

Gas Distribution Networks Operators

Cost & Regulation Benchmark

2022 Edition

Artelys

OPTIMIZATION SOLUTIONS

ADéquations

Innovations for the 2022 Edition

Based on the feedback we have received from participants and on recent developments in the gas industry, we are extending the scope of the 2022 Edition of the “Cost & Regulation Benchmark”:

- **NEW:** We are reinforcing workshops on long-term trends that can impact the business models of DNOs, addressing themes such as hybrid tariffs and the role of green gases. Two themes will be selected and investigated through sessions including insights from experts and from recent publications.
- **NEW:** We are extending the scope of the analysis by incorporating insights that can be gained by looking at approaches by gas distribution companies beyond Europe.

We are convinced these novelties will reinforce the value brought by the “Cost & Regulation Benchmark”.

- A **TOTEX benchmark** depending on data provided by DNOs, allowing for a comparison between DNOs’ practices,
- A **regulatory benchmark** that allows to discuss the evolution of regulatory practices,

Each new edition of the benchmark gives DNOs an opportunity to:

- Improve their understanding of cost differences between their systems, and impact of regulatory regimes on cost recovery
- Exchange with other DNOs on processes, practices and key stakes related to new topics of interest,
- Enhance the panel with new DNOs and new countries.

The following pages provide an overview of the three key components of the “Cost & Regulation Benchmark”.

Key objectives of the benchmark

Originally launched in 2011 as an initiative to challenge benchmark studies undertaken by regulators to set the level of distribution tariffs, the Artelys-Adéquations benchmarks have gathered more than 15 DNOs from 13 different countries across the years.

The benchmark is structured as a participatory process based on the following three components:

- A series of **workshops**, where DNOs’ experts can gain insights into key topics of interest.

1st component – Workshops

The benchmark is **structured around several workshops** that are the key milestones of the project. Each workshop is hosted by one of the participating DNOs.

The objectives of the workshops are to:

- Offer a place to discuss technical aspects of the benchmark regarding the data shared by DNOs: solving misunderstandings regarding data collection for the TOTEX benchmark, sharing the first results and fine-tune data collection process if necessary.

- Present the results of the benchmarks (both the TOTEX benchmark and the regulatory benchmark)
- Enable the DNOs to discuss many topics both in a formal and informal way.
- Organise presentations and expert discussions on several topics, chosen by the DNOs for each of the workshops.

The workshops are also the opportunity for each of the DNOs to raise specific questions for which they want to obtain insights from their peers.

Methodology

Each workshop is an opportunity to analyse different topics. The topics are chosen each year by the DNOs according to their preferences and are often related to the outcomes of previous editions. When comparing current practices, each DNO describes the processes associated with each of their activities and suggest indicators that may be useful to compare.

Examples of the topics covered in 2021: long-term agenda imposed by the evolution of the regulation, energy balance in networks, regulatory risks, commercial policies of DNOs, training of staff, smart grids, and green projects (biomethane, H2, etc.).

Expected outcomes

Beside the formal **technical presentations**, the workshops are also an excellent opportunity for the DNOs to discuss with their peers in a more open and informal way. Traditionally, the workshops last two days with a diner gathering all participants organised on the evening of the first day. Individual presentations made by the DNOs are disseminated within the group.

NEW in 2022 Edition

In 2022, we are introducing a **new category of workshops** that address prospective topics. The objective of these workshops is to delve into topics that are expected to heavily impact the future business models of DNOs. In 2022, we propose to discuss two themes: **hybrid electricity-gas tariffs** and **hydrogen in distribution grids**. External experts will be invited for specific themes, and a summary note will be circulated to participants for each of the themes being discussed during the prospective workshops.

Furthermore, in both technical and prospective workshops, we will include a discussion of best practices from experience gained by gas distribution companies outside Europe.

2nd component – TOTEX benchmark

The TOTEX benchmark allows participants to:

- Compare the absolute level of costs,
- Understand cost differences between DNOs, and prepare for tariffs discussion with national regulatory authorities,
- Assess potential improvements of operational performance, based on controllable costs,
- Compare relevant KPIs of each activity at an international level to identify operating performance levers in the light of other DNOs' practices.

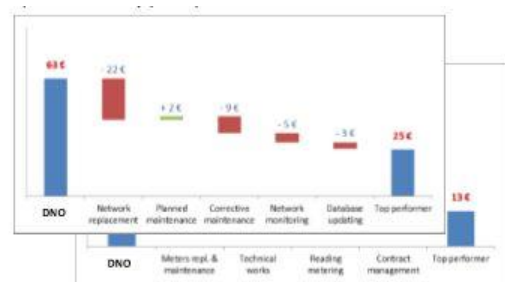


Figure 1. Explanation of standard unit cost (€/delivery point)

Methodology

As each DNO has a monopoly in its area, its cost efficiency can only be analysed if compared with DNOs operating in other geographical areas. Most often, econometric benchmarks use parametric (e.g. COLS) or non-parametric (e.g. DEA) methods but fail to capture the influence of the underlying environmental factors and cost drivers that can explain discrepancies.

That is why *Artelys* and *Adéquations* bring forward a methodology based on 15 years of collaboration with network operators and an extensive experience of benchmark surveys in the energy sector.

The methodology is carefully designed to highlight cost formation mechanisms, while following key principles:

- **Compare the comparable:** by adjusting costs from various scopes of operated network perimeters or activities falling under the operator's responsibility.

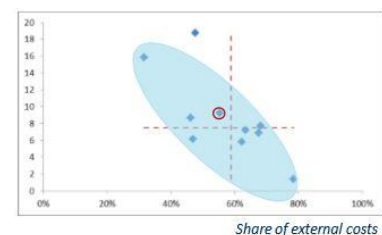


Figure 2. Level of manpower (in FTE/10,000 customers)

- **Use appropriate cost drivers** for each cost category (network length, delivered energy, number of delivery points, etc.)
- **Distinguish between controllable performance levers and external constraints:** by isolating the DNOs' legal and environmental specificities, by considering the effects of structural factors on operational costs and by separating controllable costs from non-controllable ones.

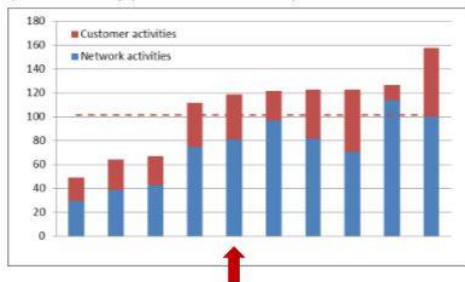


Figure 3. Yearly standard cost (in €/delivery point, PPP corrected)

- **Approach costs on a TOTEX basis, OPEX + CAPEX**, in order to remove differences due to accounting modes.

Name of the DNO		Unit	Year
Activity	OPEX (excluding Capitalised OPEX)	Of which Physical expenses	CAPEX (including capitalised OPEX)
Investments			
3.01 Development of new assets			
AP network			
AFPE network			
Cables			
Classical meters - small regulators			
Smart meters			
Pipes/meters			
Client stations			
Electricity			
3.02 Replacement and refurbishment of existing assets			
AP network			
AFPE network			
Cables			
Classical meters - small regulators			
Smart meters			
Pipes/meters			
Client stations			
Electricity			
3.03 Out of scope			
Works imposed by third parties			
Other (specify)			
Network activities			
3.11 Preventive network maintenance			
of which AP network			
3.12 Fault maintenance and works			
of which AP network			
3.13 Network monitoring (incl. control centres)			
3.14 Technical data base - System Mapping - Cartographical			
3.15 Support Functions - network activities			
3.16 Out of scope			
Other (specify)			

Figure 4. An extract of collected data

DNOs are asked to fill out a questionnaire related to both technical and financial aspects. An econometric analysis is then implemented based on these datasets.

During the data collection process, *Artelys* and *Adéquations* focus on ensuring a common understanding through the provision of a detailed glossary explaining the precise scope of requested information, giving adequate definitions and examples and leaving “free items” and comments.

A **TOTEX workshop** is organised to dive into the calculation of two or three KPIs. Each participant presents the underlying components of the

calculations and its specificities with regard to these parameters. Hence all DNOs can identify best practices, the impact of different strategies and the room for improvement.

3rd component – Regulatory benchmark

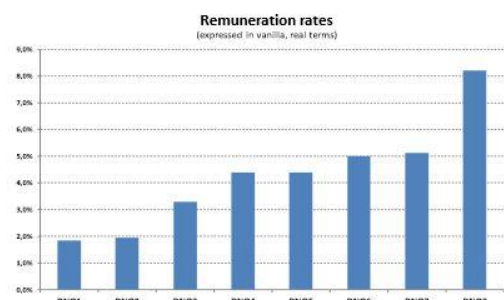
The regulatory benchmark enables the DNOs to:

- Analyse differences in **tariff rules** imposed by regulators and assess their level of severity,
- Identify the elements that may generate **gaps in tariff levels** (financial regulation, technical standards, activity perimeter, etc.),
- Share **good practices** on regulatory frameworks, tariff policies, distribution activity and new growth drivers.

Methodology

The analysis is carried out on the basis of data filled in a questionnaire. The questionnaire consists of seven main topics, each of which is to be analysed by one or more DNOs:

- **Regulation framework:** used to compare the history of distribution tariffs, tariff methodologies, evolution formulas, incentive regulation, etc.
- **Allowed revenues and scope of activities:** used to understand the differences in DNOs' scope of activity as well as the way in which each activity cost is recovered.
- **Technical aspects:** used to underline the differences in technical standards adopted by the DNOs and to estimate their impact on distribution costs.
- **Asset remuneration:** used to compare the perimeter and the calculation method of the assets base which serves to determine the remuneration.



- **Client base:** used to compare the DNOs' customer profiles and the main traits of their service area.
- **Losses, allocation, billing:** used to share good practices on procedures related to estimate the delivered quantities: compensation of gas losses, conversion of volumes of energy, allocation and billing methods for non-metered quantities...
- **New growth drivers:** used to collect information on DNO growth drivers, such as, LNG networks, biogas, hydrogen injections, smart meters, etc.

The regulatory benchmark often provides the topics of interest that are discussed during the workshops.

Fees

Participation fees are of €15,000 (excl. taxes) by participating DNO. This amount covers the costs related to the TOTEX benchmark, the regulatory benchmark and the organisation of the workshops as well as assistance provided the secretariat.

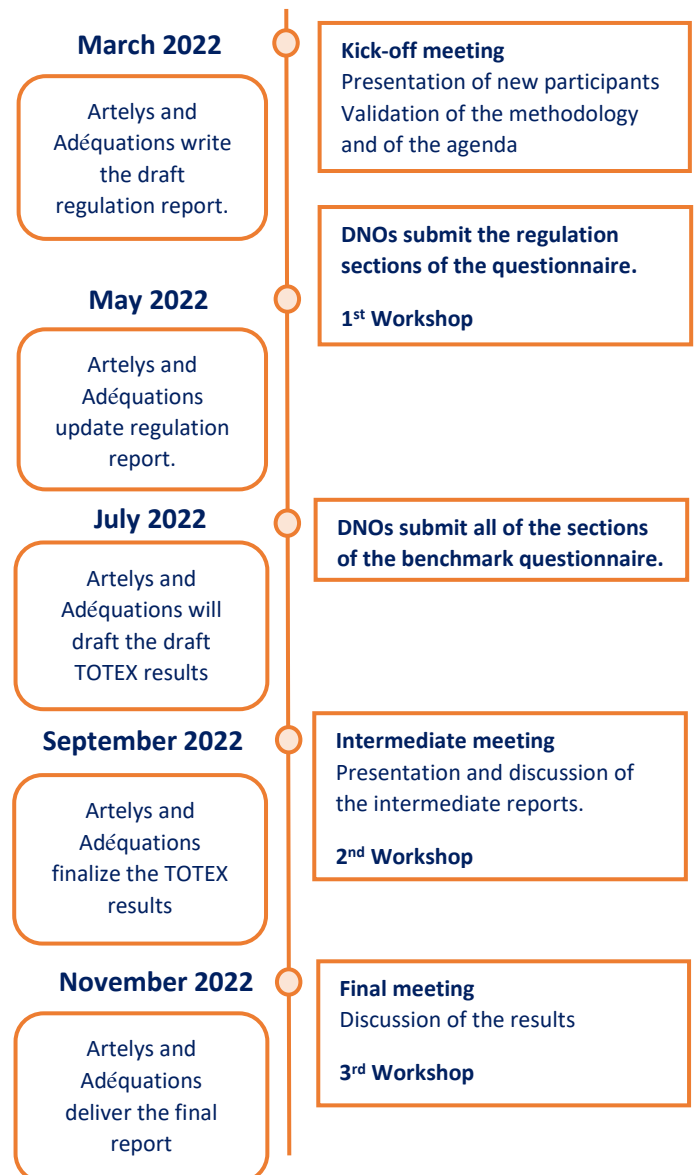
Confidentiality


Participants are asked to fill out a survey with technical information, cost-related data, the scope of their activities, environmental factors and managerial practices. The data shared by participants is considered with the highest confidentiality standards.

Artelys and *Adéquations* commit to keeping the collected data secret and confidential, to be used solely for the purpose of the benchmark and in accordance with the confidentiality agreement that the group has agreed to. Data will not be disclosed outside of the group without the prior written consent of the participating DNOs.

2022 Edition


The 2022 benchmark will be launched in March 2022 with 3 planned workshops. Meetings will be organized in turn by participating DNOs. Additional online meetings could be organised if necessary (and especially in the case of COVID19-related restrictions). This will lead to profitable exchanges with constructive feedback on the methodology and the quality of the results. The final results and reports will be sent to participants by the end of 2022.



 **Artelys** is a consulting company specialized in **optimization, decision-making** and **modelling** since its founding in **2000**. We provide clients with decision support studies and software, to empower them to follow evidence-based investment strategies.

Contacts

Amaury SALAUZE
Laurent CORNAGGIA
Tel: +33 (0)1 44 77 89 00
amaury.salauze@artelys.com
laurent.cornaggia@artelys.com

Since 1997,  **ADéquations** has been making economic studies, in the fields of the gas and electricity networks while being based on two main competences:

- **Econometric analyses** and statistics which led to the development of models of formation of the costs, known and recognized at the European level
- **International benchmarking** surveys (of costs, tariffs, performances, modes of regulation...).

Contacts

Jean-Jacques LIMOGES
Tel: +33 (0)6 09 18 51 04
jean-jacques.limoges@adequations.com