



Rte

06/02/2019

French Capacity Market

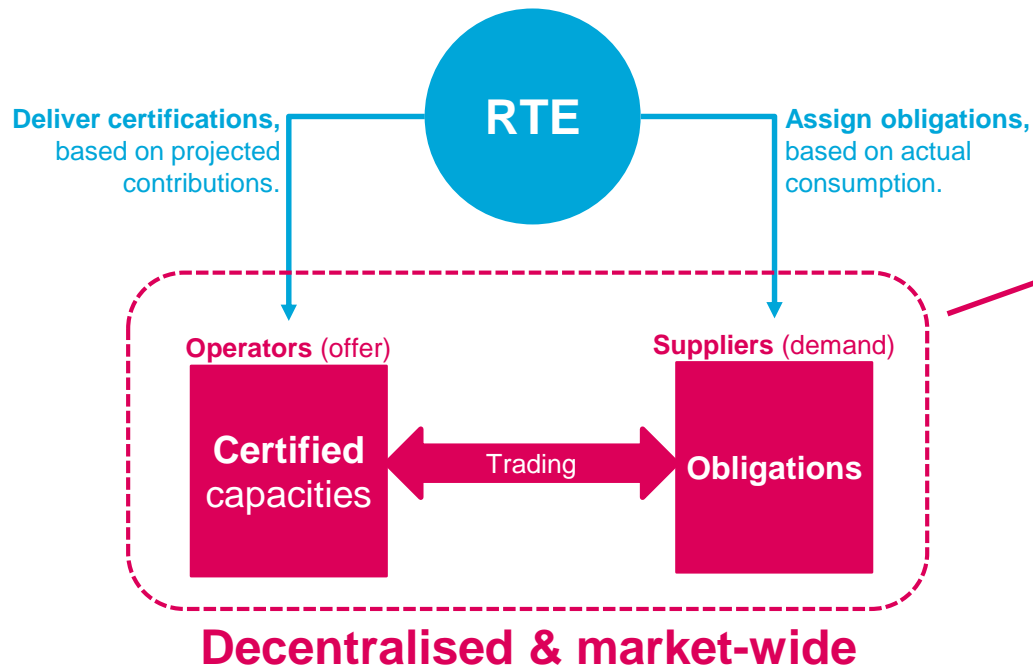
A market open to cross-border participation

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French Capacity Market overview

Architecture



- The mechanism is a form of “insurance”, rewarding operator contributions during peak periods.
- Starting 4 years in advance, the market delivery period is aligned on a calendar year.
- Factors and interconnection contributions are annually refined, based on Adequacy Forecast Report data.

French Capacity Market overview

Key features

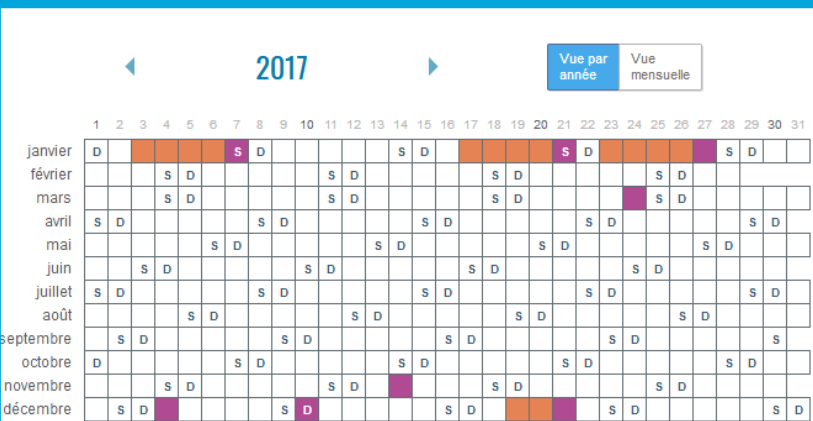
Market based	“BRP-like” market design (individual forecast & hedging, organized & OTC market, imbalance settlement)
	No administrative capacity target
	Transparency (underlyings & trades)
No distortions	Market wide (all capacities participate)
	Technology neutral (generation, DSR, RES,...)
	Cross border contributions included (valued from 2019)
SoS oriented	Forward looking (market starts 4 years ahead, 1 year product)
	Certification = individual contribution to SoS
	Capacity Obligation = individual contribution to adequacy risk



French Capacity Market overview

The mechanism is up and running

RTE notifies “peak period” days in day ahead



- PP1/PP2 **Availability control**
10 to 25 PP2 days (system stress)
- PP2
- PP1/PP2 **Capacity obligation**
10 to 15 PP1 days (high consumption)

Generation and demand side response receive capacity certificates based on availability commitments

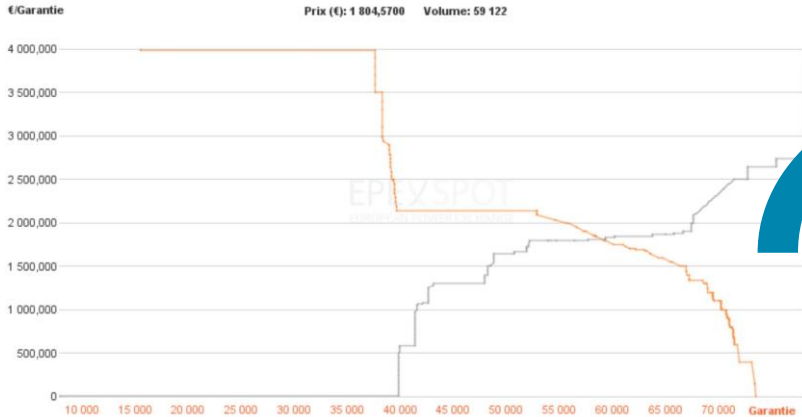
Delivery year	2018
EDC Code	PTU000120
EDC label	AIGLE
Network	Rpt
EDC type	Production
Filière	Lac
EDC status (en projet ou en service)	En service
Certification date	24/07/2015
NCC initial	175.4
NCC evolved	183.9
NCC forecast	175.4
RPC EIC code	17X100A100R00182
RPC name	EDF-DOAAT
Last updated date	28/07/2015 02:07

Power segment	NCC evolved
AUTRE	4510.5 MW
AUTRE RENOUVELABLE	3.3 MW
BIOMASSE	40.4 MW
DÉCHET INDUSTRIEL	22.3 MW
EFFACEMENT	1936.3 MW
EOLIEN ONSHORE	2093.6 MW
FIL DE LEAU ET DE L'ÉCLUSE	2125.9 MW
FIL DE L'EAU ET DE L'ÉCLUSE	2866.6 MW
GAZ ISSU DU CHARBON	6.5 MW
GAZ/ HOUILLE/CHARBON	8664 MW
LAC	5467.9 MW
MULTI FILIÈRE	4214.1 MW
NUCLÉAIRE	53547.3 MW
POMPAGE HYDRAULIQUE	3703 MW
PÉTROLE/FIOL	1655.2 MW
SOLAIRE	

RTE publishes extensive information on certified capacities



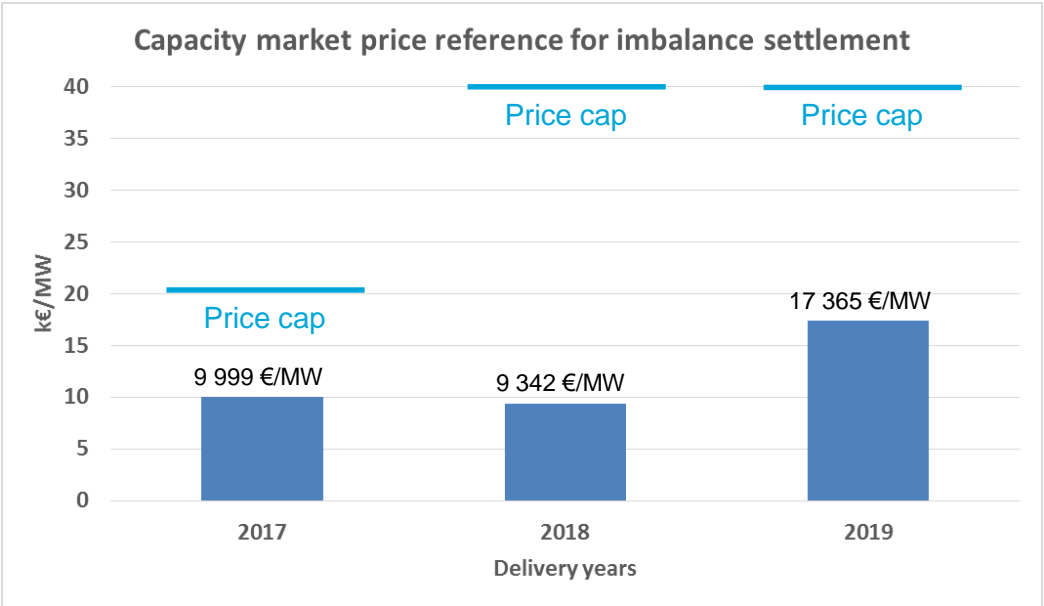
Market outcomes



Several organized market sessions for each delivery year, providing a reference price for the market and the imbalance settlement process

OTC trades are allowed and widely used by market participants. All transactions are public (volumes & prices).

Date solde	Type	Année de livraison	Date d'achèvement	Type compte débit	Type compte crédit	Quantité (GWh)	PUSC (MW/GWh)	Prix unitaire (€/GWh)	Quantité (MWh)
17 juillet 2017	Transaction	2017		ACO	ACO	200	0.1	976.00	200
18 juillet 2017	Transaction	2017		ECH	ACO	500	0.1	900.00	500
18 juillet 2017	Transaction	2017		ECH	ACO	2 000	0.1	1 000.00	2 000
18 juillet 2017	Transaction	2017		ECH	ACO	1 000	0.1	1 000.00	1 000
18 juillet 2017	Transaction	2017		ECH	ACO	200	0.1	875.00	200
20 juillet 2017	Transaction	2017		ESP	ESP	3	0.1	900.00	3
20 juillet 2017	Transaction	2017		ESP	ACO	40	0.1	900.00	40
1 août 2017	Transaction	2017		ESP	ACO	363	0.1	1 000.00	363
15 août 2017	Transaction & h.	2018	15 août 2018	ECH	ACO	180	0.1	2 200.00	180
15 août 2017	Transaction & h.	2018	15 janvier 2018	RFC	ECH	190	0.1	1 170.00	190
15 août 2017	Transaction & h.	2018	15 janvier 2018	RFC	ECH	130	0.1	1 290.00	130
15 août 2017	Transaction & h.	2018	20 octobre 2017	ECH	ACO	300	0.1	1 270.00	300
17 août 2017	Transaction & h.	2018	15 janvier 2018	ECH	ACO	110	0.1	1 270.00	110
24 août 2017	Transaction	2017		ECH	RFC	250	0.1	1 010.00	250
29 août 2017	Transaction	2017		ESP	ACO	89	0.1	1 000	89
1 septembre 2017	Transaction	2017		RFC	ECH	50	0.1	900.00	50
1 septembre 2017	Transaction	2017		ACO	ACO	100	0.1	999.98	100
1 septembre 2017	Transaction	2017		ACO	ACO	80	0.1	999.98	80
1 septembre 2017	Transaction	2017		ESP	ACO	35	0.1	999.98	35
1 septembre 2017	Transaction	2017		ECH	ECH	43	0.1	999.98	43
1 septembre 2017	Transaction	2017		ACO	ACO	43	0.1	1 200.00	43
1 septembre 2017	Transaction	2017		ECH	ECH	70	0.1	1 200.00	70
1 septembre 2017	Transaction	2017		ESP	ESP	120	0.1	1 200.00	120





State Aid clearance based on commitments



Commission Decision of 8.11.2016 on State aid scheme **allowing the French capacity mechanism provided that all remedies described in the Decision are implemented.**

« The Commission authorises the aid scheme implemented through the capacity market for a maximum period of 10 years. » (article 3)

1 Competition issues

- ✓ **Strengthened ex-ante controls** on potential market abuses (certification corridor, transparent sourcing for vertically integrated companies,...)
- ✓ **Specific measures for incumbents** (asymmetric regulation : bidding constraints, progressive imbalance settlement,...)
- ✓ **Full market transparency** (all trades are public, increased role for the organized market,...)

2 Cross-border participation

- ✓ **Target model:** Taking into account foreign capacities with a hybrid model, which remunerates both interconnections and foreign generation and demand-side response capacities (TSO cooperation agreement required)
- ✓ **Interim model** which the explicit participation of interconnections only

3 Support for new capacities

- ✓ **Call for tenders** for new capacities held 4 years before the first delivery year covered by the contract
- ✓ **7-year contract for difference** aimed at fostering investment in new capacities.

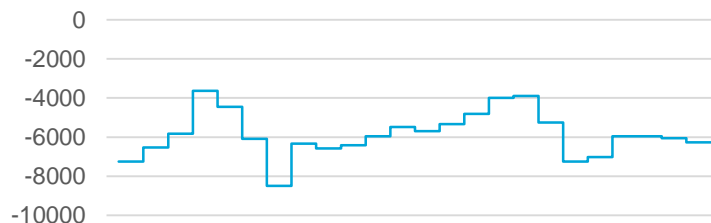


DY 2019 saw a major change in accounting for XB contributions



Cross border contributions are needed for French security of supply during stress days (PP2) or high consumption days (PP1).

An example : France net import in MW 21/11/18 (PP2 day)



Decree and new set of rules updated the way cross border contribution is taken into account

- For years 2017 and 2018 cross border contribution was considered using a **mark-down for suppliers : Implicit cross border contribution**
- From year 2019 **EU countries cross border contributions are explicitly** taken into account with a contribution for each neighbouring country based on the **expected imports in case of security of supply crisis** in France

Two complementary models for explicit XB participation

Interim Model Simplified procedure

- Interconnectors directly receive capacity certificates.
- Interconnector operator may rebalance its position (= give back capacity certificates) *ex ante* if interconnector is not available,
- Interconnector availability controlled against NTC:
 - Normal capacity imbalance settlement applies for negative imbalances
 - Positive imbalances are not accounted for

Target Model In-depth procedure

- Cross border capacities are certified
- Supported by a TSO-TSO cooperation agreement
- Access Tickets to the capacity market are allocated by RTE up to the border contribution
- Capacities may decrease their participations and release Access Tickets,
- Cross border capacities imbalances are settled exactly as for French capacities
- Interconnector cannot lower its contribution in the event of an outage

Next steps



DY 2019 : first year for explicit cross-border participation

- For **delivery year 2019**, given the regulatory timeline (decree was signed in November by the energy Minister) only **the simplified procedure will apply**
- RTE will certify and sell during the May auction all of the certificates (6319 MW)



From DY 2020 TSO-TSO agreements will be signed

- TSO-TSO cooperation agreement will be signed **from delivery year 2020** for neighbouring countries (UK, BE, GE, IT, SP)
- These cooperation agreement are an opportunity of **additional revenues for capacity providers** in these countries



Conclusions – A glimpse at the CEP

- The Clean Energy Package is about to be approved. Electricity Regulation articles 18 to 21 create a new framework for capacity mechanisms in Europe.
- On the one hand, the Clean Energy Package creates a whole set of additional requirements, delays and procedures for Member States willing to ensure their security of supply by implementing a capacity mechanism.
- On the other hand, the Clean Energy Package also features building blocks of what could become a European capacity market : common rules drafted by ENTSOE, a European registry of capacities,...
- Innovative design features such as explicit cross border participation create opportunities for bottom-up initiatives to develop the European dimension of capacity markets