



COMMISSION
DE RÉGULATION
DE L'ÉNERGIE

IFRI HIGH LEVEL CONFERENCE

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**What regulation for an innovative
grid?**

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1. The energy sector in transition
2. How regulation in France has accompanied these evolutions
3. The European dimension

THE ENERGY SECTOR IN TRANSITION (1/2)

We see two main drivers for the transition occurring in the energy sector:

- **Decarbonization**

- Development of renewable energy, often intermittent and connected at the distribution level
- Development of electric vehicles, and of the necessary infrastructures
- Energy efficiency

- **Digitalization** of the economy, including energy

- Network operation is transformed by new tools
- Smart metering is being implemented
- Development of new services associated to data management

➔ These evolutions are associated with a **new role for consumers**, more active :

- Demand-side response
- Self-consumption of locally produced electricity

THE ENERGY SECTOR IN TRANSITION (2/2)

- Energy is traditionally a long term industry, where investments are undertaken for several decades and evolutions occur at a slow pace.
- We are now in a transition phase, characterized by quick evolutions under these drivers.
- This transformation is putting a stress on the business models of utilities (regulated vs market / new services to consumers - advice on energy savings etc.)
- The regulator shall anticipate these evolutions and accompany them.

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HOW REGULATION HAS ADAPTED TO THESE CHALLENGES

- A snapshot of a few « hot topics » and how CRE accompanies them:
 - Smart grids
 - Innovation in network tariffs
 - Demand-side response
 - Data in the energy sector
 - Self-consumption

THE FRENCH REGULATOR HAS BEEN PLAYING A STRONG PART IN SMART GRIDS DEVELOPMENT SINCE 2010

Informing and strengthening dialogue with all stakeholders

- Organize institutional conferences on smart grids
- Maintain a website dedicated to smart grids to share knowledge and experience www.smartgrids-cre.fr (24,000 visitors/month, participation of 200+ market players, etc.)



Giving appropriate directions in order to enable the deployment of smart grid technology

- Identify and understand needs from all stakeholders
- Follow up on smart grid demonstration projects
- Participate actively in international and European initiatives (CEER, EC SGTF, ISGAN)
- Define financial conditions of smart grid deployment (grid tariff)
- Propose evolutions of the regulatory framework when needed



CRE'S DELIBERATIONS ABOUT SMART GRIDS DEVELOPMENT



12th June 2014

Recommendations about smart grids on low-voltage grids

- 41 recommendations, after a one-year consultation of all stakeholders
- Recipients: legislator/regulatory power, normalization, TSO, DSOs, etc.
- TSO and DSOs have to provide a roadmap on relevant actions for them as of 1st November 2014



25th February 2015

Communication about smart grids development

- Short review of TSO's and DSOs' roadmaps
- Extra recommendations about data, self-consumption, non-interconnected grids, etc.
- Inclusion of smart gas grids and mutualisation of energy grids (electricity, gas, heat, cold, etc.)
- Yearly update of TSOs and DSOs roadmaps



8th December 2016

Status report about roadmaps + new recommendations about smart grids development

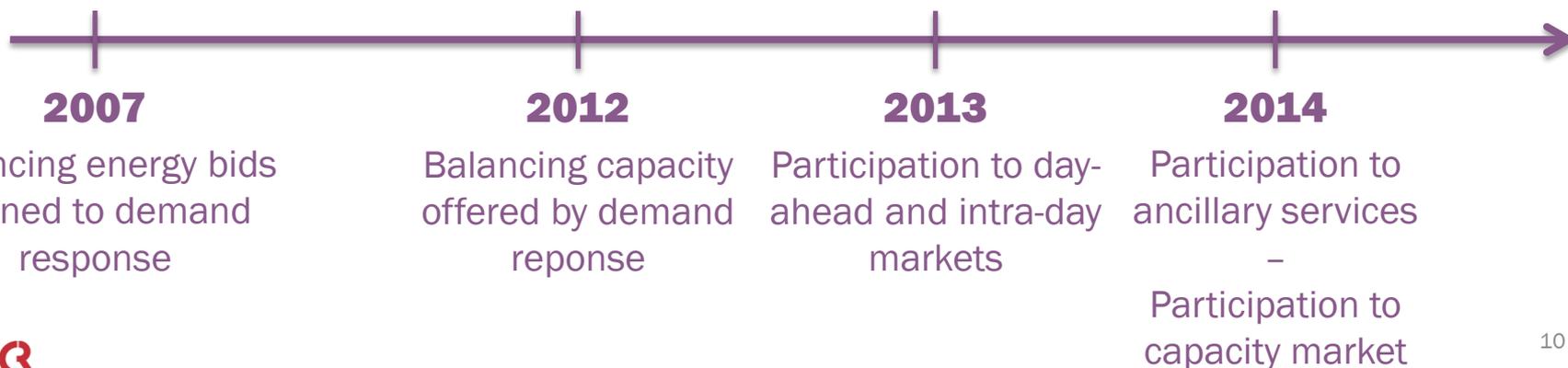
- Detailed review of operators roadmaps and new legal context
- 17 new recommendations
- New roadmaps updates expected on 1st June 2017

A TARIFF REGULATION THAT ENABLES THE NETWORK TO ADAPT TO A CHANGING ENERGY SYSTEM

- TURPE 5 (“*Tarifs d’utilisation des réseaux publics d’électricité 5*”), the fifth network access tariff regulation period, is due to come into force in August 2017
- Its provisions on investment, R&D and smart grid incentivise the DSO to innovate and adapt the network
 - TURPE 5 increases significantly the allowed revenue of the DSO, to enable him to adapt to green transition and digitalisation
 - Enedis expenses plan for investment and R&D were entirely incorporated in the allowed revenue
 - The DSO will have the possibility to ask once a year for the covering by the **tariff of costs related to new smart grids projects** that may be deployed during the next four-year period, provided the cost-benefit analysis is positive for the community

DEMAND RESPONSE

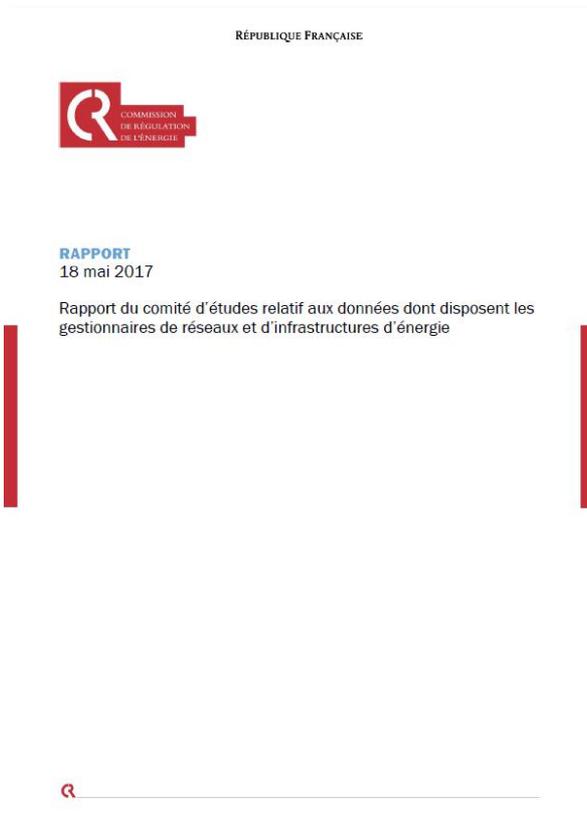
- CRE helped setting up a regulatory framework for demand response which is:
 - **Open:** aggregators can freely enroll consumers in their demand response programs without the consent of their electricity supplier
 - **Flexible:** demand response can participate in several markets to yield more value:
 - Day-ahead and intraday electricity markets
 - Balancing markets and ancillary services
 - Capacity markets



DEMAND RESPONSE

- Regulatory framework must feature fair settlement rules to achieve economic efficiency:
 - Aggregators demand response actions need to be monitorable;
 - They need to be able to trigger demand response actions without the consent of consumer's electricity supplier;
 - Aggregators sell curtailed energy on the markets: they must buy this energy from the supplier/producer which produced it or bought it in the first place.
- CRE conveys these principles in the discussions around the “Clean Energy for All” package.

CRE'S REPORT ABOUT DATA MANAGED BY REGULATED OPERATORS



(English version to be published in September)

- CRE has recently published an unprecedented 100-page report about **data managed by regulated operators**, after a one-year consultation with all stakeholders, both French and European, within energy sector and outside, institutional and private
- This work has been conducted by a committee of 3 Commissioners, notably Yann Padova, appointed to this position for his expertise about personal data management
- The report contains 15 recommendations to use data as a development lever for energy transition. They are gathered in 4 topics:
 - Ensuring consistency, quality, and interoperability of data
 - Clarifying roles of stakeholders to build an efficient governance involving all energies
 - Strengthening trust and confidence to serve innovation
 - Giving a better visibility to stakeholders and opening up CRE's approach

SELF CONSUMPTION

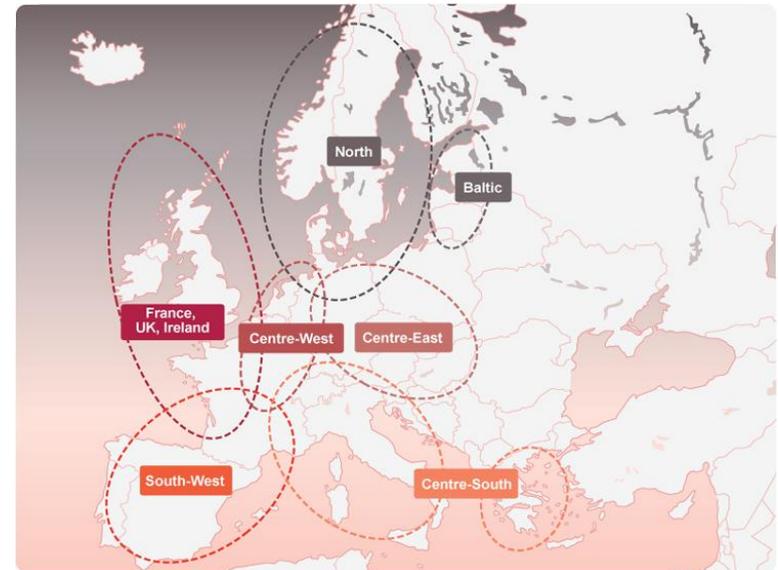
- Self consumption currently concerns only 14 000 users, but it is developing quickly.
- CRE is required by the law on self consumption (Feb. 2017) to set specific network tariffs for self consumers.
- CRE intends to broaden the perspective, and conduct an analysis and public consultation not only on **how network tariffs should take self-consumption into account**, but also on how self consumption may impact the whole energy system, and on **how it should be inserted in the regulatory and economic framework**.
- A forum on self-consumption will be held by CRE in September to give the opportunity to stakeholders to share their point of view and their experiences.

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THE INTEGRATION OF EUROPEAN ELECTRICITY MARKET HAS BEEN UP AND RUNNING FOR YEARS

- The Clean energy package insists on an increased regional cooperation to deliver a European-wide security of supply
- However, France and CRE have already played a decisive role in pushing for the integration of electricity markets in Europe, notably through regional initiatives
 - France belongs to 4 out of the 7 EU regional initiatives
- Objectives:
 - Use work done at regional level as input for network codes
 - Anticipate the implementation of network codes
- Examples of results
 - Harmonized **rules for the allocation of long term rights**
 - **Day-ahead market coupling** at all our borders with EU countries and implementation of **flow based market coupling in CWE**
 - Implementation of the **XBID solution** for intraday coupling border by border



Source : RTE

THE « CLEAN ENERGY FOR ALL » PACKAGE (1/3)

- The construction of the internal energy market has been underway for almost two decades now.
- The « Clean Energy for all » package, published by the European Commission in Nov. 2016, gives a good orientation to reinforce this construction.
- Some topics require further reflexion/precaution when addressing them in European legislation.
- CRE has published a set of position papers on a dozen of topics addressed by the Clean Energy package, covering topics of governance, network and market issues.

THE « CLEAN ENERGY FOR ALL » PACKAGE (2/3)

- Demand-side response:
 - The EC proposals favours the development of demand-side response, with the possibility for DSR operators to participate in the electricity markets, without the need for an agreement from other players.
 - In such as scheme though, it is necessary to organize an **energy transfer** between the supplier and the independent DSR operator.
 - This energy transfer must be settled by a **financial transfer**.
- **Local energy communities**: CRE fully shares the objective of the Commission, but considers that some provisions have to be amended.
 - Empowering these communities with the role of DSO must be limited by strict conditions
- Rules on **reserve** procurement and **balancing markets**:
 - Need to maintain sufficient flexibility at this stage.

THE « CLEAN ENERGY FOR ALL » PACKAGE (3/3)

- With the general trend to more harmonization at the European level, ACER is expected to play a larger role in the future.
- CRE shares the objective of strengthening the coordinating role of ACER by (e.g granting a decision-making power to ACER for topics that require today a unanimous approval by 28 regulators).
- For this evolution to be acceptable, CRE considers that the **internal governance of the Agency** must reinforce the power for the Board of Regulators (BoR)
 - **Amending proposals**: the BoR must be able to amend the Director's proposals.
 - **Voting rules**: they must ensure the representativeness of the decisions. As a minimum, the current 2/3 majority must be kept.