



The French Regulatory Commission of Energy (CRE) is consulting market participants

PUBLIC CONSULTATION N° 2018-007 OF 12 APRIL 2018 ON THE USE OF ELECTRICITY LONG-TERM TRANSMISSION RIGHTS ON FRANCE'S BORDERS

Interconnectors play a central role in the architecture of the European electricity market. By taking advantage of the complementary nature of generating fleets or demand profiles, they are used to improve the security of supply and reduce the overall energy supply cost. From an economic standpoint, the opportunities for cross-border exchanges for participants in the electricity system (generators, suppliers, industrial consumers, etc.) are largely guided by price differences between wholesale markets. Wholesale prices reflect the tightness between supply and demand across each market zone, and it is in the interests of market participants to use interconnectors in order to create flows from zones where prices are low, to those where prices are higher. However, interconnectors have limited transmission capacity, and so the regulatory framework includes rules governing allocation of capacity between users. Under the European regulatory framework, these allocations are organised by auction, specifically implicit auctions in the case of market coupling arrangements (the reference mechanism for organising flows of electricity for day-ahead and intraday time frames), and explicit auctions for long-term time frames (up to a year in advance). For market participants, the value of interconnector transmission rights is dependent on the anticipated differences in day-ahead prices between zones. Spot prices are highly volatile, which poses risks for market participants involved in cross-border exchanges. The long-term rights issued by the transmission system operators (TSOs) offer the possibility of hedging these risks, either physically or financially.

EU Regulation n°2016/1719 of 26 September 2016, known as the FCA (Forward Capacity Allocation) Regulation, introduced a harmonised framework for calculating and allocating long-term transmission rights in the European Union. It provides for the creation of a set of methodologies that TSOs must submit for approval by the regulatory authorities. Article 16 of the Regulation notably stipulates the definition of a methodology for splitting long-term cross-zonal capacities between different long-term time frames (monthly, annual, etc.). To this end, and with a view to the European consultation procedure to be carried out at a later date, CRE is keen to gauge the opinions of market participants on the splitting rules to be applied on France's borders. More generally, CRE wants to refine its assessment of the benefits of long-term rights for market participants, their use of these rights, the value they place on them and the way in which they articulate different time frames between them, in order to guide future work on the hedging of long-term risks.

This public consultation will first of all review the existing situation in terms of long-term rights on France's borders (part 1), before going on to cover the criteria for defining long-term capacity splitting rules between various time frames (part 2), and finally looking at the wider issues to do with the design of long-term rights (part 3).

Deliberated in Paris on 12 April 2018,
For the French Regulatory Commission of Energy,
A Commissioner,

Christine CHAUVET

Responding to the consultation

CRE invites interested parties to submit their contributions by **18 May 2018**:

- by email to the following address: dr.cp4@cre.fr;
- using the online form available on the CRE website (www.cre.fr), in the section entitled “Documents / Public Consultations”;
- by post: 15, rue Pasquier - F-75379 Paris Cedex 08 FRANCE.

CRE will publish a summary of the contributions received, subject to statutory confidentiality requirements. In their submissions, contributors should clearly indicate any information they wish to keep anonymous and/or confidential. Otherwise, the entirety of the contribution will be treated as non-confidential and non-anonymous.

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1. BACKGROUND: THE IMPLEMENTATION OF LONG-TERM TRANSMISSION RIGHTS (LTR)

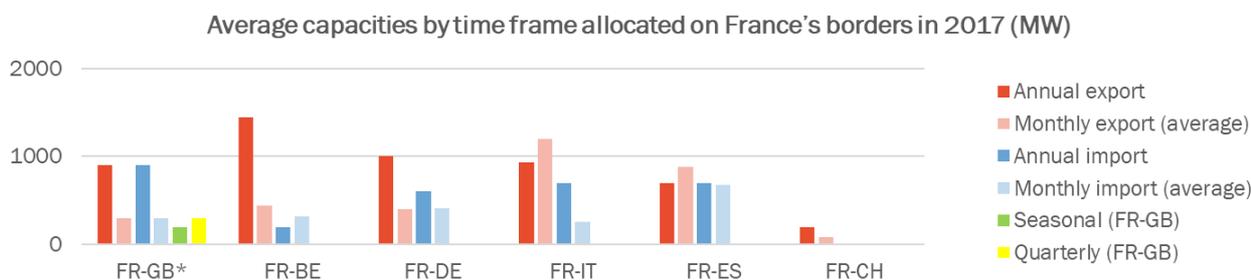
Long-term rights are instruments issued by TSOs, allowing market participants who purchase them to secure, in advance, the conditions in which they will subsequently carry out a future cross-border exchange. These rights may take different forms, ranging from Financial Transmission Rights (FTRs) in the form of options or obligations, to Physical Transmission Rights (PTRs). PTRs entitle the holder to nominate cross-border exchanges of energy in the day-ahead time frame, effectively guaranteeing that the holder will be able physically to use the interconnector. FTRs, on the other hand, ensure the holder receives financial compensation equivalent to the difference in the day-ahead price differential between the zones concerned. In the case of “FTR-options” (currently the only form used in Europe), this compensation - which is paid by the TSO to the rights holder - is limited to the case where the day-ahead price differential is positive in the direction specified by the right. “FTR-obligations”, meanwhile, entail a symmetrical commitment by the holder of the FTR to compensate the issuing TSO in the event that the price differential is negative. In the case of PTRs, holders are able to waive the nomination of their rights to use of the interconnector concerned. This results in the TSO making the capacity available for sale again for the day-ahead time frame. In this case, the PTR holder will receive the day-ahead price differential, if this differential is positive in the direction specified by the right, as in the case of FTR-options (under the UIOSI principle). Each type of right may be allocated for different time frames and in different forms (base load, peak, etc.).

1.1 Current situation of long-term rights on France’s borders

In France, as can be seen in the table below, the characteristics of long-term transmission rights vary between borders:

Border ¹	Product type	Product form	Allocation time frames	Possibility of including scheduled reduction periods
FR - GB	PTR	Base load	Annual/Seasonal/Quarterly/Monthly/Weekend	No
FR - BE	FTR	Base load	Annual/Monthly	Yes
FR - DE	PTR	Base load	Annual/Monthly	Yes
FR - IT	PTR	Base load	Annual/Monthly	Yes
FR - ES	PTR	Base load	Annual/Monthly	Yes

The average volumes allocated in 2017 for each product are shown, for information, in the graph below:



* Following changes to the splitting rules on the FR-GB border in 2017, the volumes shown are not the average volumes allocated in 2017 but rather the volumes corresponding to the new splitting rules.

There is a clear disparity between borders in the way in which rights are allocated between different time frames, with annual products generally preferred to short-term products (depending on the border direction, the average proportion of annual products as compared with other long-term products varies from 41 to 78%). The allocation rules, on which CRE has issued an official opinion², are summarised in more detail in the table below (for borders not subject to flow-based capacity calculations, the capacity allocated for the day-ahead time frame corresponds in all cases to the value of NTC_{D-2} minus - in the case of PTRs - the net long-term capacities nominated; no capacity is reserved for the intraday time frame):

¹ On the France-Switzerland border, which is not included in the table as Switzerland is not covered by the FCA Regulation, long-term rights are issued in the form of PTRs for base load use of the interconnector, allocated for annual and monthly time frames, but only in the direction FR>CH.

² cf. Deliberation of 13 November 2012 for the France – Germany and France - Belgium borders, Deliberation of 15 October 2015 for the France – Italy border, Deliberation of 26 November 2015 for the France - Spain border, and Deliberation of 27 October 2016 for the France – Great Britain border

Border	Capacity offered for the annual time frame	Capacity offered for the monthly time frame (and other intra-annual long-term time frames for the FR-GB border)
FR>GB GB>FR	Calendar Year (01/01/N to 31/12/N): 900 MW	<ul style="list-style-type: none"> ▪ Seasonal: Winter (01/10/N to 31/03/N+1) and Summer (01/04/N to 30/09/N): 200 MW ▪ Quarterly: 300 MW ▪ Monthly: 300 MW (The capacity of the FR-GB direct current interconnector is 2000 MW ³ , and so 300 MW is reserved for the day-ahead time frame and Weekend product)
FR>BE	NTC _a - 200 MW reserved for monthly time frame - 200 MW reserved for D-1	200 MW + 25% (NTC _m - capacity already allocated for annual time frame - 200 MW reserved for monthly - 200 MW reserved for day-ahead time frame)
BE>FR	NTC _a - 200 MW reserved for monthly time frame - 200 MW reserved for day-ahead	200 MW + 50% (NTC _m - capacity already allocated for annual time frame - 200 MW reserved for monthly - 200 MW reserved for daily time frame)
FR>DE	70% NTC _a	90% NTC _m - capacity already allocated for annual time frame
DE>FR	60% (NTC _a - 200 MW reserved for D-1)	40% (NTC _a - 200 MW reserved for D-1)
FR>CH ⁴	200 MW (1/3 of minimum available capacity not reserved by LTCs)	200 MW (1/3 of minimum available capacity not reserved by CLTs)
CH>FR ⁴	No allocation (almost all volume reserved for LTCs)	No allocation (almost all volume reserved for LTCs)
FR>IT	<ul style="list-style-type: none"> ▪ Base load: minimum value of NTC_a over the year, reduced by 17% ▪ Base load with scheduled reductions: minimum value of NTC_a over periods not subject to reduction, minus the non-reduced base load volume, then reduced by 17% 	Minimum value of NTC _a over the month, minus products already allocated for the annual time frame, then reduced by 17%
IT>FR	700 MW ⁴ (Represents approx. 75% of the minimum NTC _a over the year)	Minimum NTC _a over the year - capacity allocated for the annual time frame (Altogether, the total minimum NTC _a over the year is therefore allocated on a long-term basis)
FR>ES ES>FR	Usually, 1/3 of the average value of NTC _a over the year In case of significant reductions, a product is defined with scheduled reduction periods	2/3 of the average of minimum daily values of NTC _a over the month - capacity already allocated for the annual time frame The monthly product is adjusted so that the sum total of annual and monthly products is always less than NTC _m

D-1 = day-ahead time frame

NTC_x = commercial exchange capacity in a given direction, calculated for a given allocation time frame x (a = annual, m = monthly)
LTC = existing long-term contracts on the FR-CH border benefiting from priority access to the interconnector

1.2 Implementation of the FCA Regulation

Whilst the allocation of long-term rights is a long-standing practice, it has been governed by a harmonised framework since the adoption of Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation, known more commonly as the FCA Regulation, which came into force on 17 October 2016. The guiding principles set out in the Regulation are as follows:

- Issue of long-term transmission rights

Unless the regulatory authorities are able to show that the financial markets offer sufficient hedging opportunities, **TSOs are required to issue long-term transmission rights on the bidding zone borders within their area of competence** (Article 30 of the FCA Regulation);

- Allocation of long-term transmission rights

Long-term rights are allocated by the TSOs on each border and in each direction at **explicit auctions** based on the marginal price principle (Article 40 of the FCA Regulation), organised via a **single European allocation platform** based on **harmonised European allocation rules** or HARs) (Articles 49 to 52 of the FCA Regulation). These harmonised rules, and the regional annexes for the capacity calculation regions to which France

³ No capacity calculation is presently carried out on this border; the total thermal capacity of the cable is made available on the market.

⁴ Rules not written or not set out in a published document

belongs⁵, were approved at the end of 2017, along with the functional requirements of the single allocation platform;

- Design of long-term transmission rights

Long-term transmission rights are offered for at least **annual and monthly time frames**; their detailed design (type, form, time frame) is defined for each capacity calculation region (Article 31 of the FCA Regulation). This design was approved by CRE, in coordination with the other regulatory authorities concerned, in its Deliberation of 12 October 2017 for the France - Germany, France - Belgium, France - Italy and France - Spain border, and its Deliberation of 15 February 2018 for the France - Great Britain border;

- Volume of rights

The volume of rights issued by the TSOs is dependent on the **capacity of the interconnector** between the zones concerned, as anticipated at the time the rights are allocated (TSOs must be able to honour PTR nominations and provide appropriate remuneration for any FTRs or PTRs that have not been nominated, from the proceeds of day-ahead rights sales). This capacity is calculated using a harmonised methodology for each capacity calculation region, based on a common European grid model (Articles 10 and 18 of the FCA Regulation). It is **split between the different long-term allocation time frames** using a methodology defined for each capacity calculation region (Article 16 of the FCA Regulation);

In the near future⁶, the FCA Regulation stipulates that TSOs be required to submit, for each capacity calculation region:

- the methodology for **calculating long-term capacity** between bidding zones;
- the methodology for **splitting this capacity between the different allocation time frames** defined in the design of long-term rights.

1.3 Objectives of this public consultation

This consultation is intended to seek the opinions of French market participants (and more generally all participants using long-term transmission rights on France's borders), to enable CRE and RTE to take account of market requirements in their work on LTTRs. It concerns considerations requiring short-term decisions (rules on splitting capacities between time frames, which will incidentally be submitted to public consultation in each capacity calculation region), and also more general issues to do with the architecture of the existing system, which could be changed in the future.

2. RULES ON SPLITTING LONG-TERM CAPACITY BETWEEN TIME FRAMES

Article 16 of the FCA Regulation states: *"no later than the submission of the capacity calculation methodology referred to in Article 10, the TSOs of each capacity calculation region shall jointly develop a proposal for a methodology for splitting long-term cross-zonal capacity in a coordinated manner between different long-term time frames within the respective region"*.

In addition, Article 9 of the FCA Regulation states: *"all TSOs in each capacity calculation region shall ensure that long-term cross-zonal capacity is calculated for each forward capacity allocation and at least on annual and monthly time frames"*. This represents a departure from the existing situation, in which long-term capacity is not systematically calculated or re-calculated.

The task of defining rules for splitting capacity between time frames entails establishing, based on the level of long-term capacity (NTC) calculated for a given allocation time frame, the portion of this capacity (expressed in absolute or relative terms) actually made available on the market for the time frame concerned (with the remainder of the NTC being either already allocated as part of previous allocations, or reserved for later time frames)⁷.

Several criteria may be taken into account when defining capacity splitting rules:

- Criterion n° 1: sufficient available capacity for all allocations:

There are two aspects to this:

⁵ Channel, South West Europe, Italy North, CORE

⁶ According to the FCA Regulation, the submission date depends on the approval dates of day-ahead and intraday capacity calculation methodologies established by TSOs under the CACM Regulation. These methodologies should be approved in 2018.

⁷ N.B.: since the NTC calculated for a given delivery period is subject to change over time (owing to anticipated system status changes for the delivery period concerned), the capacity values available across all time frames cannot be established in advance with any certainty.

- Splitting of capacities between long-term time frames and day-ahead and intraday time frames⁸: for FTR type products, it is not necessary to reserve volume for short-term time frames, since the NTC is allocated physically only for these time frames; in the case of PTRs, a volume may be reserved for short-term time frames in order to ensure liquidity in the corresponding markets (it may be expressed in absolute terms or as a percentage of the NTC calculated for the last long-term time frame before day-ahead, and could depend on the average rate of nomination of long-term products observed over a given period in the past).
- Splitting of capacities between long-term time frames: splitting may be defined in advance to ensure that sufficient supply is available at each auction, or alternatively, the entirety of the NTC (minus any amount reserved for day-ahead allocation) may be allocated for the annual time frame, if it is considered that the return of rights acquired will be enough to ensure that sufficient volume is available at subsequent auctions⁹.

- Criterion n° 2: minimum volume of hedging products for market participants:

Minimum floor levels may be set for each long-term time frame, in order to ensure that the volumes offered for sale are adequate to meet the hedging requirements of market participants. These levels could, for example, be set on the basis of the comparative volume of activity on the financial derivatives markets (long-term energy contracts). Additional auctions (seasonal, quarterly, etc.) could also be held, over and above the annual and monthly auctions required by the FCA Regulation, to allow for a more dynamic hedging strategy.

- Criterion n° 3: consistency of capacity valuations with actual system status:

This objective would entail allocating the majority of capacity for short-term time frames, in order to better reflect the “true” value of congestion income where the system’s actual status over the delivery period is known accurately.

- Criterion n° 4: independence from grid development:

In addition to fluctuations in the NTC caused by variations in the anticipated status of the power system, interconnector capacity between zones can vary significantly when new installations come online. Consequently, it may be preferable to adopt splitting rules expressed in the form of a percentage of the NTC calculated (perhaps with a minimum floor value), rather than as absolute volumes, in order to ensure that such grid developments are automatically reflected.

It should be noted that the rules on splitting capacity between time frames to be defined under the FCA Regulation will not apply to the French-Swiss border, as Switzerland is not covered by the Regulation. This border has a peculiarity, in that a large part of the interconnector capacity was historically reserved for the holders of long-term contracts backed by generating assets. Until now, the capacity made available to the market when these contracts expired was entirely allocated for the day-ahead time frame. However, it may be preferable to allocate a part of this capacity to long-term time frames.

Question 1: What do you see as the most appropriate way of splitting capacities between different time frames? What considerations do you think it is important to take into account when setting the rules for splitting capacities (these need not be limited to the criteria listed above)?

Question 2: Do you believe it is necessary to maintain different rules for splitting capacities for each of France’s borders, or would you like to see these rules harmonised?

Question 3: Do you believe the specific allocation time frames (quarterly, seasonal) currently proposed on the France - Great Britain border should be maintained, or perhaps generalised?

Question 4: Do you think a part of the interconnector capacity freed up by the expiry of long-term contracts on the France - Switzerland border should be allocated to long-term time frames? If so, what allocation rules would you propose?

⁸ This aspect does not fall directly within the scope of the FCA Regulation, which only applies to long-term capacities.

⁹ Given the low return rate of rights in recent years, this scenario seems unrealistic, and in practice could result in reduced liquidity at subsequent auctions.

3. UTILISATION OF LONG-TERM TRANSMISSION RIGHTS

3.1 Adequacy of long-term rights to the requirements of market participants

Long-term transmission rights issued by TSOs are primarily intended to meet the need to secure future cross-border transactions for market participants whose activity requires forward visibility (e.g. suppliers who need to determine their supply costs in order to put together their commercial offerings, generators looking to guarantee their future revenue for investment, etc.). Long-term rights complete the other energy hedging products available on the markets in each zone. Long-term rights can also be used in other ways, which may be influenced by the market design, depending on the extent to which it represents a suitable solution for the needs of market participants.

In terms of their function as a means of hedging long-term risks, the transmission rights issued by TSOs can be compared to alternative measures based on the financial markets, where long-term energy contracts, the underlying of which consists of the day-ahead price observed in a given zone, are traded. Combinations of these contracts in two adjoining zones (purchased in one zone, sold in the other) can fulfil the same function of hedging against the price spread between those zones. In some regions, only these financial market-based solutions are used¹⁰. However, such a system, which does not entail involvement by the TSOs, requires the markets to be sufficiently liquid. By comparison, long-term rights have the advantage of guaranteeing that a certain volume of long-term hedging products will be made available by the TSOs, but also have certain drawbacks: the maximum time frame is one year, whereas hedging requirements may extend to a longer period; the calendar of explicit auctions is relatively rigid, and auctions may not necessarily coincide with the continuous quoting of long-term energy contracts; there is no organised secondary market (only OTC rights transfers are possible); the volume offered on the market is limited due to the link with the interconnector capacity actually anticipated.

Question 5: Do the long-term rights currently used on France's borders satisfy your requirements?

Question 6: Do you believe that purely financial products traded between market participants via an exchange, with no TSO involvement (e.g. CfDs on price spreads between zones or equivalent combinations of products) could carry out all of the functions presently provided by long-term rights? If so, why?

As regards types of long-term rights, PTRs, which can be nominated, have the advantage of allowing OTC cross-border exchanges between market participants. This type of long-term right is currently proposed on all France's borders, with the exception of the France - Belgium border. However, historic analysis shows that, on most of France's borders, nomination rates are low or very low, with PTRs being used as FTR-options. Compared with PTRs, FTR-options operate more simply and increase day-ahead market liquidity. On the other hand, they require all market participants to use the day-ahead exchanges to realise cross-border transactions (which also makes the day-ahead price more representative of forecast system status), insofar as the entire physical interconnector capacity is allocated and nominated via the market coupling arrangement.

Question 7: How do you explain the generally low PTR nomination rates on France's borders? Would you be in favour of extending FTR-options to these borders? Do you see any benefits to introducing FTR-obligations?

3.2 Valuation of long-term rights

In theory, the value of long-term rights is dependent on the price spreads between bidding zones as forecast at the time of allocation. These forecasts are also reflected in long-term energy products available in each zone¹¹. The optional form of long-term rights - PTRs and FTR-options - also has an impact on their valuation (which increases in comparison with a symmetrical product, since this form enables the holder to take advantage of favourable price spreads without being exposed to unfavourable spreads). However, other considerations may negatively impact

¹⁰ In the Nordic countries (Finland, Sweden, Norway, Denmark), the TSOs do not issue long-term rights. Instead, long-term price spreads between zones are hedged by Contracts for Difference (CfD) quoted on the market, every day up to four years before the deadline, and there is no link to anticipated interconnector capacity. Given that there are no long-term energy contracts quoted in each bidding zone (long-term contracts are based on the Nordic System Price, a fictional price calculated without any congestion restrictions between zones), long-term hedging in a given zone is achieved by the combination of a long-term contract index-linked to the Nordic System Price and a CfD (EPAD: Electricity Price Area Differential) index-linked to the differential between the zone price and the Nordic System Price.

¹¹ These define the "spread forward", i.e. the difference between the prices of long-term contracts in the zones concerned, for a given time frame.

their value (scheduled reduction periods, if occurring at a time when the expected price differential is higher than the average¹² over the delivery period, imperfectly guaranteed firmness of rights¹³, etc.).

However, an analysis of auction results shows that the expected fundamentals are not always achieved, suggesting that market participants take other factors into account when valuing long-term rights. In particular, undervaluation of long-term rights is observed on most of France's borders, whether defined by comparison with the day-ahead price spread, or even on the basis of spread forwards observed.

Question 8: What considerations do you think explain differences in the valuation of cross-border capacity between long-term and short-term time frames?

4. RECAP OF QUESTIONS

Question 1: What do you see as the most appropriate way of splitting capacities between different time frames? What considerations do you think it is important to take into account when setting the rules for splitting capacities (these need not be limited to the criteria listed in part 3.2)?

Question 2: Do you believe it is necessary to maintain different rules for splitting capacities for each of France's borders, or would you like to see these rules harmonised?

Question 3: Do you believe the specific allocation time frames (quarterly, seasonal) currently proposed on the France - Great Britain border should be maintained, or perhaps generalised?

Question 4: Do you think a part of the interconnector capacity freed up by the expiry of long-term contracts on the France - Switzerland border should be allocated to long-term time frames? If so, what allocation rules would you propose?

Question 5: Do the long-term products currently used on France's borders satisfy your requirements?

Question 6: Do you believe that purely financial products traded between market participants via an exchange, with no TSO involvement (e.g. CFDs on price spreads between zones or equivalent combinations of products) could carry out all of the functions presently provided by long-term rights? If so, why?

Question 7: How do you explain the generally low PTR nomination rates on France's borders? Would you be in favour of extending FTR-options to these borders? Do you see any benefits to introducing FTR-obligations?

Question 8: What considerations do you think explain differences in the valuation of cross-border capacity between long-term and short-term time frames?

Question 9: Do you have any other remarks concerning the current system of long-term transmission rights and possible changes that could be made to it?

¹² Bearing in mind that the reduction itself contributes to an increase in the price spread between zones, all other things being equal.

¹³ Except in cases of force majeure, the FCA Regulation requires rights holders to be compensated based on the day-ahead price spread, where a reduction is applied before the day-ahead firmness deadline. This measure ensures that the reduction is neutral for rights holders. The firmness of rights can only be reduced if the compensation cap provided for by Article 54 of the FCA Regulation is reached.