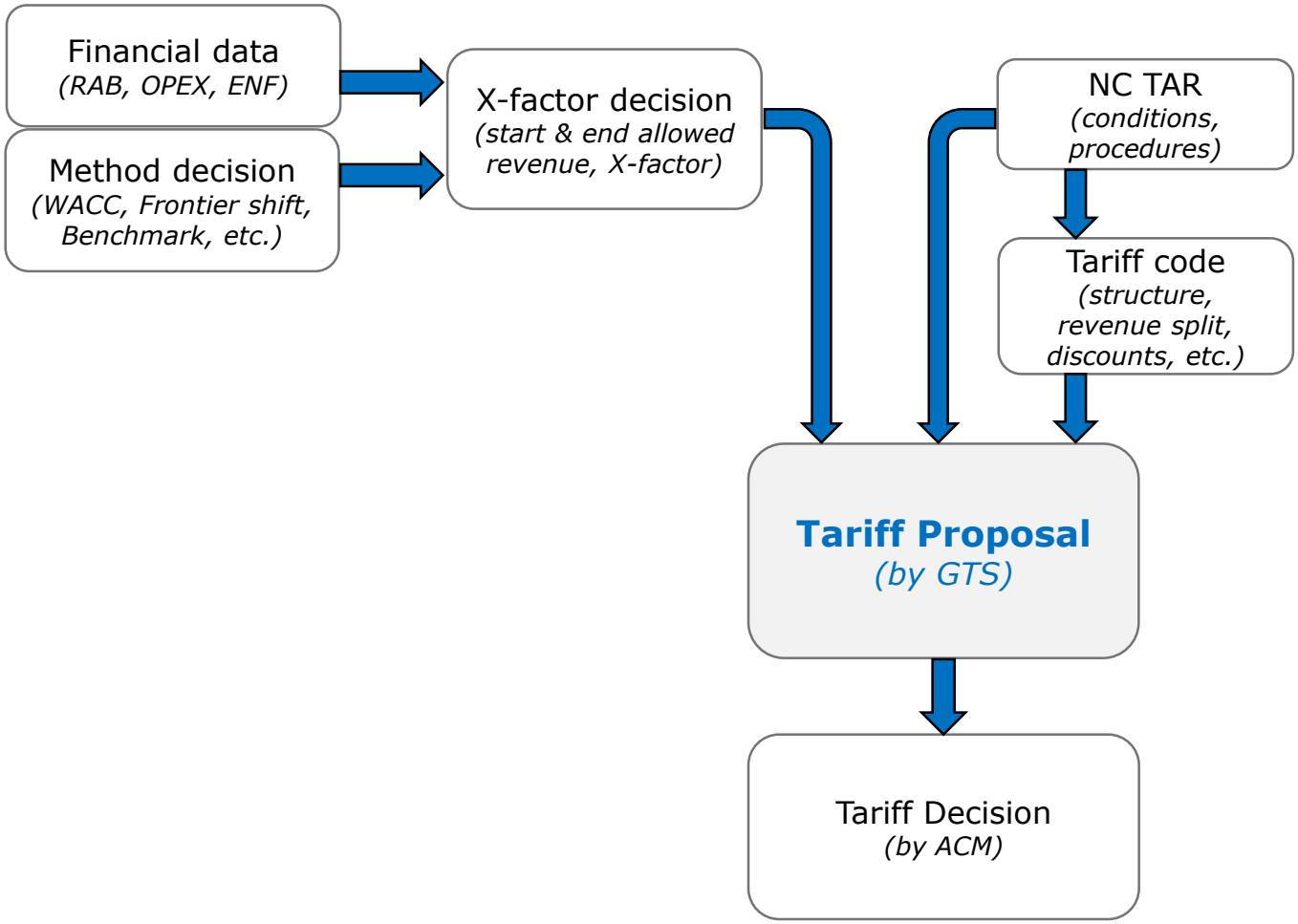
Context of the Tariff proposal



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 0.03%*
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/code-amendment-decision-regarding-discount-interruptible-capacity

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Forecasted Contracted Capacity 2022

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?

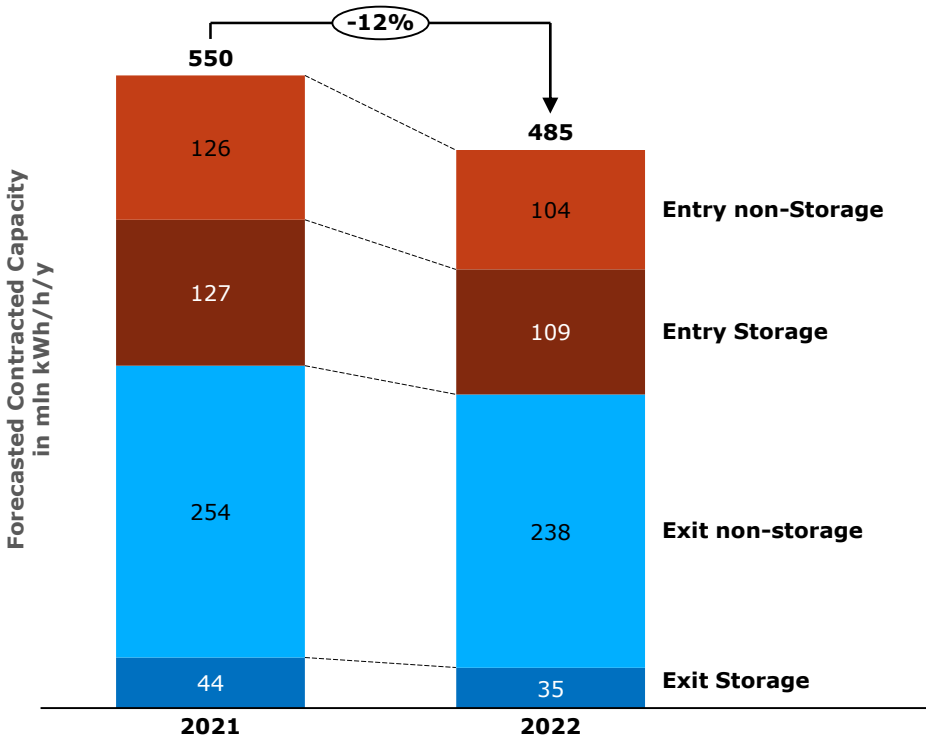
- We forecast the FCC per segment: Storage, Border points, Production points, LNG, Local distribution points, Industry
- Two types per segment: already contracted capacity + expected capacity sales
- Expected capacity sales are based on historical analysis and expectation from shippers, operators etc.

What if the realised capacity sales differ from the FCC?

- With an accurate forecast, shippers will pay the right 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 T+2 will be minimised

FCC: 2021 versus 2022

- Total FCC decreases by 12%
- Entry capacity declines with 40 mln. kwh/h/year (-16%)
  - Storage: -18 million
  - Non storage: -22 million
- Exit capacity declines with 25 mln. kwh/h/year (-8%)
  - Storage: -9 million
  - Non storage: -16 million



[1] Including ITC BBL. For more info see line 397 Method Decision.

Explanation differences between 2021 and 2022

- Entry non-storage
  - Decrease mainly due to segment production points (Groningen, Small Fields)
  - Borderpoints decrease to a less extent
  - LNG remains constant
- Entry storage
  - Several LT-contracts will end/decrease in segment storage. Additional bookings to existing LT-booking level not expected
- Exit non-storage
  - Several LT-contracts decrease in segment border points, H-gas as well as L-gas (converting small-scale consumer markets Germany, Belgium, France)
  - Industry and DSO exit remains constant
- Exit storage
  - Several LT-contracts will end/decrease in segment storage. Additional bookings to existing LT-booking level not expected

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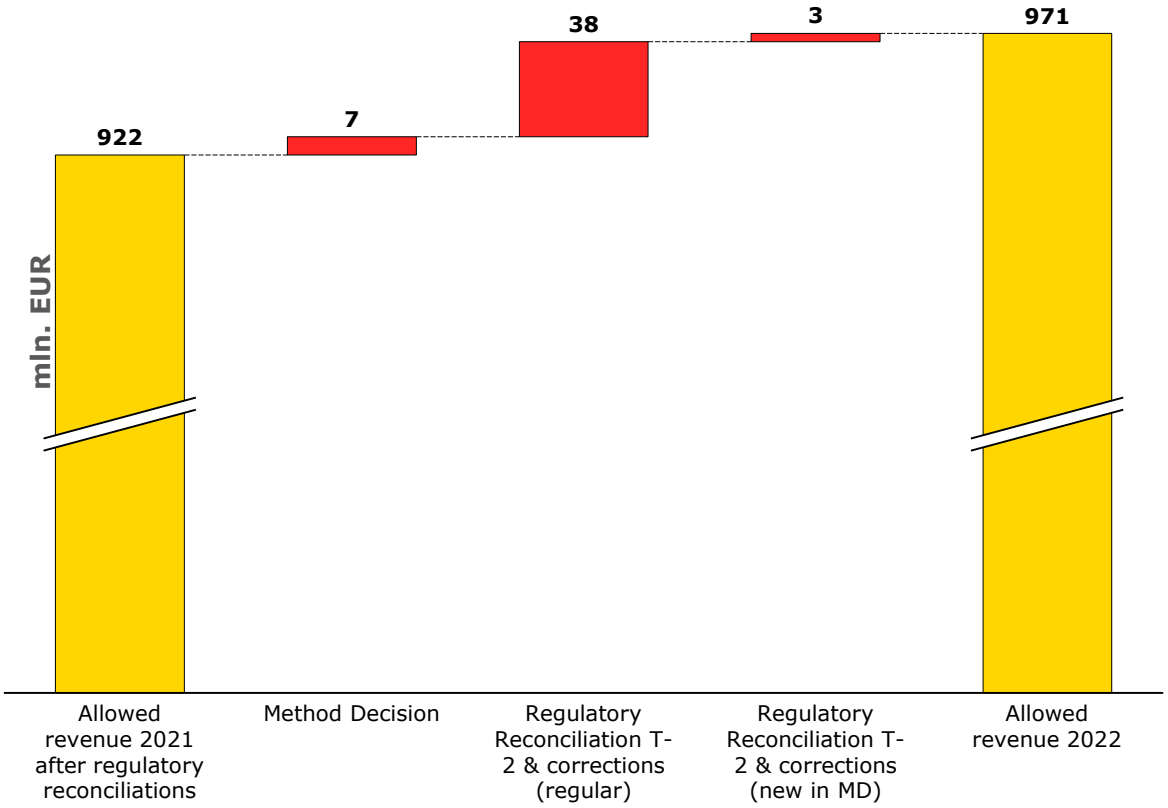
Determination of allowed revenue 2022



*Based on an estimated CPI of 1.7%. The final CPI will be available in April 2021 and will be applied by ACM in the tariff decision.

** See appendix 5 and 6 for a detailed overview of these corrections

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Input parameters for 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	971M €	tariff decision by ACM, yearly
Forecasted contracted entry capacity	212M kwh/h/y	
Forecasted contracted exit capacity	273M kwh/h/y	
Forecasted contracted entry Storage capacity	109M kwh/h/y	
Forecasted contracted exit Storage capacity	35M kwh/h/y	

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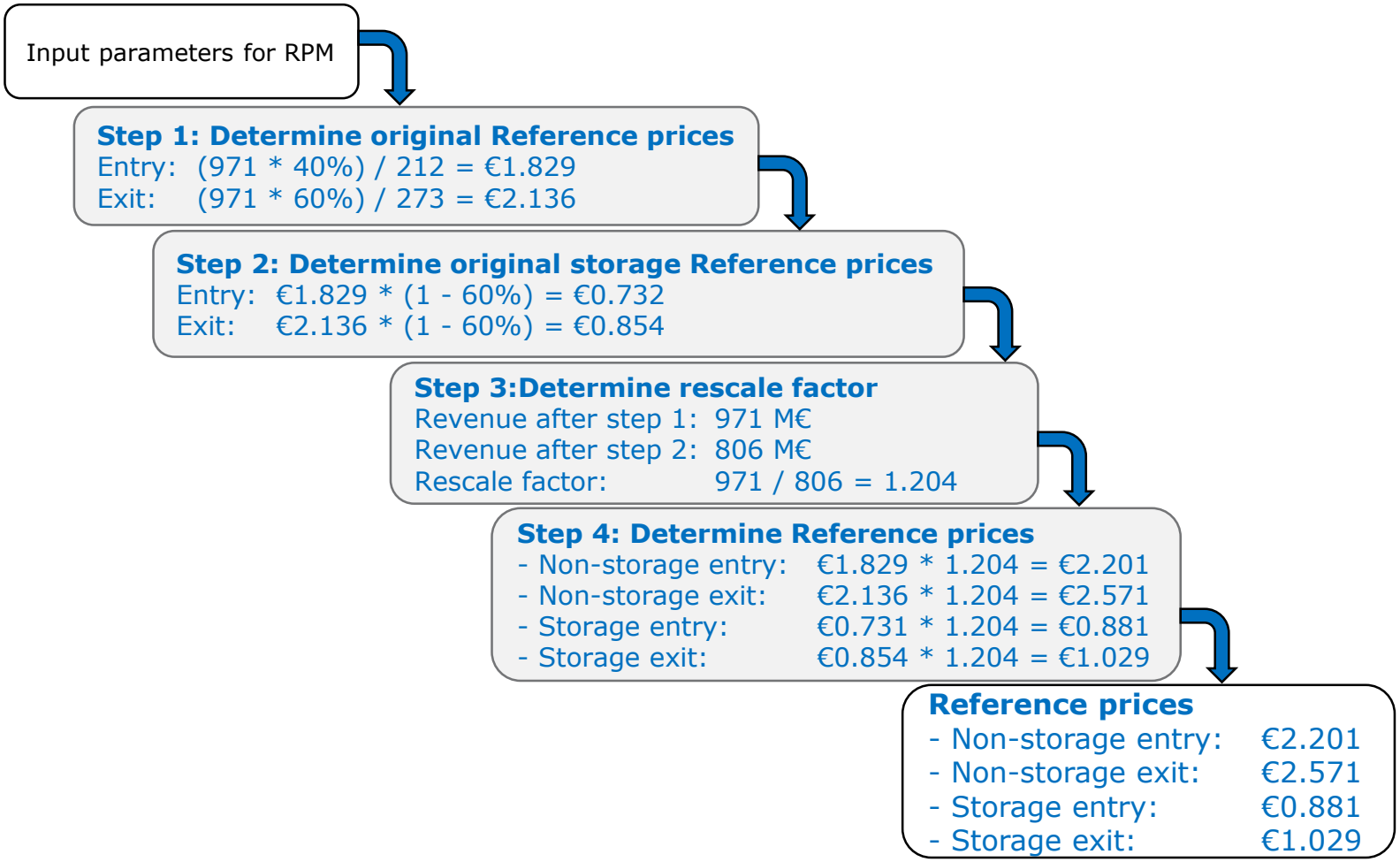
Reference price calculation in four steps



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Proposed total prices 2022 versus 2021

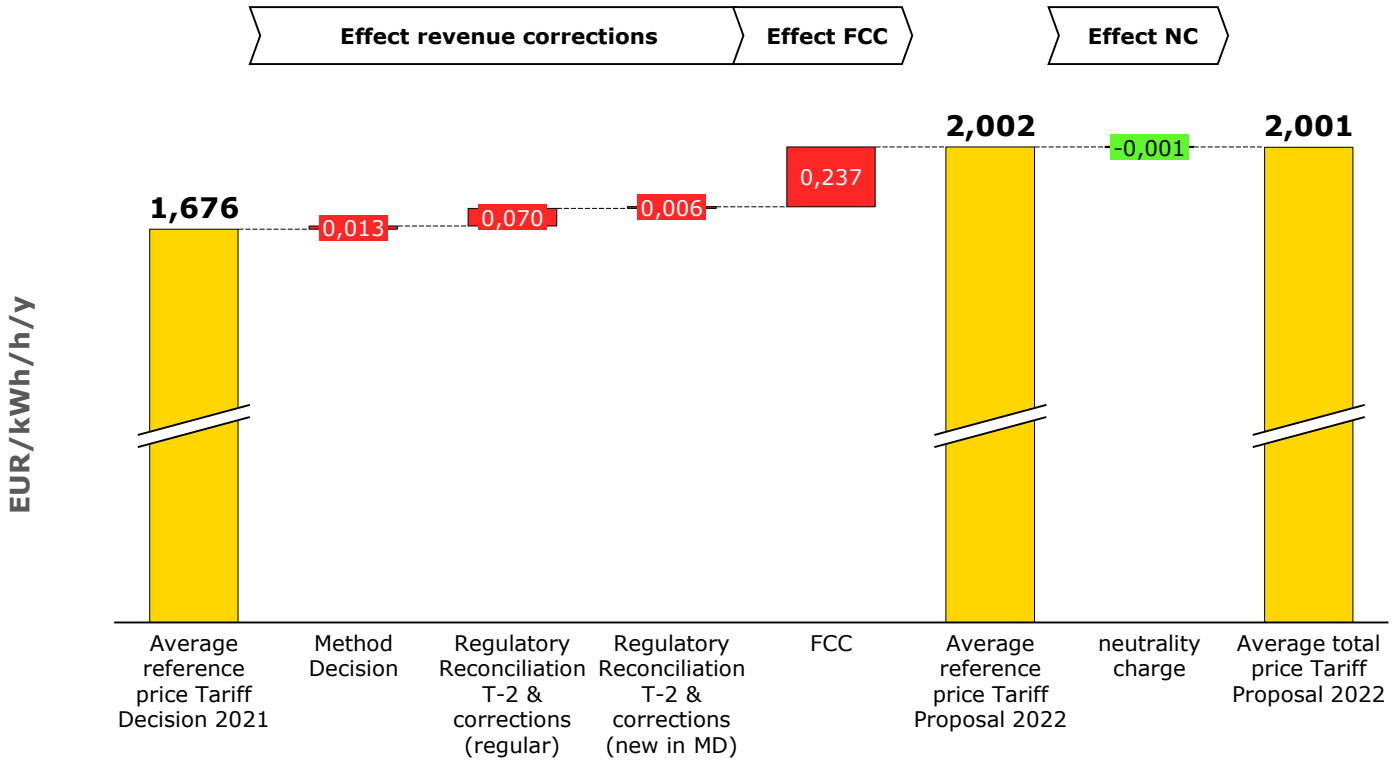
- The total price is **17%** higher compared to 2021.
- The Reference price is 19.5% higher in 2022 compared to 2021. Main drivers:
    - The new method decision 2022-2026 results in an increase of allowed revenues of EUR 10 mln. for 2022 compared to the 2021 income after regulatory reconciliations and including neutrality charge. This leads to a tariff increase of 0.8%
    - Applying regulatory reconciliation T-2 and corrections results in a tariff change of +4.5%
    - The effect of declining capacity sales is expected to be a tariff increase of +14.1%
- The neutrality charge leads to no significant change of total price. Neutrality charge equals EUR -500k in 2022. This implies a very small reduction of the total price.

total price*	2021	2022[2]	Delta 2022-2021
Average[1]	1.707	2.001	17%
Non-storage entry	1.801	2.200	22%
Non-storage exit	2.290	2.570	12%
Storage entry	0.720	0.880	22%
Storage exit	0.916	1.028	12%

* Prices in €/kWh/h/year

1. weighted average of the four prices, prices in €/kWh/h/year
2. 2022 figures include a Neutrality Charge of – € 0.001 /kWh/h/year

Explanation average total price increase

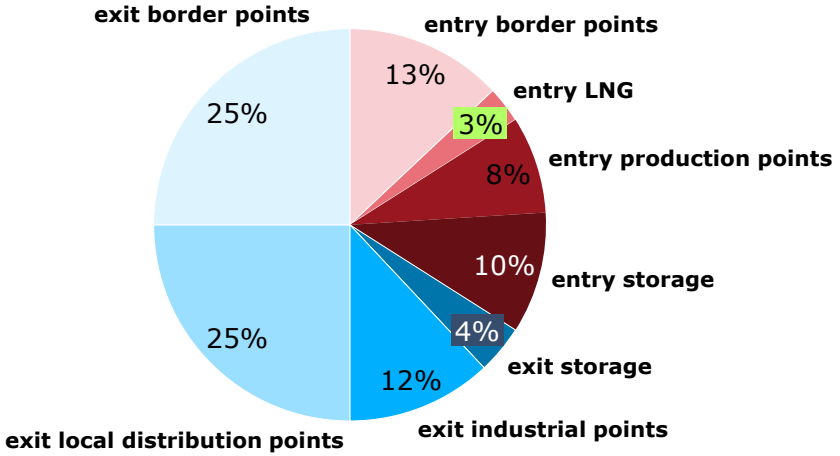


*Based on an estimated CPI of 1.7%. The final CPI will be available in April 2021 and will be applied by ACM in the tariff decision.

Expected revenue distribution per segment

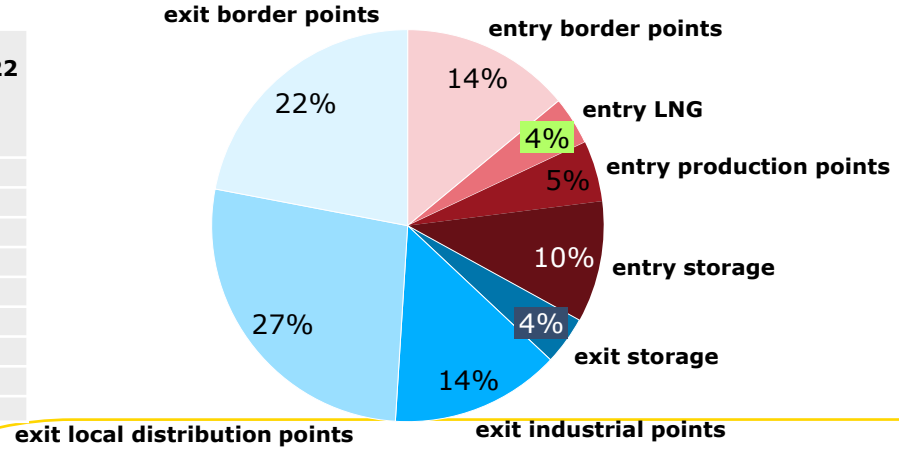
Segment	FCC 2021 *(Mln.kWh/h/y)*	Expected revenue 2021 *(M€)*
Entry border points	68	121
Entry LNG	16	29
Entry production points	41	73
Entry storage	127	90
Exit storage	44	40
Exit industrial points	49	110
Exit local distribution points	102	231
Exit border points	102	231
Total (all numbers rounded)	**550**	**925**

2021



Segment	FCC 2022 *(Mln.kWh/h/y)*	Expected revenue 2022 *(M€)*
Entry border points	63	139
Entry LNG	18	39
Entry production points	23	50
Entry storage	109	96
Exit storage	35	36
Exit industrial points	51	131
Exit local distribution points	102	263
Exit border points	84	217
Total (all numbers rounded)	**485**	**971**

2022



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Reference price development 2022 and beyond: allowed revenues

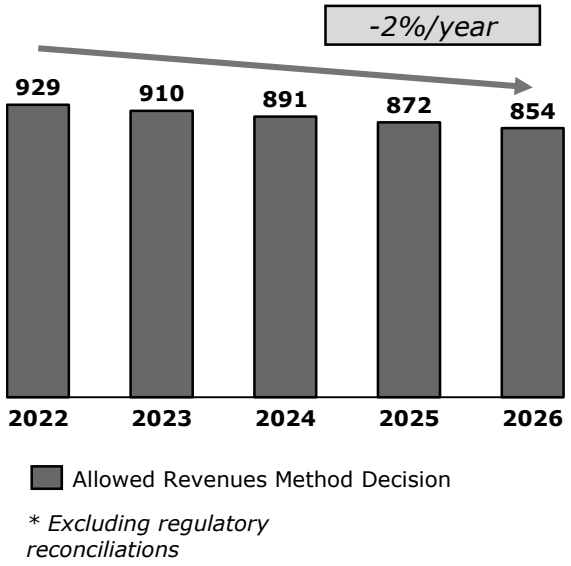
Main changes in the Method Decision:
- Allowed revenues decrease by 2% on a yearly basis

- ACM changed the Regulated Asset Base calculations by distinguishing:
  - '*doorrollen*' of existing investments, i.e. depreciate existing asset base during the regulatory period
  - '*bijschatten*', reestimate new investments.
    - Investments with a depreciation period >10 years are reconciliated in the yearly tariff decisions

- ACM applies an accelerated depreciation factor of 1,3 instead of linear depreciation

Main implications for regulatory reconciliations in tariff decision:
- New set of regulatory reconciliations are added:
  - New investments
  - WACC (risk free rate, A-rated utilities index)

The main implication is that the predictabilty of allowed revenues and thus tariffs has substantially decreased.



** Excluding regulatory reconciliations*

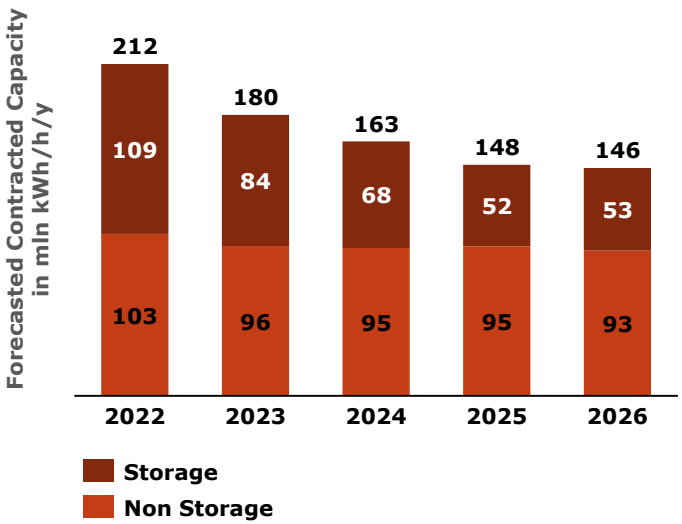
FCC development 2022-2026: storage bookings decline sharply

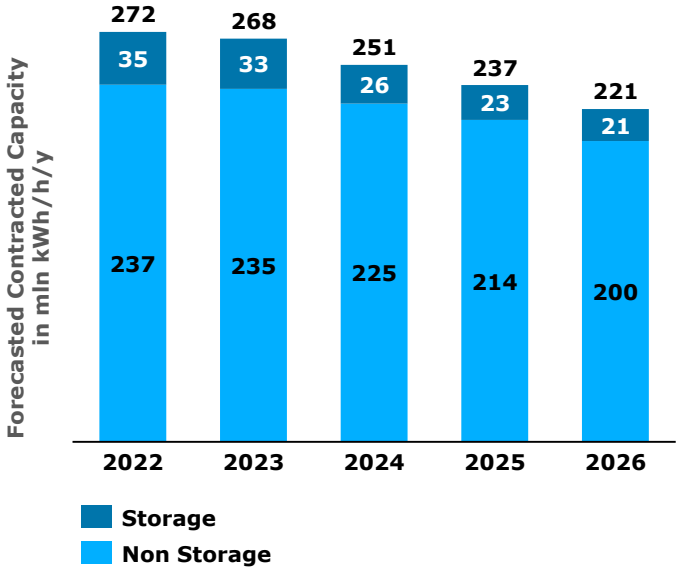
Entry
FCC decreases due to:

- Storage declines 17% per year;
- Non-storage declines by 3% per year;
- Production decreases;
- Border points and LNG remain stable

Exit
FCC decreases less than entry. Main drivers:

- Storage declines by 12% per year
- Non-storage declines by 4% per year;
- Substantial decrease in exit border points;
- Industry and DSO exits remain stable





Tariff development 2022–2026: regulatory reconciliations do not allow for a reliable forecast

Two levers determine tariffs:
1. Allowed revenues
2. FCC

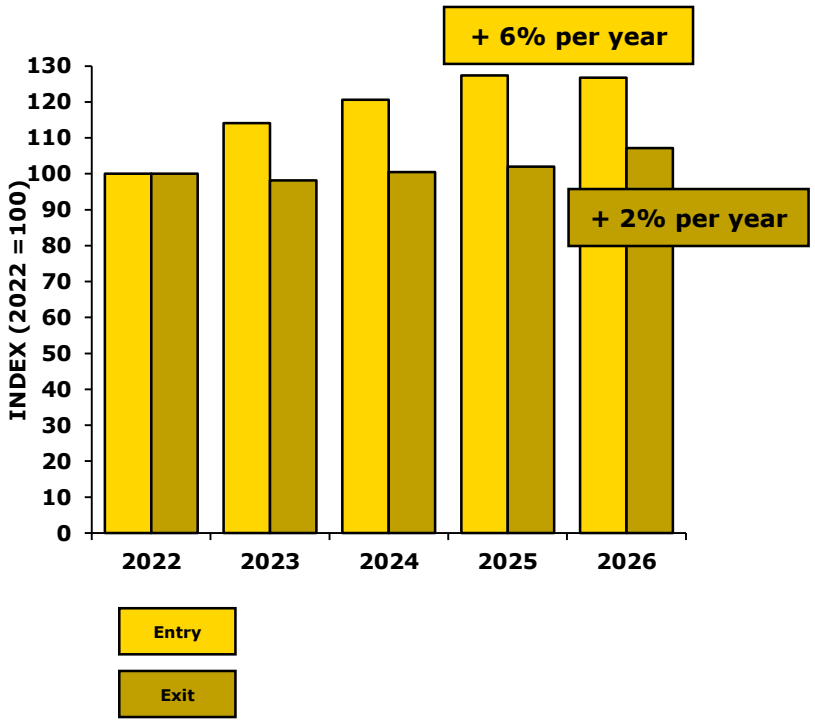
Allowed revenues decrease by 2% per year (compounded)

FCC declines on average by 7% per year

Entry tariff increases by 6% per year
Exit tariff increases by 2% per year

Disclaimer:
Excluding all regulatory reconciliations; The high level of regulatory reconciliation in the new method decision substantially complicates tariff outlooks.

tariff outlook



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

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Next steps

Early March 2021:

- GTS will send tariff proposal 2022 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 two weeks after publication on ACM website
- GTS publishes proposed neutrality charge on GTS website

Mid-end May 2021:

- ACM determines final reservation prices in tariff decision 2022 and publishes this on ACM website
- GTS publishes final neutrality charge in parallel with tariff decision
- GTS will process tariffs 2022 in GTS ICT systems
- GTS will determine entry/exit network points and publishes this in TSC at GTS website

1 jan 2022:

- Start of 2022 tariffs

Thank you for your attention!

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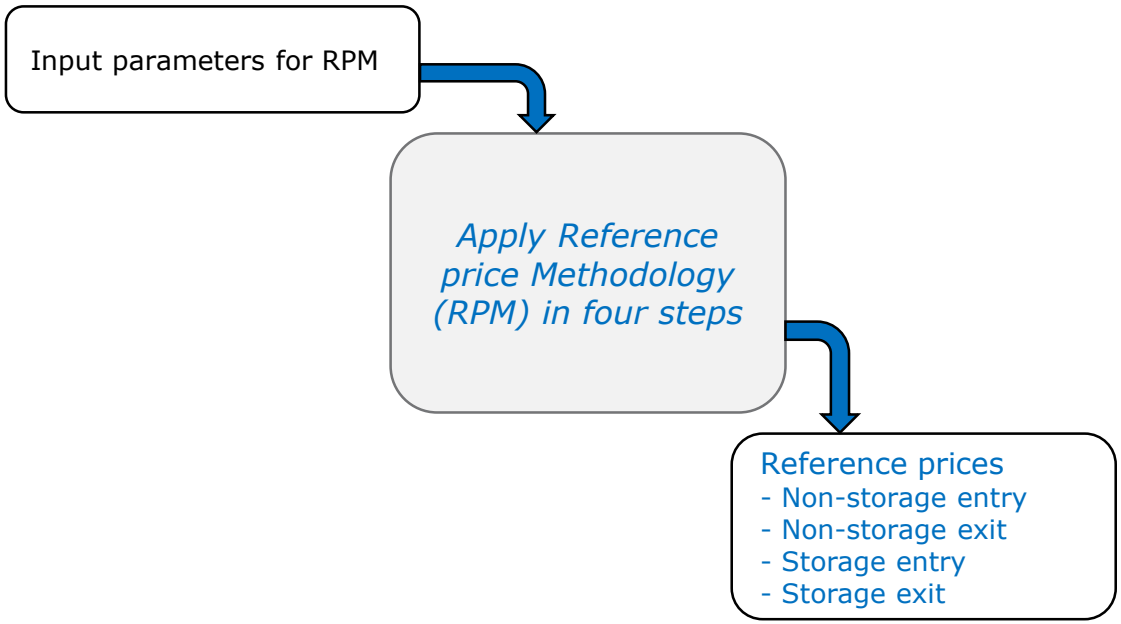
Appendix

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

1. How to determine Reference prices

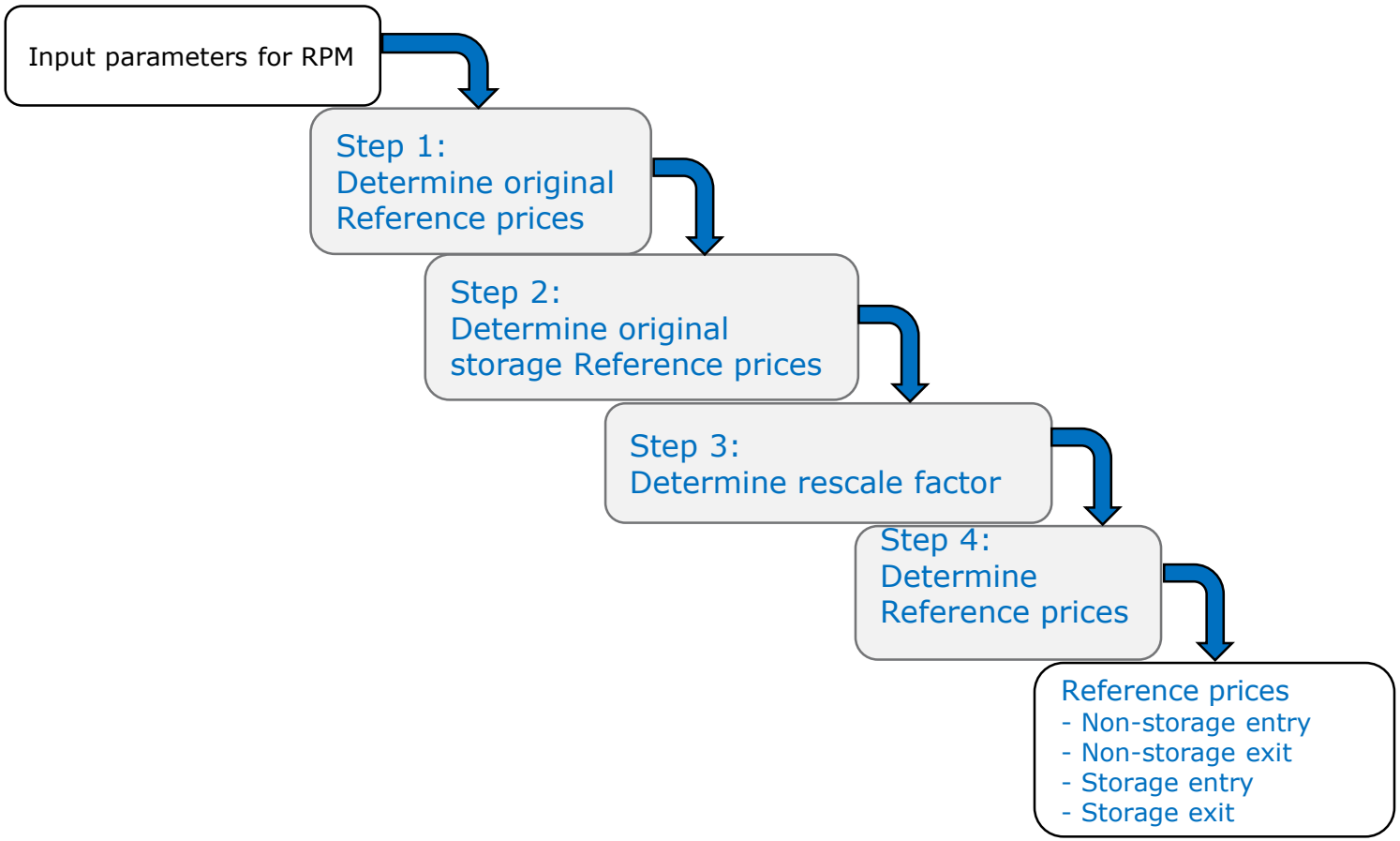
'Reference price' means the price for the yearly firm standard capacity product



1. Input parameters for 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		tariff decision by ACM, yearly
Forecasted contracted entry capacity		
Forecasted contracted exit capacity		
Forecasted contracted entry Storage capacity		
Forecasted contracted exit Storage capacity		

1. Reference price methodology (RPM) in four steps



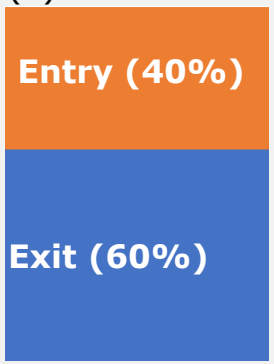
1. Step 1: Determine Original Reference prices

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

1. Step 2: Determine original storage Reference price

Original reference price

Storage discount (60%)

Step 2:
Determine original storage Reference price

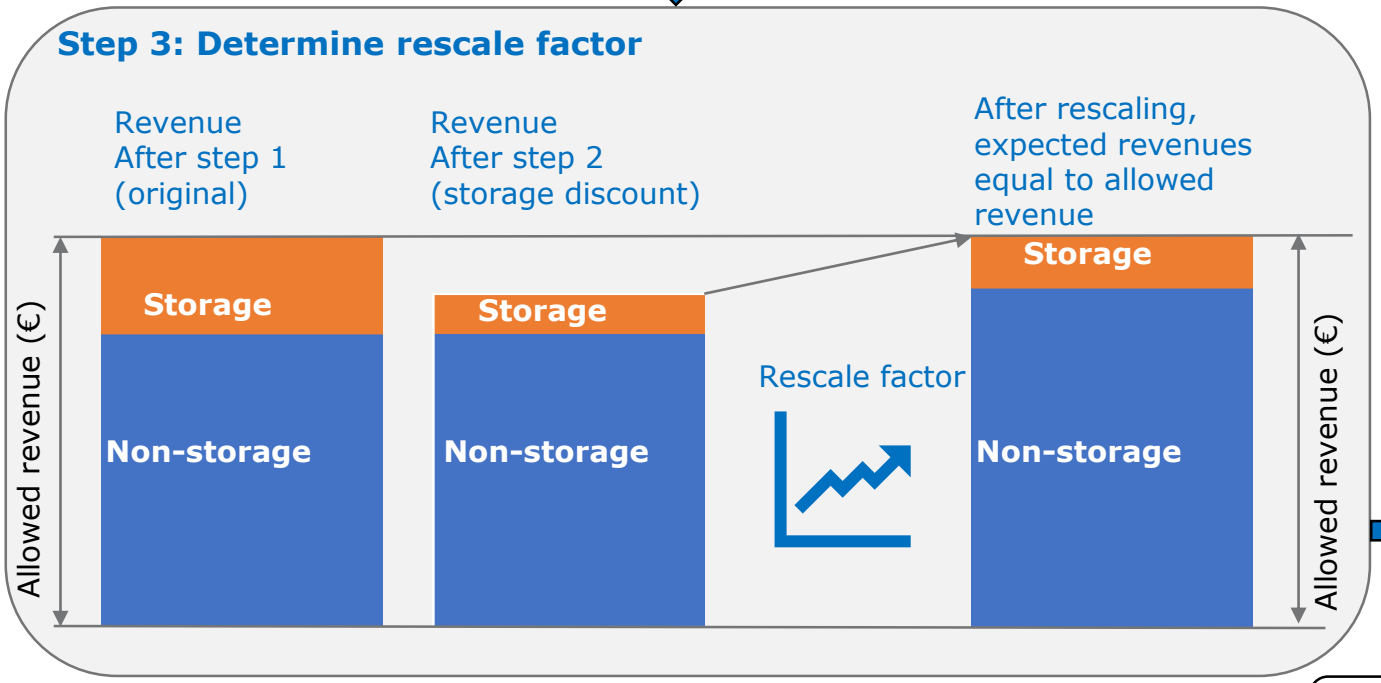
Apply storage discount to original Reference price

& Storage discount (60%)

Original storage Reference price

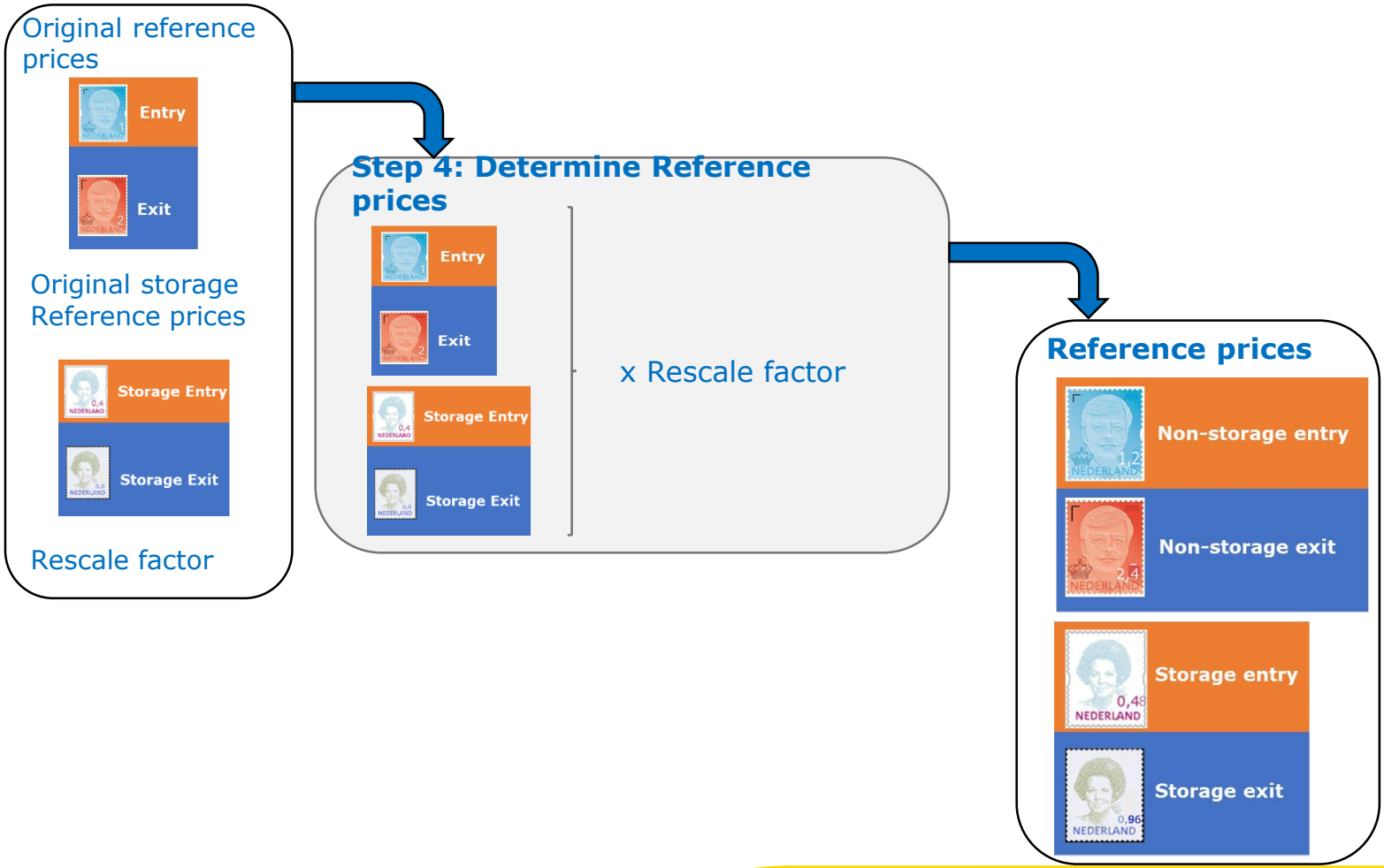
1. Step 3: Determine rescale factor

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



Rescale factor

1. Step 4: Determine Reference prices



2. 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

3. Overview of proposed all-in 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	2,20014984	1,05313337	0,50032311	0,01979984	0,00082500
February			0,42203094	0,01849181	0,00077050
March			0,33831372	0,01338625	0,00055776
April		0,48819215	0,23300491	0,00952544	0,00039689
May			0,18947810	0,00750010	0,00031251
June			0,16275081	0,00665621	0,00027734
July		0,38264524	0,15556265	0,00614987	0,00025625
August			0,14799473	0,00585451	0,00024394
September			0,15569828	0,00637139	0,00026547
October		0,82005311	0,20881833	0,00827015	0,00034459
November			0,32740037	0,01338625	0,00055776
December			0,44706743	0,01769011	0,00073708

3. Overview of proposed all-in 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	2,56998361	1,23015962	0,58442483	0,02312809	0,00096367
February			0,49297214	0,02160018	0,00090001
March			0,39518251	0,01563642	0,00065152
April		0,57025472	0,27217182	0,01112662	0,00046361
May			0,22132840	0,00876083	0,00036503
June			0,19010838	0,00777508	0,00032396
July		0,44696592	0,18171192	0,00718363	0,00029932
August			0,17287189	0,00683862	0,00028494
September			0,18187035	0,00744239	0,0003101
October		0,95789979	0,24391961	0,00966032	0,00040251
November			0,38243468	0,01563642	0,00065152
December			0,52221715	0,02066372	0,00086099

3. Overview of proposed all-in 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	0,88005994	0,42125335	0,20012924	0,00791994	0,00033000
February			0,16881237	0,00739673	0,00030820
March			0,13532549	0,0053545	0,00022311
April		0,19527686	0,09320196	0,00381017	0,00015876
May			0,07579125	0,00300004	0,00012500
June			0,06510032	0,00266248	0,00011094
July		0,15305809	0,06222506	0,00245995	0,0001025
August			0,05919789	0,0023418	0,00009757
September			0,06227931	0,00254855	0,00010619
October		0,32802124	0,08352733	0,00330806	0,00013783
November			0,13096015	0,0053545	0,00022311
December			0,17882697	0,00707605	0,00029484

3. Overview of proposed all-in 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	1,02799344	0,49206385	0,23376993	0,00925124	0,00038547
February			0,19718885	0,00864008	0,00036000
March			0,158073	0,00625456	0,00026061
April		0,22810189	0,10886873	0,00445064	0,00018545
May			0,08853136	0,00350433	0,00014602
June			0,07604335	0,00311004	0,00012959
July		0,17878637	0,07268477	0,00287345	0,00011973
August			0,06914875	0,00273545	0,00011397
September			0,07274814	0,00297696	0,00012404
October		0,38315991	0,09756785	0,00386413	0,00016101
November			0,15297388	0,00625456	0,00026061
December			0,20888686	0,00826548	0,00034439

4. 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 13, 14 & 37-44
GTS shows which Reference prices will be proposed	slide 2
GTS makes a comparison with the prices for the previous year	slide 25
GTS explains how she determines the proposed forecasted contracted capacity	slide 16-18
GTS explains which regulatory reconciliation and corrections it wishes to propose	slide 50
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 27
GTS will publish the oral explanation (this presentation) on its website	end February 2021

5. Details of regulatory reconciliation T-2 and corrections

regulatory reconciliation and corrections	Total *€ mln.*	Link to Method Decision 2017-2021
Purchase costs energy (only QC)	39	Chapter 9.2.1
Revenue-cap regulation	-3	Chapter 9.3
Administrative imbalance	8	Chapter 9.2.4
Over subscription and buy back	-4	Chapter 9.4.3
Auction premium	-2	Chapter 9.4.2
Other corrections	0	
TOTAL (rounded)	**38**	

regulatory reconciliation and corrections	Total *€ mln.*	Link to Method Decision 2022-2026
Investment costs with a depreciation period > 10y	-7	Chapter 8.3.6
Disinvestments and revenues from disinvestments	7	Chapter 8.3.7
Decrease in OPEX due to disinvestments	-1	Chapter 7.3.3
Other corrections	4	
TOTAL (rounded)	**4**	

6. 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 2022 the neutrality charge amounts to approximately EUR -0,5 mln.

Neutrality charge calculation (using RPM method)

Input parameters for RPM

Step 1: Determine original Reference prices
Entry: (-0.52 * 40%) / 212 = - €0.0010
Exit: (-0.52 * 60%) / 273 = - €0.0011

Step 2: Determine original storage Reference prices
Entry: - €0.0010 * (1 - 60%) = - €0.0004
Exit: - €0.0011 * (1 - 60%) = - €0.0005

Step 3:Determine rescale factor
Revenue after step 1: - 0.52 M€
Revenue after step 2: - 0.43 M€
Rescale factor: -0.52 / -0.43 = 1.204

Step 4: Determine Reference prices
- Non-storage entry: - €0.0010 * 1.204 = - €0.0012
- Non-storage exit: - €0.0011 * 1.204 = - €0.0014
- Storage entry: - €0.0004 * 1.204 = - €0.0005
- Storage exit: - €0.0005 * 1.204 = - €0.0005

Neutrality charges
- Non-storage entry: - €0.0012
- Non-storage exit: - €0.0014
- Storage entry: - €0.0005
- Storage exit: - €0.0005