



COMMISSION
DE RÉGULATION
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JOUR MOIS ANNÉE

Roadmap on French electricity balancing

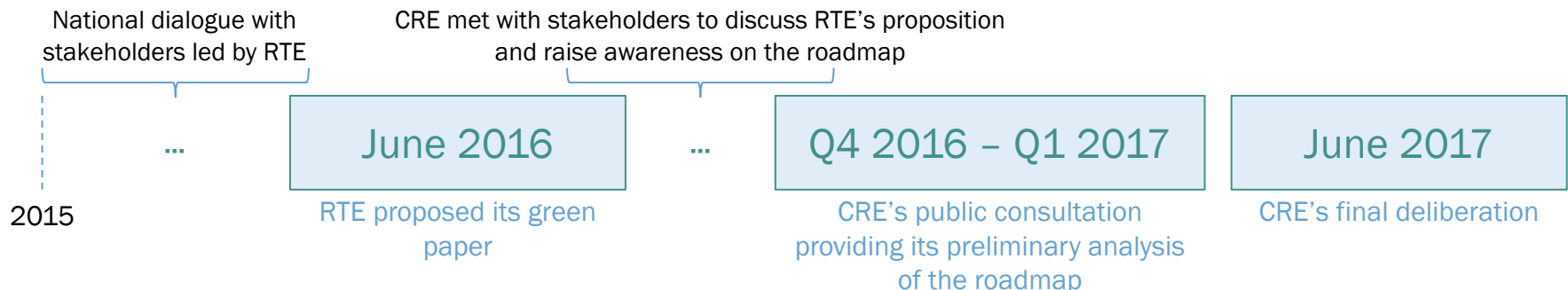
INTRODUCTION TO THE ROLE OF THE REGULATOR IN THE BALANCING PROCESSES

- Access to French balancing markets is mainly defined by two sets of rules proposed by the French TSO RTE and approved by CRE :
 - One set of terms and conditions for **automatic services related to frequency restoration** (FCR and aFRR);
 - One set of terms and conditions for **manual services** (mFRR and RR).

- Historically, **these rules are updated and adapted on a yearly basis** through a national process composed of
 - 4 to 6 months of national dialogue held by RTE with balancing stakeholders;
 - 2 to 3 months of public consultation;
 - 3 months for CRE's decision on the proposed rules.

FRENCH ROADMAP ON ELECTRICITY BALANCING – OBJECTIVES AND PROCESS

- In 2015, considering the cross challenge embodied by both the energy transition and the European integration, **CRE asked RTE to propose a roadmap for the French electricity balancing.**
- The objective was to adapt national balancing terms and conditions consistently with :
 - The future European regulation (“*Guidelines on Electricity Balancing*”)
 - The French legislation which has also recently changed in order to meet national energy transition targets.
- It promotes **participation of renewables and demand side response** to energy markets, including balancing energy markets. These changes also require to review balancing terms and conditions.
- This roadmap will provide stakeholders **visibility on future changes** and will help ensure their readiness.



INTRODUCTION TO THE FRENCH BALANCING SYSTEM

- The European integration targeted by the Guideline on Electricity Balancing does not require to make all national balancing mechanisms uniform. **National specificities can be preserved, provided they are not opposing integration or causing substantial competition distortions among European market participants.**



- The French balancing relies on a proactive, centralized and integrated operation of the system :
 - Foreseen imbalances are dealt with by RTE as soon as they are spotted ;
 - RTE continuously manages remaining “margins” it could call out at a future given timeframe to balance the system.
 - RTE currently handles jointly balancing and congestions.
- This system is designed to take advantage of the French energy mix and to enable an optimal use of resources;
- However, it also comes along with some drawbacks :
 - Significant proactivity (actions taken more than 60 min ahead of time) means possible overlap of TSO and balance responsible parties (BRP) actions.
 - The margin model can lead to filter balancing energy bids, not offered to the common platforms, thus limiting cross border exchanges of balancing energy.

DIFFERENT NATIONAL BALANCING MODELS

Central dispatch system operation	Self dispatch system operation	Self dispatch system operation
Centralized balancing	Centralized balancing	Decentralized balancing
Proactive	Proactive	Reactive
USA, Italy, Poland	France, UK	Germany
		Netherlands

Decentralized and increased responsibility of BRPs



Strong centralization of balancing



ILLUSTRATION OF RTE'S PROACTIVITY

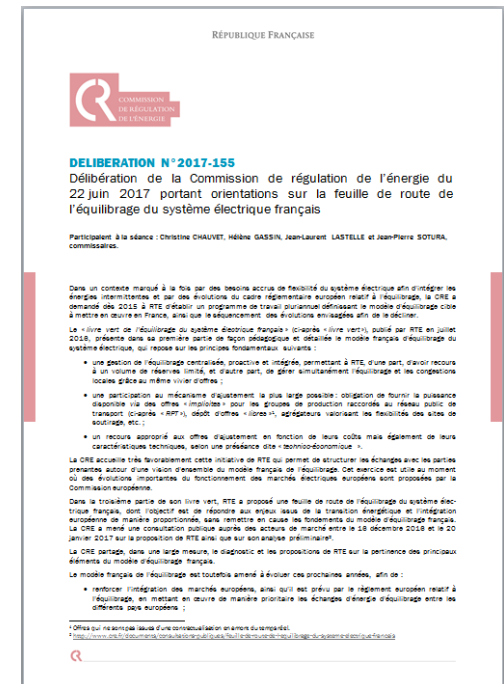
	Response time	Capacity procured	Energy (2016)	Participating entities	Procurement of capacity
FCR	< 30s	570 MW	↑236 GWh ↓232 GWh	Generators and consumers from FCR cooperation countries	FCR Cooperation weekly auction and secondary market
aFRR	< 15m	~700 MW	↑1,2 TWh ↓1,4 TWh	Generators and consumers in France	Compulsory participation, regulated price and secondary market
mFRR	< 13m	1000 MW	↑1,4 TWh ↓2,5 TWh	Generators and consumers in France	Call for tender
RR	< 30m	500 MW	↑1,2 TWh ↓1,5 TWh	Generators and consumers in France	Call for tender
	Other	~	~	Generators in France Other entities	Compulsory participation of available capacity Contracting

→ RTE uses 2 to 3 times as much manual reserves as automatic reserves

- On average, RTE's margin activations represent 182 GWh per year (historical data of 2012-2015)
- This represents less than 3% of the energy activated by the TSO from manual reserves (RR+mFRR) for P=C purposes and less than 2% of all activations
- This limited volume of energy also needs to be put in the light of the relatively low volume of procured reserves

ROADMAP ON ELECTRICITY BALANCING – MAIN MESSAGES (1/3)

- The roadmap on electricity balancing highlights substantial and deep evolutions of the French balancing markets.
- However, CRE and RTE consider that the fundamentals of French balancing systems – namely it's proactive and centralized dimensions – will continue to be relevant and suitable to its industrial context while ensuring an efficient use of all resources (generation, demand response, storage...).
- The European integration will help enhance these fundamentals, provided that the right changes and improvements are performed.



Link to the English version of the decision :

<http://www.cre.fr/en/documents/deliberations/orientation/electricity-system-balancing-roadmap>

ROADMAP ON ELECTRICITY BALANCING – MAIN MESSAGES (2/3)

The roadmap has identified 4 major fields of work

1. Implementation of the European platforms for the exchange of balancing energy and increasing use of standard products

- Not to mention design and implementation work, the use of these platforms will constitute a significant change for TSOs who will have to thoroughly adapt their processes and the way they operate the system
- For progressive adaptation, it is important for TSOs to maintain the possibility for them to use specific products
- However, CRE is very committed to make sure standard products will be given the highest priority to balance the system
 - Procurement of standard products, weight of terms and conditions on standard offers, marginal pricing vs pay as bid for specific products, framing of elastic needs...

2. Improve the participation of renewables, demand side response and storage

- Such participation is the result of a transversal review of balancing mechanisms :
 - Aggregation capabilities (cross technology, cross BRP, e.g. to offer standard products)
 - Procurement conditions: technologically neutral market procurement, short term procurement...
 - Increased ID CZ GCT frequency
 - Free bids (non pre-contracted energy bids)
 - ...

ROADMAP ON ELECTRICITY BALANCING – MAIN MESSAGES (3/3)

3. Incentives on BRPs to deliver a balanced perimeter : *In order to control balancing costs in a context of an increased share of renewables and intermittent energy, BRPs will have to be increasingly incentivized to balance their perimeter.*

- Such enhancement will be provided through
 - More targeted/individual incentives (“profiling” and the remodeling of how we pass from 2 measurements per year to a BRP consumption on a 30/15mn ISP)
 - A review of the imbalance settlement price and imbalance settlement period.

4. Increased transparency of balancing mechanisms to lower entry barriers enhance competition and allow optimal investment signals

- High involvement and information of stakeholders in design evolutions (during the roadmap definition and continued since)
- Adequacy with EBGL requirements on the publication of data (offers, activations, unshared offers, availability and use of XB capacities...)
- Increased transparency on specific aspects of French balancing (e.g publication of data on the margin model)

CONCLUSION

- The definition of the roadmap has successfully involved **22 stakeholders** besides CRE and RTE.
- It sketches all foreseen evolutions for the next 5 years and **shows the extent of upcoming works for both RTE and stakeholders.**
- As such, one of the most important challenges of the roadmap was to **prioritize and articulate these evolutions.** The objective was to **make best use of all parties' limited resources and ensure a sustainable adequacy between changes implemented and the European integration of balancing markets.**
- CRE is committed to ensure the success of the coming implementation process. As such **CRE greets the continuous involvement of stakeholders in all next steps.**