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Regulatory Aspects of Smart Metering for Gas Sector

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ERRA Natural Gas Markets and Economic Regulation Committee
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Agenda

- **Context and deployment status**
- Assessing a project's viability
- Regulating a gas smart metering project
- Q&A

Context – EU and French legislation

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<u>European Union</u>

- The Third Energy Package (2009) requires Member States to ensure implementation of smart metering systems
- This implementation may be **conditional on a positive economic assessment** of the long-term costs and benefits
- For gas, there is **no time limit for the rolling out** of smart metering systems

<u>France</u>

- In transposition of the EU disposition, France decided to put the smart metering roll out in DSO's hands
- However gas smart metering projects are conditional on :
  - a **viability assessment by the NRA**
  - the **government's approval**

Context – French distribution system

- Heterogeneity among the 22 French DSOs
- Regarding smart metering roll out, CRE's jurisdiction is linked to its **tariff setting responsibility**

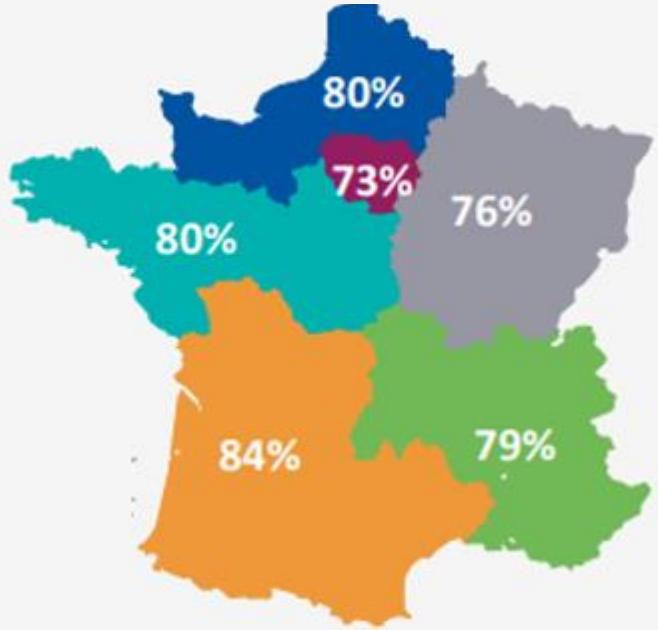
Typology of DSO	Size (consumers)	Network tariff status
1 national DSO (GRDF)	11 million	Each DSO has its own network tariff
2 major local DSOs	100,000 to 200,000	
7 middle range local DSOs	8,000 to 50,000	
12 smaller DSOs	<8,000	1 shared network tariff

- Therefore it is CRE's responsibility to :
  - Assess smart metering projects' **viability**
  - Establish the **financial trajectory** that will be integrated to the tariffs to finance the project
  - Define and monitor the regulatory mechanisms to ensure a smooth roll-out

Deployment status

- 3 gas DSOs have already started deploying a smart metering system :
  - **GRDF (France)** : 11 million meters are to be installed between 2017 and 2023
  - **Régaz (Bordeaux)** : 225,000 meters are to be installed between 2019 and 2027
  - **GreenAlp (Grenoble)** : 44,000 meters are to be installed between 2021 and 2025
- 14 gas DSOs submitted a smart metering project to CRE's assessment in 2021
- These projects could start between 2022 and 2024, and last until 2030

GRDF's deployment status (dec 2021)



In December 2021, GRDF had installed 9 million meters

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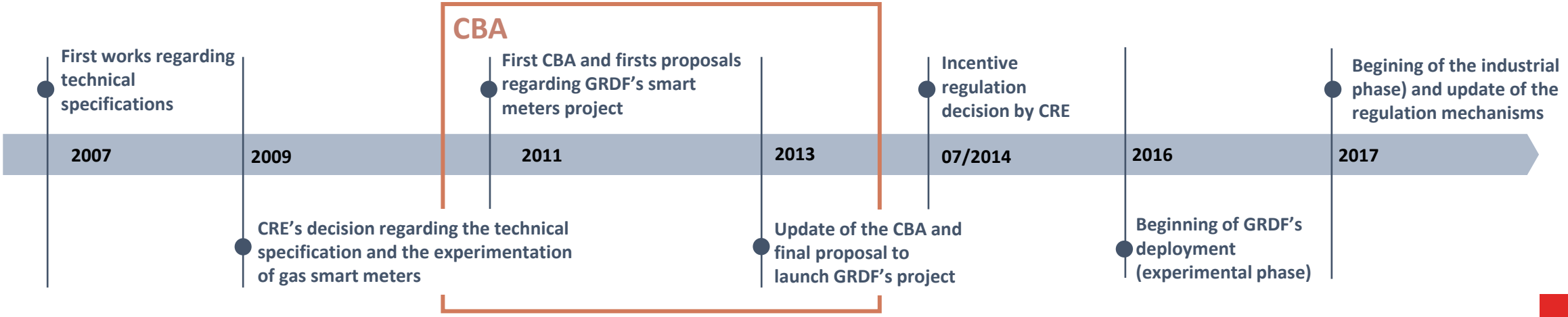
Principles and description of a CBA process

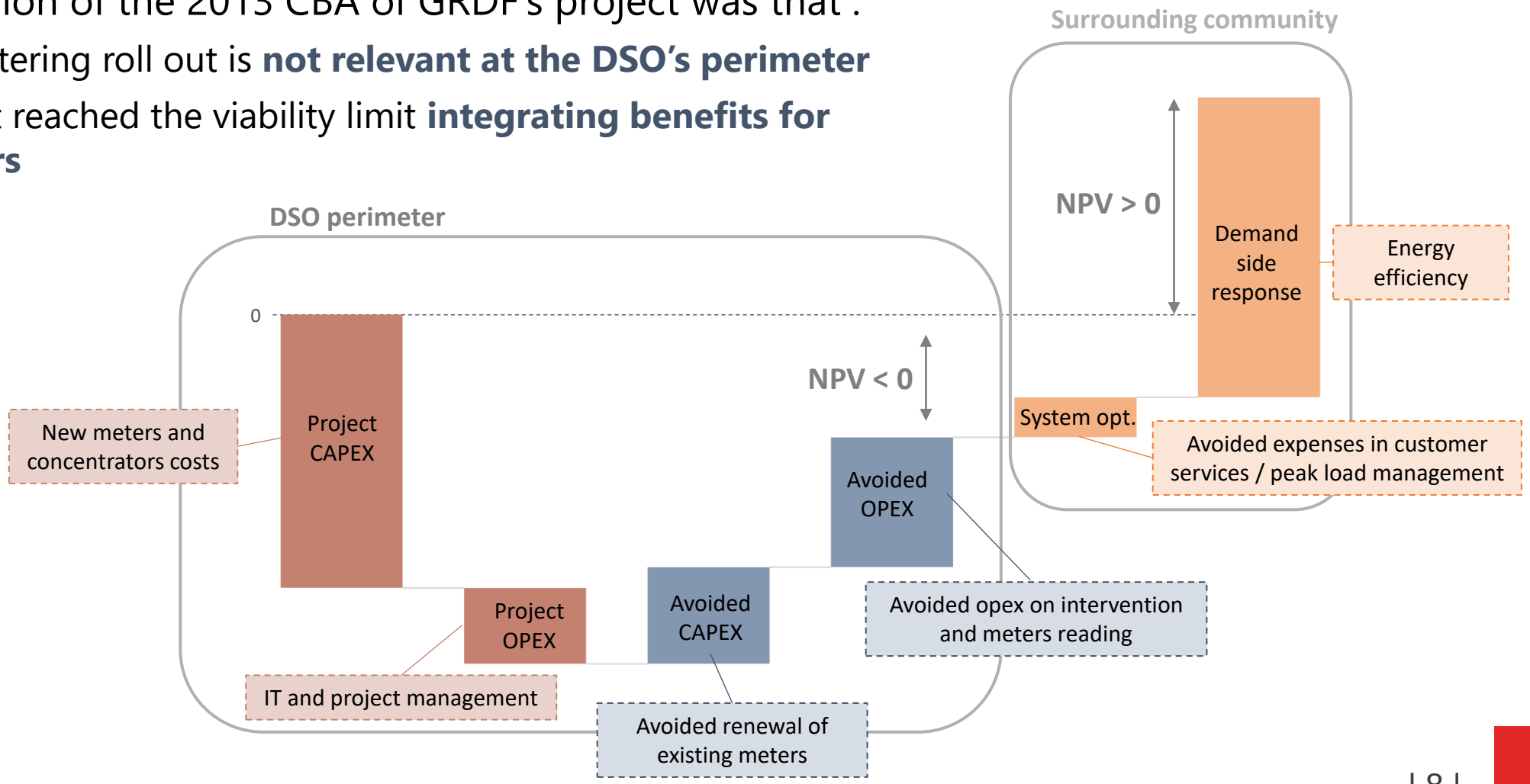
- The **cost-benefit analysis (CBA)** aims at determining **whether a project is relevant** not only for the **DSO but also for the surrounding community** (including consumers). It requires :
  - **hypothesis and data regarding** financial parameters, technical parameters and costs & benefits items
  - **a decision criteria** : the one used by CRE to determine if the benefits outweigh the costs is the Net Present Value **(NPV) criteria**
- The time span necessary to conduct a CBA and approve a project varies a lot, depending on the size of the project and the availability of data (from a few months to several years)



Example of a regulatory timeline – GRDF'S smart metering project

Case study – GRDF's project CBA

- The conclusion of the 2013 CBA of GRDF's project was that :
  - smart metering roll out is **not relevant at the DSO's perimeter**
  - the projet reached the viability limit **integrating benefits for customers**



Case study – cost mutualization for smaller DSOs

- Due to massive fixed costs (IT), **smart metering projects struggle to reach the viability threshold** for smaller DSOs
- CRE established that **below 50,000 consumers**, DSO's smart metering projects will not be viable
- In order to ensure equal access to smart metering for all French consumers, regardless of their DSO, CRE issued recommendations to foster :
  - The **constitution of buying groups** for meters and concentrators
  - The gathering of DSOs on a **common metering IT**
- This approach enables DSOs to obtain **lower equipment prices** and to **share fixed costs**
- It also benefits to consumers by **reducing the impact of smart metering projects on tariffs**

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Regulating smart metering projects

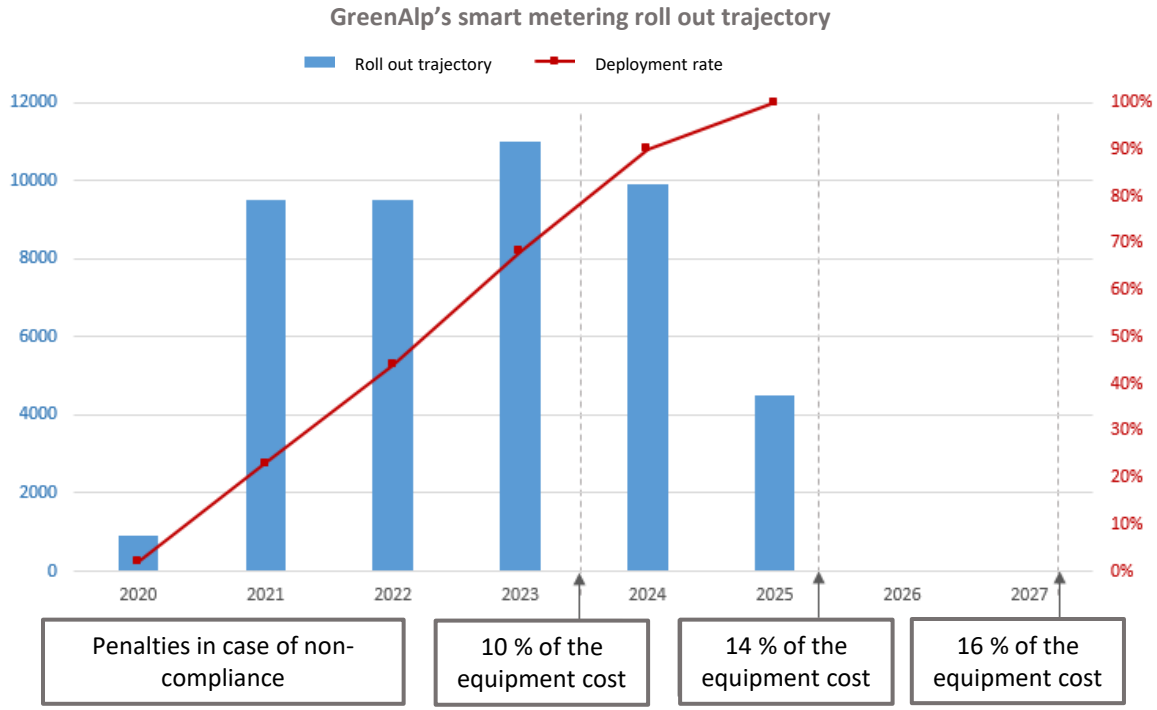
- **Insuring that operators are efficient** is one of the core responsibilities of CRE. As a result, when new projects and activities appear, it is CRE's responsability to :
  - Establish the right amount of money they need to accomplish it
  - Make sure the money the operators receive is put to good use

- With smart metering roll out, **stakes are even higher** than usual as projects are **bigger than the usual industrial projects** and associated with accordingly bigger financial stakes

- For gas smart metering projects, CRE focused its **regulation mechanism on** :
  - Deployment timetable compliance
  - Investment costs
  - Operating expenses
  - Quality of service

Deployment timetable regulation

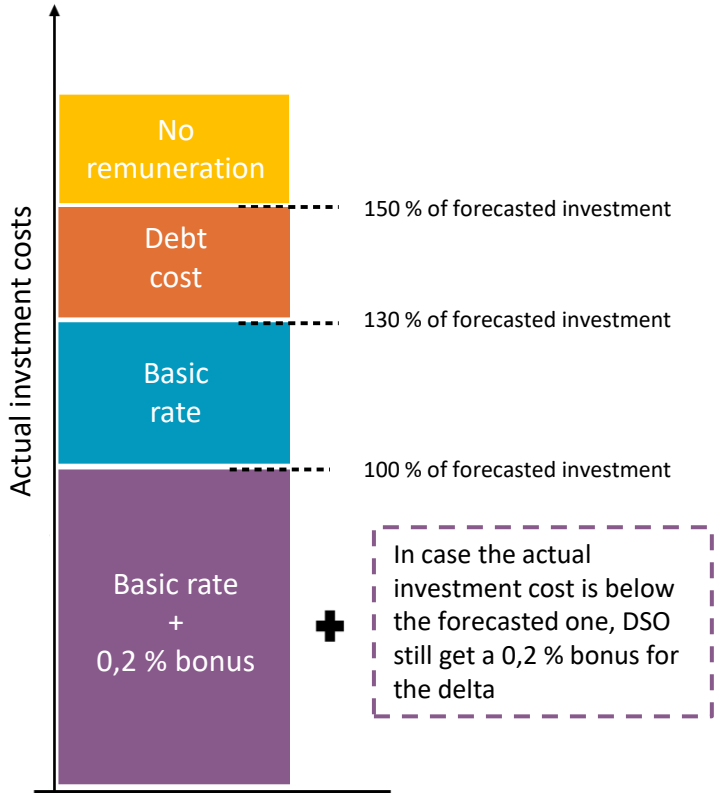
- This regulatory mechanism is based on **periodically comparing the forecasted roll-out trajectory to the actual roll-out**.
- In case of a delayed roll-out, the operator is **penalized for each meter that should have been rolled out**.
- The penality is based on the **unitary costs of the meters** and it increases in time.
- This last disposition was introduced to **take into account the learning curve** of the DSO.



Costs regulation

- **Regarding OPEX :** operating expenses that exceed the initial trajectories that were integrated to the tariffs remain fully at the operators expenses.

- **Regarding CAPEX :** the regulatory mechanism is based on **periodically comparing the forecasted reference investment costs and the actual investment costs** of the project.
- It **impacts the level of remuneration** operators receive for their smart metering projects.
- If the amount of annual investments starts exceeding the forecasted one, **the remuneration bonification lowers depending on the exceeding rate**.
- In case of particularly high investment costs, the remuneration **can be lowered to zero**.



Performance regulation

- This regulation mechanism aims at ensuring that DSOs roll out **fully operating smart metering systems** during and after deployment. It ensures that the whole economic value expected from the project is achieved
- Before the project starts, CRE establishes a **list of indicators** to monitor DSO's performance regarding quality of service
- These indicators are **oriented towards network users** (reintervention rate, consumption data availability, teleoperating success rate, …) and aim at ensuring that the smart metering system meets user's needs
- To each indicator is associated a **target rate**. The incitation is mostly symmetric : if the target is reached, operators are given a **financial bonus and if not a penalty**
- The whole level of bonuses and penalties is limited

Objectifs et incitations du 1er mai 2021 au 31 décembre 2023	
Objectif	- objectif de référence : 99,5 %
Incitations	- calcul : à partir des résultats de l'indicateur arrondis à 2 décimales - pénalités : 20 000 €, par mois et par point strictement en dessous de l'objectif de référence - bonus : 20 000 €, par mois si le taux est supérieur ou égal à l'objectif de référence - versement : au CRCP

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