



ACER



European Union Agency for the Cooperation
of Energy Regulators

Energy Community Regulatory School Training Course - Increasing transparency of gas transmission tariff setting: NC TAR implementation

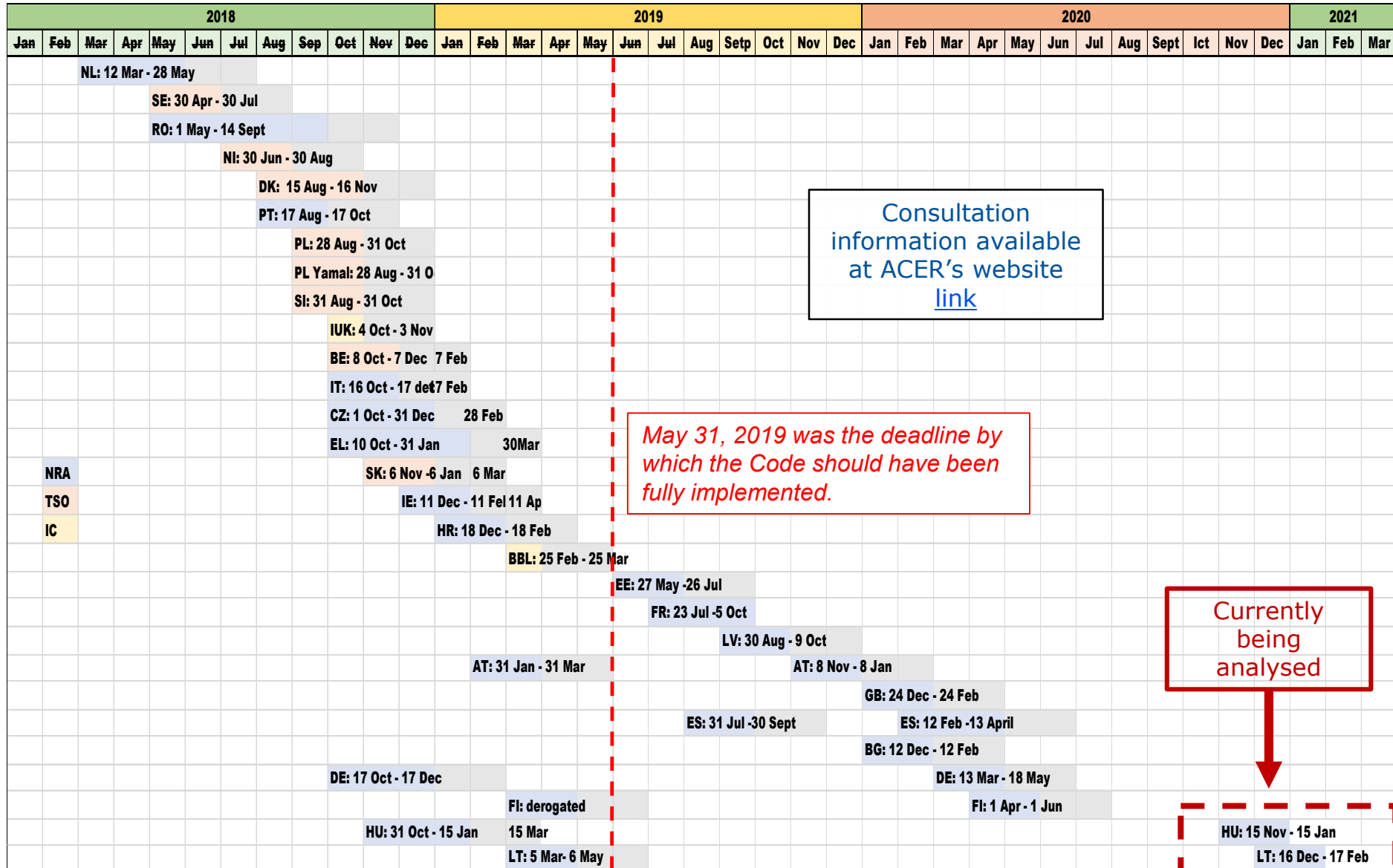
ACER

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9 March 2021

OVERVIEW

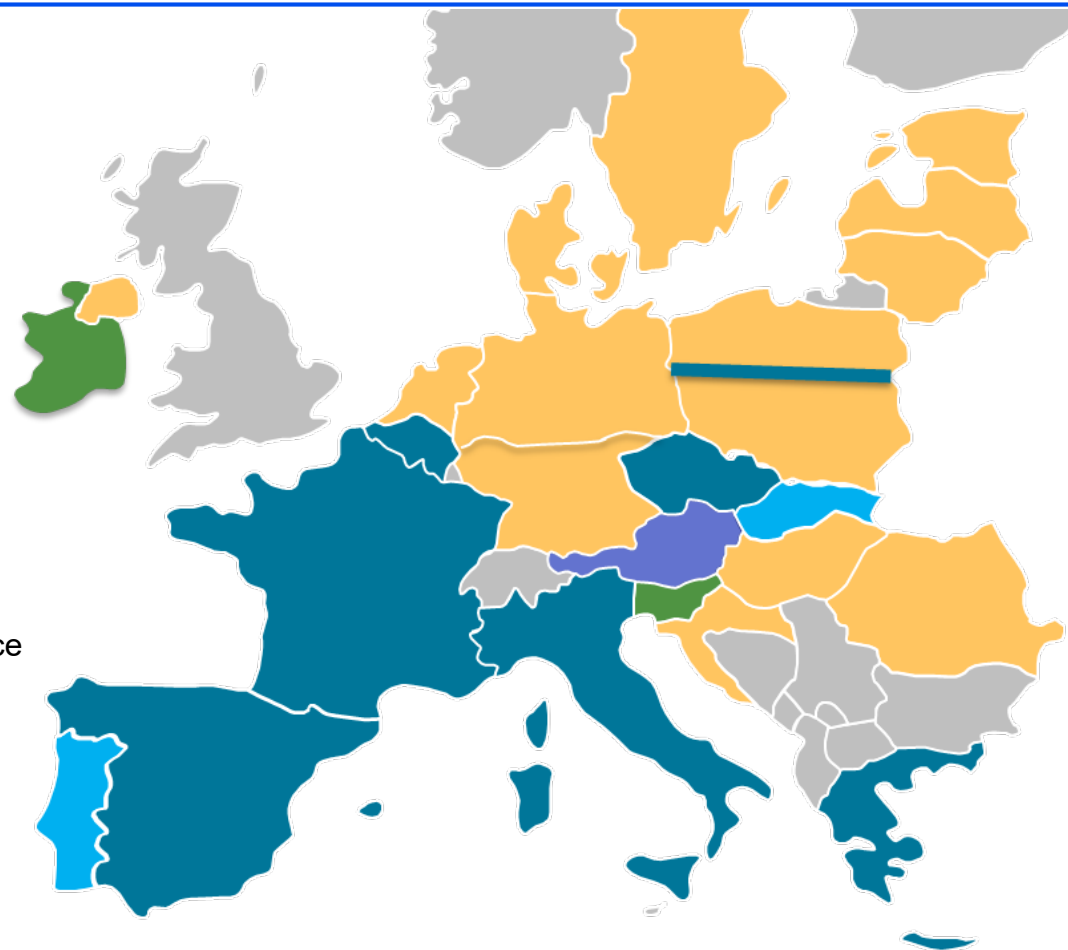
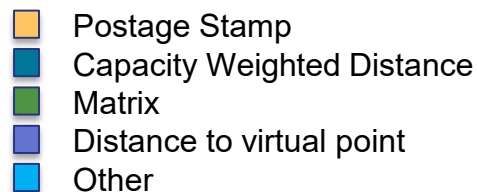
NC TAR final consultations per Member State



* Updated 22 February 2021

RPMs set in the NRA motivated decisions across the EU

Most systems use postage stamp or Capacity Weighted Distance Reference Price Methodologies:



Note on the modified CWD label:

- FR applies a CWD methodology combined with flow scenarios (applicable to entries from LNG, the exit to ES, the exit to CH and domestic points), and a CAA used as an input to the methodology to set equal unit costs for cross-system and intra-system use.
- PT applies a CWD methodology with the cost drivers of effective capacity and effective distance.
- PL Yamal applies a CWD methodology where the unit costs for the utilisation of the pipeline are set to be equal.

- **Large amount of information shared** with stakeholders and the Agency, although not always sufficient for building full a understanding of the methodologies:
- **Positive experience:** NRAs & TSOs made an effort to increase clarity and provide information in English
- **Room for improvement** to further facilitate the assessment of RPMs
 - >> *partial /inconsistent information provision in the consultations*
 - >> *simplified models not fully allowing to calculate and forecast tariffs.*
- Overall, **transparency improved**, but not to the same level across Member States

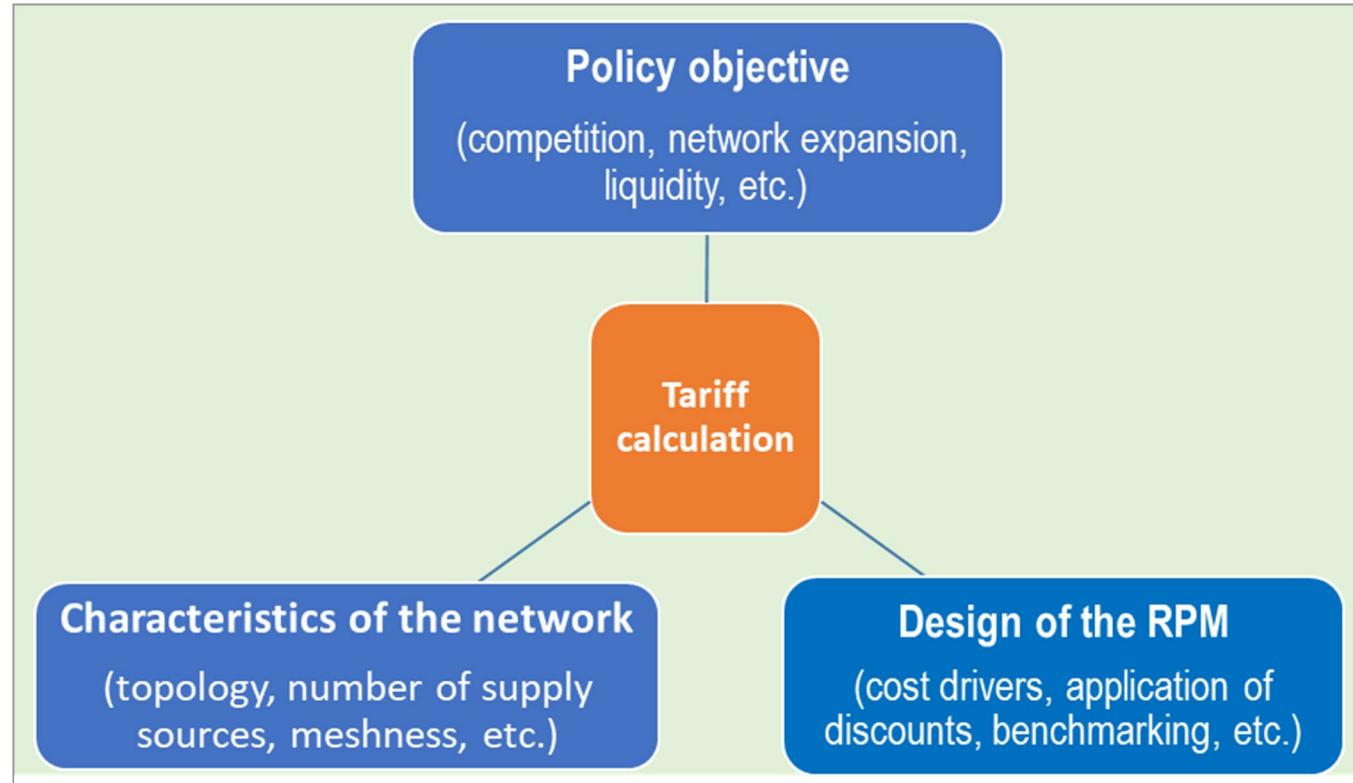
TRANSPARENCY

National policy goals differ, so the NC is applied in different contexts.

- Policy goals had clear impact on tariffs but were **not always made explicit**, hence could not be fully assessed.
 - » **Transit countries with significant volume risk.** The NC TAR does not provide specific measures to protect domestic users. The options chosen can lead to partial incompliance with NC TAR rules. The measures chosen were not clearly assessed in the consultation.
 - » **Networks with few supply sources.** Some options may seek at lowering the costs to additional sources/ entries. Such options often went beyond the rules of the NC TAR (by socialising LNG regasification costs).
 - » **Networks with points in competition.** Some consultations proposed questionable options such as an in-compliant application of benchmarking (SK), or the lowering of tariffs associated to specific points (PT).
- **The promotion of wholesale competition on the national market** led to many consultations proposing postage stamp methodologies or the equalisation of entry points.
- **Equal tariffs for domestic customers** often led to the equalisation of all domestic exits.
- **The expansion of networks** led to the use of more complex methodologies providing locational signals that were based on unit costs (IE, PT).

Transparency has greatly improved, but not sufficiently

- Complex methodologies imply a **trade-off between transparency and cost-reflectivity**:
 - » Postage stamp methodologies provided greater transparency, but simplified the attribution of costs.
 - » Simplified tariff models were not sufficient to calculate and forecast tariffs in case of complex methodologies.
 - » More complex RPMs, require greater transparency
- The Agency required and received **additional information** from NRAs/TSOs to assess the consultations.
 - » Cooperation with ACER and NRAs was generally positive.
 - » Information was not sufficient or was not made available in time upon request (BE, EE).
 - » The Agency suggested in some cases to extend the consultation and/or to publish additional information (DK, EL, FR, PL, RO).
- Overall, the information released did not match the information needed to fully understand the methodologies. The Agency suggests to extend or repeat consultation when this is the case.



- Enabling transparency requires justifying several aspects:
 - » Design of the RPM
 - » Characteristics of the network
 - » Policy objective

REFERENCE PRICE METHODOLOGIES AND CROSS-SUBSIDIES

- In general, the Agency missed:
 - » A justification of the choice of cost drivers.
 - » A clear explanation of the characteristics of the network.
 - » These elements reduced the usefulness of the comparison tools of the NC TAR (cost allocation assessment, comparison with CWD, etc.)
- The CAA and the comparison with the CWD was often not well adapted to assess the appropriateness of the RPMs:
 - » The CAA requires distinguishing the physical cost drivers that are correlated to the actual costs (technical capacity and distance) from the drivers used to charge network users (e.g. booked capacity, commodity).
 - » CAA is useful, but not sufficient (heterogeneous capacity products and asset depreciation).
- In the absence of such information, **RPMs could only be partially assessed.**

Cross-subsidies could be better controlled with a more elaborated regulatory framework on:

1. **Regional networks** (limits between transmission and local networks are not clearly defined at EU level)
2. **Non-transmission charges** recovered by TSOs (storage, LNG, gas quality conversion...)
3. **Volume risk** (risk assessment substantiating potential premium, identification of the assets at risk)
4. **Flow scenarios** (selection of “relevant flow scenarios” should be justified. How does it allow to better reflect the use and the costs of the transmission system?)
5. **Tariff adjustments** based on benchmarking (should only relate to situations where several supply routes are in competition)
6. **Inter TSO Compensation mechanisms** (the consistency between the ITC and the respective RPMs of the involved TSOs is not always assessed)

- The regulation does not clearly define the limit between transmission and distribution.
- Several NRAs used the concept of Regional / Local networks to address the case of regional branches dedicated to supply domestic consumers but operated by TSOs:
 - » LT, FR, IT, PT...

Advantages	Drawbacks
Cost-reflective No distortion of cross-border trade	Complex to implement with a single RPM Need of additional transparency

- Agency's position:
 - » All NRAs should assess if their TSOs operate such regional branches.
 - » The chosen RPM should allow to allocate the corresponding costs to domestic consumers.
 - » If a single RPM cannot achieve this objective, this regional branches should be classified as distribution network.

- The NC TAR mentions the notion of volume risk (Art 7(d)). More specifically, volume risk associated with cross-system use should not be allocated to domestic consumers.
- Nonetheless, the NC TAR does not elaborate on how to achieve this objective.
- In some systems:
 - » TSOs receive a higher remuneration for cross-border assets and
 - » Hybrid regulatory systems are used (revenue cap for domestic use and price cap for cross border flows).
- Agency's position:
 - » The mitigation of cross-border volume risk leads to complex regulatory mechanisms that may induce detrimental effects (discrimination between network users, a decrease in the competitiveness of a transit route which paradoxically would increase the volume risk...).
 - » Such mechanisms require additional transparency:
 - Distinction and publication of the respective values of cross-border assets and domestic assets
 - Clear and public methodology to calculate a premium proportionate to the risk.

- In several countries, TSOs collect revenues that do not correspond to transmission activities:
 - » LNG terminal: EL, IT
 - » Storage facilities: FR, IT
 - » Levies or taxes: DE (L-gas network conversion to H-gas, biogas)
 - » Similar case: in ES, revenues of all gas infrastructure (TSO, DSO, LNG) are collected at domestic points through a common settlement mechanism.
- NRAs usually justify these mechanisms with two arguments:
 - » The market value of the services provided by a specific facility is not sufficient to cover its costs
 - » This facility induces significant positive externalities (SoS, improved competition, energy transition...)
- These mechanisms may induce 3 kinds of detrimental effects:
 1. Inefficient infrastructure
 2. Distorted competition between gas suppliers
 3. Undue cross-subsidies between gas consumers

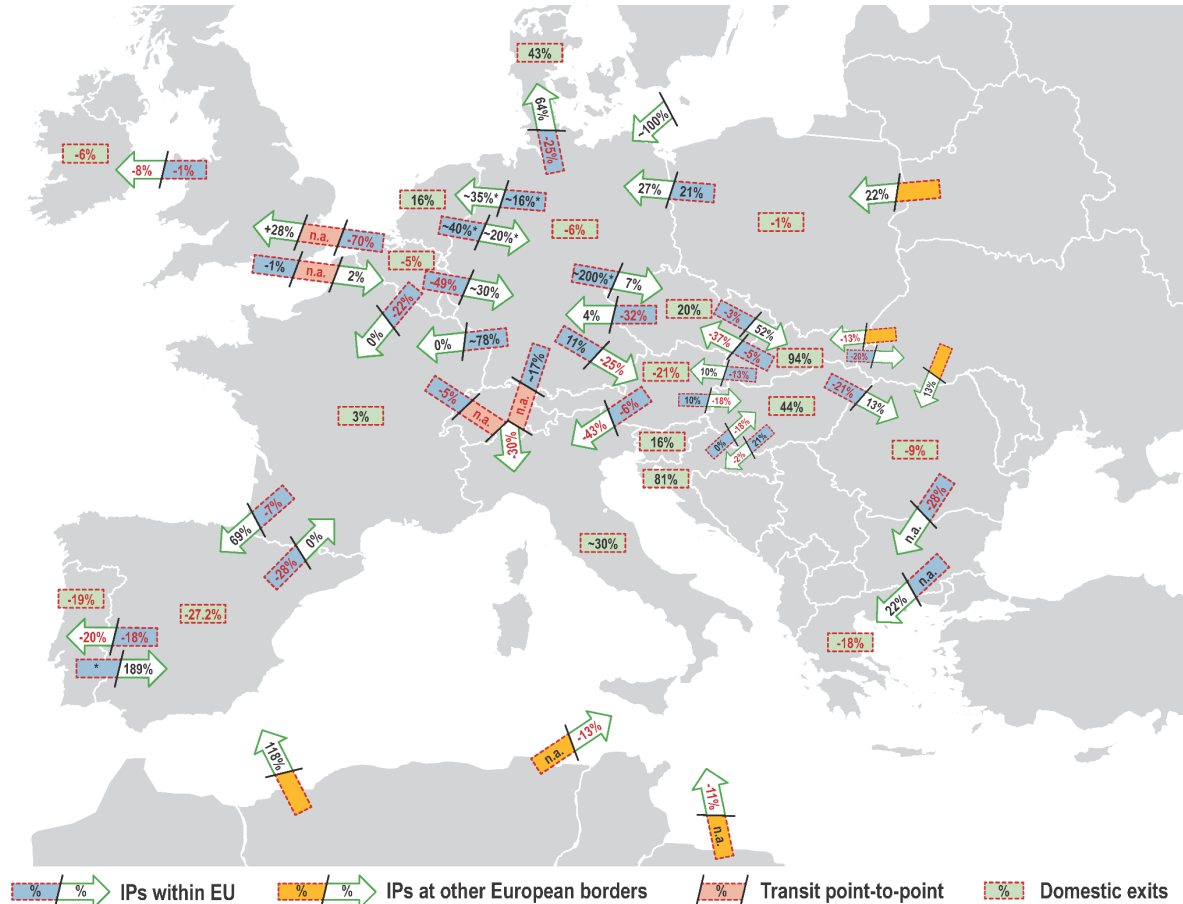
- The transmission assets jointly used within the regional market zone and their associated costs should be identified to ensure an acceptable level of cost-reflectivity at a regional level.
 - » Such an assessment should be based on a forecast of the flows across the FINESLAT market zone, and these costs should be logged into the ITC mechanism.

- The ITC mechanism should ideally aim at allocating these costs in a manner that is in line with the distribution of the benefits of the market integration.
 - » This kind of mechanism would allow to allocate efficient costs (and exclude sunk costs of over-dimensioned infrastructures) to their beneficiaries.

- Adjust the domestic exits of each TSOs within the regional market, to allow them to recover their allowed or target revenue from domestic users after the contribution of cross-border users to the ITC mechanism has been established

Tariff changes after the implementation of the NC TAR

Comparison of average gas cross-border transportation tariffs before and after the TAR NC implementation for selected gas supply routes – tariff delta in euros/MWh



- New RPMs lead to tariff increases at selected IPs, possible affecting hub prices in neighbouring markets (eg DE-FR, DE-IT, ES-PT)
- Pipeline-to-pipeline competition could explain competition for lower tariffs at IPs: AT-SI-HU, SI-IT, BE.

ALLOWED REVENUE

- 1. EU legal basis on allowed revenue**
- 2. ACER 2018 Allowed Revenue report**
- 3. Madrid Forum**
- 4. Energy transition**

EU legal basis on allowed revenue

Art. 34 NC TAR

Before 6 April 2019, the Agency shall publish a report on the methodologies and parameters used to determine the allowed or target revenue of transmission system operators. The report shall be based on at least the parameters referred to in Article 30(1)(b)(iii).

NRAs shall submit to ACER, in accordance with the process defined by ACER, all necessary information related to the methodologies and parameters used to determine the allowed or target revenue of TSOs.

Art. 30(1)(b)(iii) NC TAR

- (1) **types of assets** included in the **regulated asset base** and their **aggregated value**;
- (2) **cost of capital** and its **calculation methodology**;
- (3) **capital expenditures**, including:
 - (a) methodologies to determine the **initial value of the assets**;
 - (b) methodologies to **re-evaluate the assets**;
 - (c) explanations of the **evolution of the value of the assets**;
 - (d) **depreciation periods** and **amounts** per asset type.
- (4) **operational expenditures**;
- (5) **incentive mechanisms** and **efficiency targets**;
- (6) **inflation indices**.

Art. 13 Gas Regulation

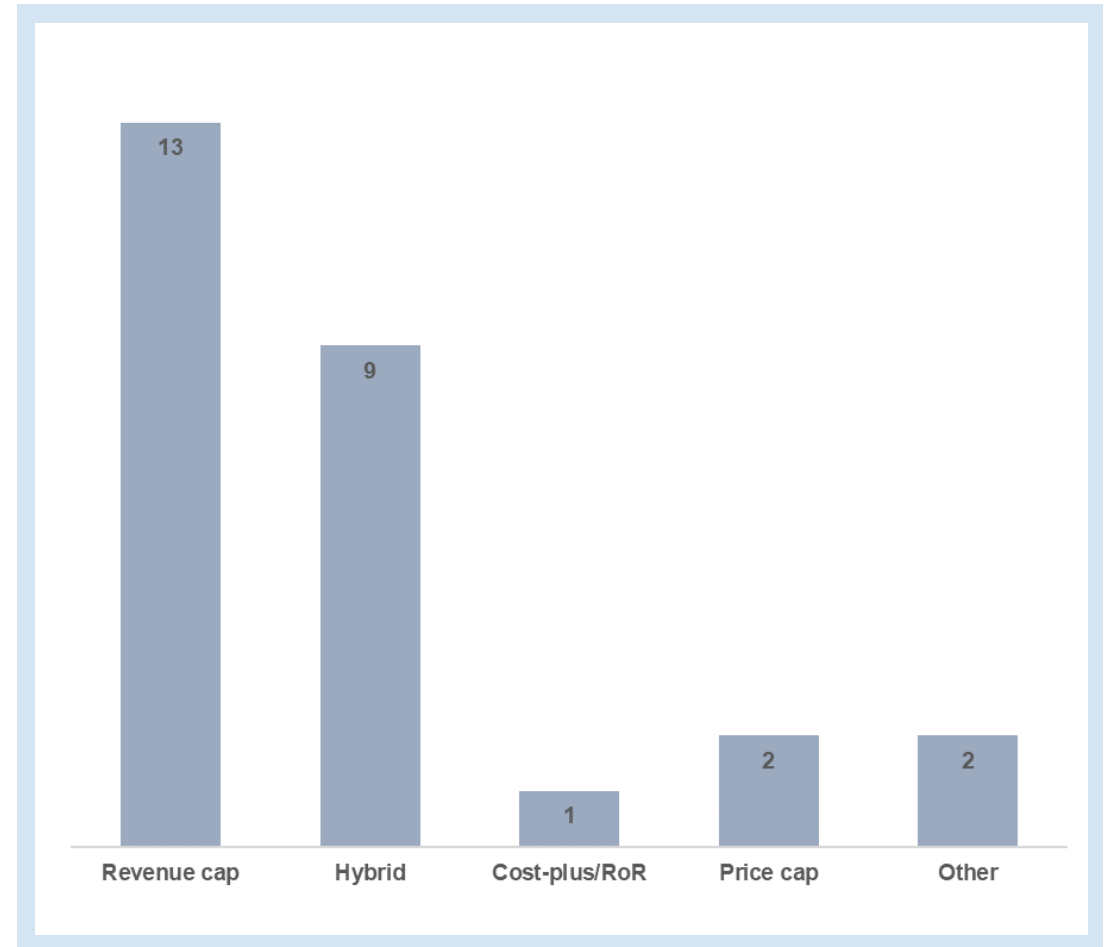
Tariffs, or the methodologies used to calculate them, (...) shall be transparent, take into account the need for system integrity and its improvement and reflect the actual costs incurred, insofar as such costs correspond to those of an efficient and structurally comparable network operator (...).

- The Gas Regulation is directly binding, without any needed to be translated to national legislation
- Which means that if the national legislation would state something contrary to the Gas Regulation, the Gas regulation prevails
- National legislation may leave room for the discretion of the NRA, but this is limited by the Gas regulation
- Regulation clearly states that the tariffs should be based on the actual costs insofar they are efficient costs.

2018 ACER AR Report

- **Description of EU Member State methodologies**
 - Overall regulatory framework
 - Determining and setting expenditures
 - The regulatory asset base
 - The weighted average cost of capital
 - Other regulatory mechanisms
- **Evaluation of EU Member State methodologies**

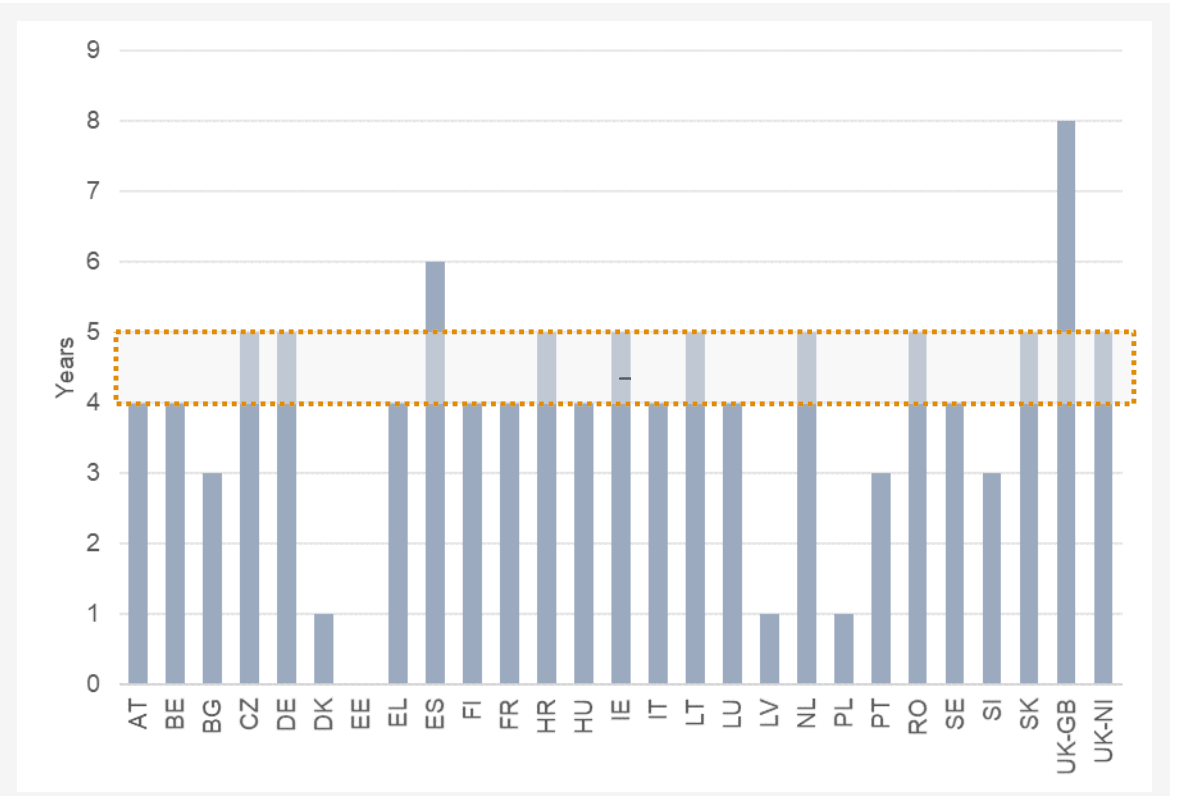
- **Five NRAs follow different approaches**
 - Greece uses a cost-plus regime
 - Estonia and Poland employ price cap regimes
 - Denmark has a variant of a cost-plus regime
 - Slovakia benchmark tariffs against competing pipelines
 - We understand that both Denmark and Slovakia's regimes are currently under review



Length of regulatory period

Most countries have adopted four- or five-year regulatory periods

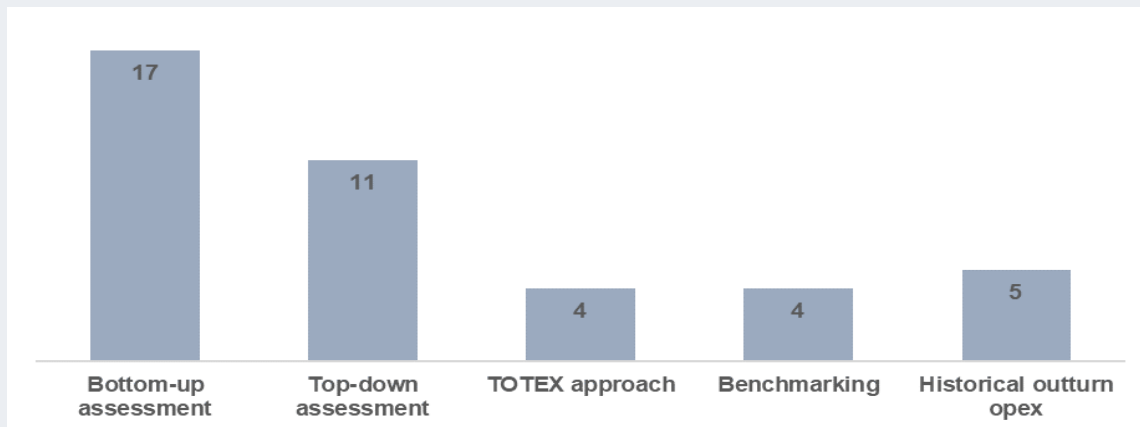
- **Four-year** or **five-year** period employed by 18 NRAs
- Three NRAs have **three-year** periods
 - Bulgaria, Portugal, and Slovenia
- Three NRAs have **one-year** periods
 - Denmark, Latvia, and Poland
- Exceptions:
 - Spain has a **six-year** regulatory period
 - Great Britain currently has an **eight-year** term
 - Estonia does not have a defined regulatory period



Operating Expenditure (OPEX) Largely bottom-up or top-down approaches - many combined approaches

- ▶ **Bottom-up assessments most common**
 - Used by 17 NRAs
- ▶ **Top-down assessments also prevalent**
 - Used by 11 NRAs
- ▶ **Eight countries use two+ approaches**
- ▶ **Benchmarking relatively uncommon (only four NRAs)**

OPEX approach tally



Varied approaches to OPEX



▶ **Bottom-up assessments the main tool**

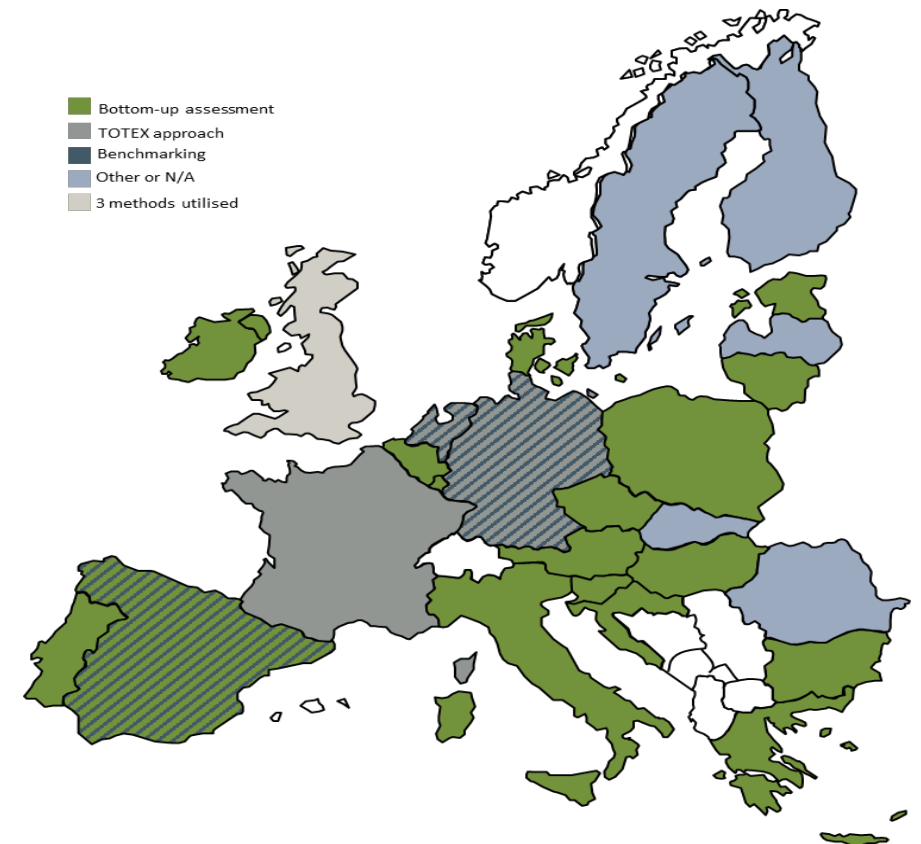
- 19 NRAs

▶ **TOTEX countries** (Germany, Netherlands, Great Britain), and partially Spain, **use benchmarking**

▶ **Five 'other' cases**

- **Ex post efficiency assessments** in Sweden and Finland
- Capital expenditure assessed as part of TYNDP in Romania
 - May be **overlap with bottom-up** approach
- **Cost-plus regime** means no *ex ante* capital expenditure assessment in Latvia
- Slovakia **tariff comparison** approach

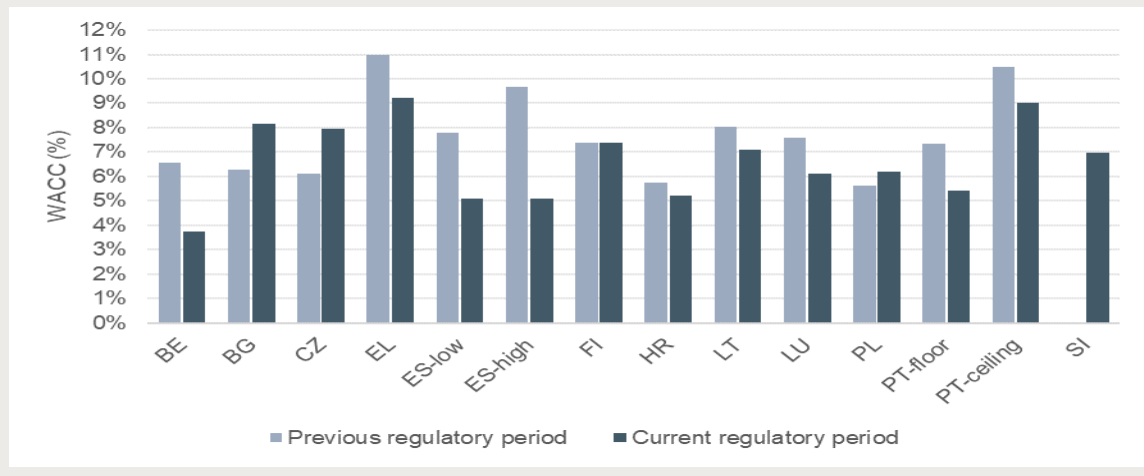
Lots of green (bottom-up assessments)



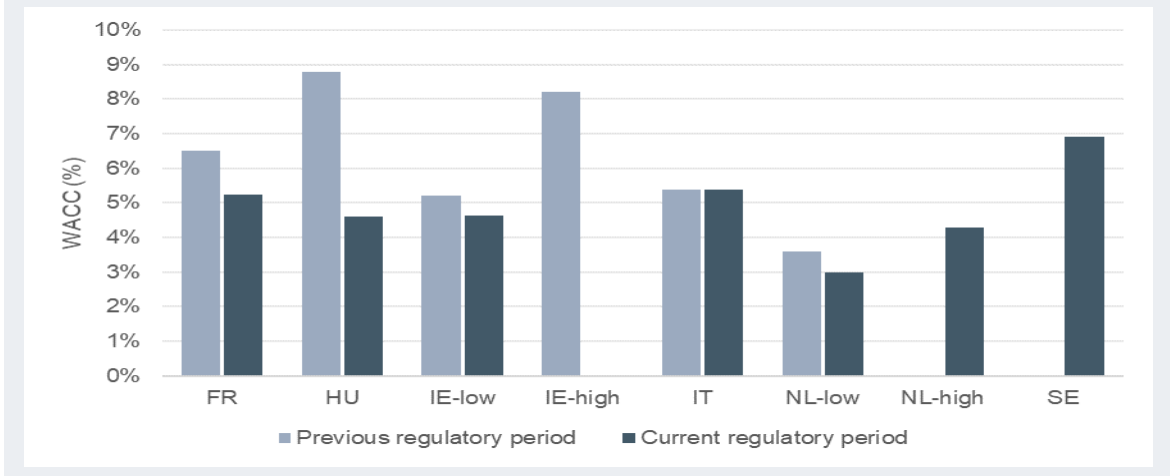
WACC values

Previous and current regulatory periods: considerable variability

Comparison of pre-tax nominal WACCs



Comparison of pre-tax real WACCs

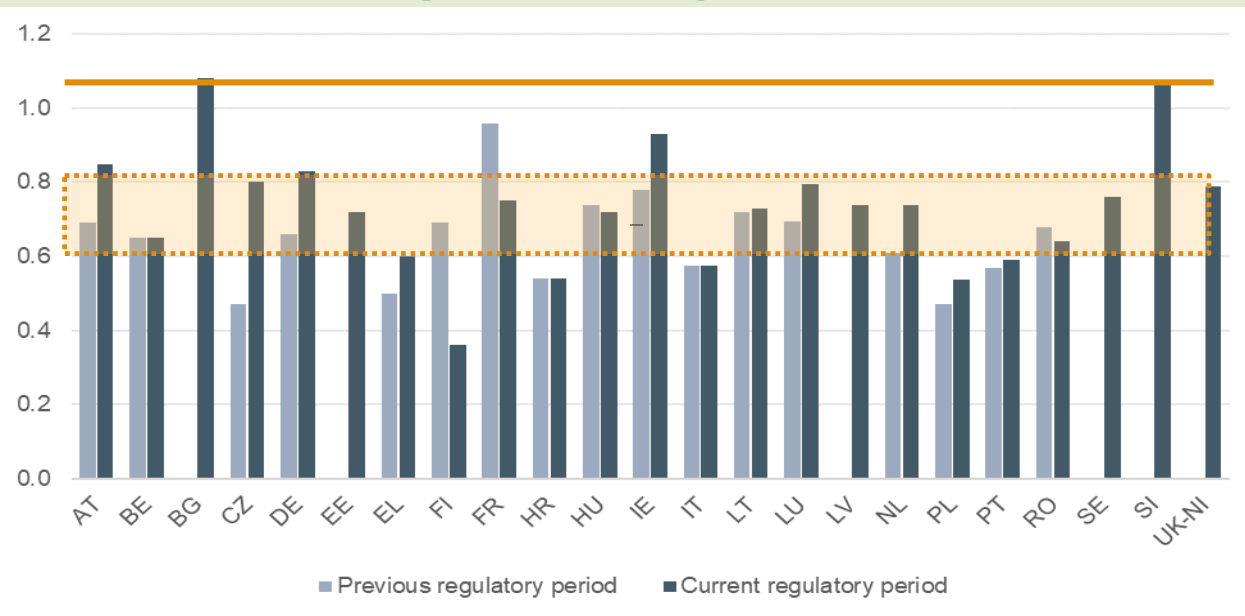


- ▶ Among WACCs that are directly comparable between previous and current regulatory periods ... **12 of 18 WACCs have declined**

WACC premiums

Allowed in Austria, Belgium, Finland, France, Italy, Latvia, Romania, Sweden
“Foreseen” in Greece, but not yet applied in practice

Equity betas for previous and current regulatory periods



- ▶ Reminder: the higher the beta, the higher the cost of equity/WACC applied
 - Equity beta multiplied by MRP and added to RFR
- ▶ **Vast majority of NRAs have an equity beta below 'one'**
 - Exceptions are Bulgaria and Slovenia
 - Bulgaria states it relies on precedent elsewhere
 - Slovenia calculates beta based on group of EU companies
- ▶ Most equity betas between 0.6 and 0.8
 - Three between 0.8 and 1.0
 - Five below 0.6

2019, 2020 Madrid Forum

- **The Agency Reports (on the RPMs) revealed that:**
 - » Transparency on the allowed/target revenues is not always provided.
 - » In exceptional cases consultations were based on allowed/target revenues not approved by the NRAs.
 - » In some cases, regulatory periods were not clearly defined and investments were transferred to the upcoming regulatory period.
 - » Changes in the allowed/target revenue from one regulatory period to the next were not always clearly explained.
 - » At times, the allowed/target revenue included significant premia that were not properly assessed and made proportionate with TSO risks.
 - » At times, past under-recoveries are logged to the allowed/target revenue without a clear assessment.
 - » At least in one case, the RAB had been subject to a recent and important re-evaluation without a clear justification.
- **Transparency on allowed/target revenue remains partial.**
- **The NC TAR does not fully support a systematic check** of these issues.

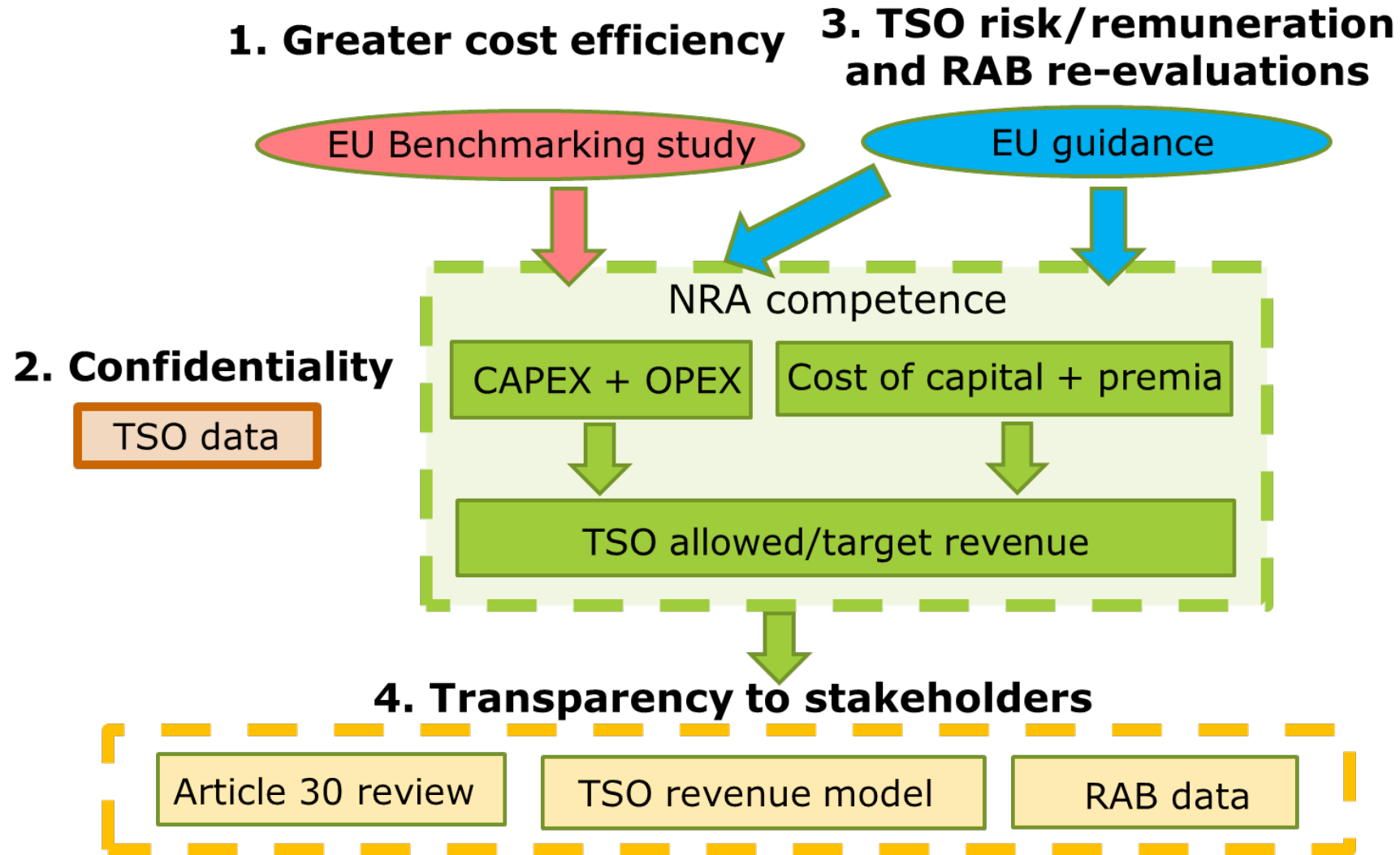
- Using efficiency scores to set AR is a core NRA competence. This is facilitated by comparing TSO costs, which is prescribed in Article 13 of the Gas Regulation.
- CEER undertakes a Benchmarking Study comparing the efficiency of TSO costs. Participation and financing happens on a voluntary basis.
- NRAs are working on improving the Study (e.g. study costs, usability of the results, coverage and transparency).
- The last edition shows an average TSO efficiency score of 79% (values ranging between 30%-100%). Currently, 10 NRAs do not participate.
- To improve the quality of an EU-wide efficiency benchmark, the participation should be extended to all EU TSOs.
- The Agency proposes:
 - » the adoption of legislation to ensure the full participation in a EU-wide benchmarking study
 - » the publication of the results, at least partially

- The EU Legal framework in principle lifts any confidentiality obstacle between TSOs and their respective NRAs.
- However, NRAs face limitations related to TSO data classified as confidential towards third parties, including other NRAs (business secret considerations or intellectual property rights' agreements).
- This is the case for requesting the participation of TSOs in the CEER Benchmarking Study, for publishing the results of the Study and for publishing additional data on TSOs' allowed/target revenue.
- In the Agency's view, such limitations can limit the comparability and understanding of benchmarking results by NRAs.
- It is advisable to strengthen existing legislation to facilitate information sharing between NRAs and to make sure that all NRAs can participate in such studies, while respecting business secrets where relevant.
- Ways to work with confidential TSO data among NRAs in the exercise of their functions as foreseen in the EU legal framework should be strengthened.

- The comparability of the remuneration of TSOs is complex as it is based on multiple approaches and parameters and requires processing data on a case-by-case basis.
- Regulatory tools for setting TSOs' remuneration are not always sufficiently transparent or justified (e.g. risk premia, RAB revaluations)
- The Agency proposes to review the proportionality between the risk and the remuneration set for TSOs (the approach and methodology to be used are being discussed with NRAs)
- The Agency proposes a progress report on the following:
 1. WACC parameters and risk premia
 2. RAB re-evaluations
 3. Regulatory accounting rules
- The objective is to provide EU guidance for NRAs on setting the remuneration of TSOs.
- This work will contribute to share the existing practices between NRAs and will facilitate consistent comparisons between TSOs.

- The Agency sees value in adapting the current publication requirements (Article 30 of the NC TAR) in a more granular way.
 - » A proposal has been agreed by NRAs. Published in the 2018 *ACER Report Methodologies Target Revenue of Gas TSOs* ([link](#)).
- The Agency sees value in NRAs publishing their full or simplified model to display the main elements of the revenue methodology and reproduce the calculation of the allowed revenue.
 - » Currently, this information is not published by all NRAs.
- The Agency sees value in NRAs publishing historical data for the RAB values in line with the existing requirements of Article 30 of NC TAR:
 - » Initial value of the RAB
 - » Evolution of the RAB
 - » Changes in the RAB value

Summary of the ACER proposal to conduct further work on allowed revenue



The Forum welcomes the ongoing work undertaken by ACER at the request of the 33rd Madrid Forum on allowed revenues including TSO benchmarking and remuneration, and invites ACER to continue this work in close cooperation with national regulators incorporating topics related to decarbonising the gas sector.

AR ahead of the energy transition

CEER benchmark study

Regulatory accounting (new)

TSO costs ahead of the energy transition (new)

- Natural gas network utilisation scenarios
- Fully depreciated assets: maintenance costs vs reinvestments
- TSO risk sharing agreements: who bears the risk of unutilised infrastructure?
- Stranded assets and cost spiralling
- Aligning allowed revenue parameters: depreciation

Repurposing of natural gas infrastructure for H2 (new)

- H2 repurposing
- RAB revaluations

TSO risk and remuneration

- WACC and premia comparison
- Risk associated with the energy transition (new)

Transparency

- Article 30
- Allowed revenue model
- RAB historical values

Rationale

- Accounting rules are key for the cost control of the TSO (e.g. intra-holding services, separate accounting, TSO tendering, etc)
- Key to properly implement the regulatory regime (classification between opex and capex...)
- Link with the reinvestment topic.
- It is not clear to ACER whether basic standards are currently in place across EU.

NRA survey

- Is there separate accounting for the TSO regulated transmission activities?
- Are the TSO audits public?
- Does the NRA set the auditing rules?
- Rules applicable for intra-holding services, associated services, services in competition (if any).

Possible outcomes

- Overview of the different regulatory practices to accounting.
- Possible guidelines and best practices on regulatory accounting.

Rationale

- Discussion on AR parameters (e.g. depreciation, reinvestments, TSO risk) requires clarity on the utilisation of the network (scenarios)

NRA survey

- Utilisation scenarios being considered by NRAs.
- Conditions/guidelines for limiting the use of natural gas set by the government.
- Scenarios that could lead to underutilisation of the natural gas network or stranding of costs.

Possible outcomes

- Identify reference scenarios used by NRAs.

Rationale

- In some networks, TSO assets are coming to the end of their depreciation periods.
- Can the technical life of assets be extended (e.g. via maintenance costs), or should these assets be replaced?
- Reinvestments will lock in costs with depreciation times possible going beyond 2050
- Are there learnings to share across NRAs?

NRA survey

- Extending asset lives of depreciated assets: what assessment from NRAs?
- Approving reinvestments: what supervision from NRAs?
- TSO remuneration for reinvestments: Are reinvestments remunerated with any form of mark-up or incentives compared to other costs?
- H2 repurposing: how is the consistency with H2 repurposing evaluated?

Possible outcomes

- Map the value and depreciation periods of reinvestments
- Best practices for extending the lives of depreciated assets via OPEX allowances
- Best practices for assessing the consistency of reinvestments with H2 repurposing

Rationale

- A decrease in natural gas demand can lead to the underutilisation of the network and stranded costs
- What instruments can NRAs use to address stranded costs (e.g. depreciation policy, asset valuation, adjustment of cost of capital, H2 repurposing, RES gases, explicit compensation outside of network tariffs)?

Points for discussion

- Who bears the risk of stranded costs / non-utilised assets?
- Who decides whether an infrastructure investment is considered stranded and needs to be decommissioned?
- Is the risk of stranded costs foreseen in the regulation applied to TSOs?
- Is there a framework for dealing with stranded costs and decommissioning decisions?
- Does the NRA have any instruments to control an increase of transmission costs for end consumers?
- Are NRAs concerned with the risk that some assets may become stranded?

Rationale

- What rules should apply when repurposing assets for H2?

NRA discussion

- Who is responsible for deciding about the transfer of assets?
- Are there criteria for deciding which assets can be transferred?
- Measures to reduce the investment costs at an early stage (e.g. late depreciation)?

Possible outcomes

- Identify possible principles (cost-reflectivity, cross-subsidisation, etc)
- AR parameters (e.g. depreciation)

Rationale

- The ACER 2018 allowed revenue report points at revaluations in the following cases: Hungary, Latvia, Austria, Denmark and Slovakia.
- ACER proposes a review of the revaluations applied per MS
- The result should clear the way for possible H2 repurposing

NRA survey

- Survey to assess RAB revaluations

NRA survey

- Review for NRAs on the revaluation practices applied.

Rationale

- As the energy transition progresses, there is a chance that TSOs are exposed to greater risk as a result of the exposure to stranded costs.

NRA survey



- Has the WACC/premia been revised in view of the energy transition?
- How is the risk of potential re-investments considered if these assets could be disposed before the end of their technical lives?
- What tools does the NRA have at hand to limit potential increases of the WACC?



Possible outcomes

- Possibly made part of other work streams (e.g. WACC comparison, stranded costs)



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