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# Channel Splitting Rules Explanatory Note

February 2019

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## **Disclaimer**

This explanatory document is submitted by all Channel TSOs to all Channel NRAs for information and clarification purposes only accompanying the “Channel TSOs proposal for a methodology for splitting long-term cross-zonal capacity in accordance with Article 16 of the Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a Guideline on Forward Capacity Allocation”

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## 1. Introduction

Article 16 of the Commission Regulation 2016/1719 establishing a guideline on Forward Capacity Allocation (FCA) requires TSOs of the Channel CCR (Channel Region) jointly to 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.

FCA states that, in the interests of developing a genuinely integrated electricity market, efficient hedging opportunities should be developed for generators, consumers and retailers to mitigate future price risk in the area in which they operate. A well-functioning market should also provide consumers with adequate measures to promote more efficient use of energy, which presupposes a secure supply of energy.

## 2. Context for splitting rules within the wider processes

FCA establishes several new regional processes. This includes a long-term capacity calculation methodology (Channel LT CCM) pursuant to FCA Article 10, and a methodology for splitting cross-zonal capacity pursuant to FCA Article 16 (Channel Splitting Rules).

FCA lists the types of transmission right that can be offered and in accordance with the Channel regional design of long-term transmission rights pursuant to FCA Article 31, Channel TSOs have previously proposed the; (a) type of long-term transmission rights; (b) forward capacity allocation time frames; (c) form of product (base load, peak load, off-peak load); and (d) the bidding zone borders covered.

Whereas the focus of the Channel LT CCM is to determine the total amount of capacity that can be made available on Channel Interconnectors, the Channel Splitting Rules determine how to distribute that total amount of capacity between the various long-term timescales.

FCA Article 31 states that *“All TSOs issuing long-term transmission rights shall offer long-term cross-zonal capacity, through the single allocation platform, to market participants for at least annual and monthly time frames.”* As such Channel TSOs have specified a non-zero minimum for the percentages for monthly and annual time frames.

The first aim listed in FCA Article 3 is *“promoting effective long-term cross-zonal trade with long-term cross-zonal hedging opportunities for market participants”*. Furthermore, FCA Article 16 states that the Channel Splitting Rules; *“shall meet the hedging needs of market participants”*. Therefore, a fundamental aspect of the Channel Splitting Rules is for Channel TSOs to have the flexibility to respond to the changing requirements of market participants. The Channel Splitting Rules requires a provisional version of the capacity split to be published, at least once a year. This should provide transparency for market participants and provide an opportunity to give feedback on what they would like to see future capacity splits to be.

Furthermore, FCA Article 16 states that the Channel Splitting Rules; *“shall be coherent with the capacity calculation methodology”*. The Channel Splitting Rules proposal achieves this by amending the capacity split in light of each long-term capacity calculation result. Again, at each stage the capacity split is published so that market participants have full transparency on the impact of the capacity calculation on the split of capacity.

Finally, FCA Article 16 states that the Channel Splitting Rules; “*shall not lead to restrictions in competition, in particular for access to long-term transmission rights.*”. Therefore, the capacity splits shall be published alongside the auction calendar pursuant to the HAR, so that all market participants have the same information/opportunity in order to bid for access to long-term transmission rights.

The Interconnectors within the Channel Region are operated by several different TSOs. Article 2 of the Channel Splitting Rules defines the ‘Responsible TSO(s)’ as “*the Channel Region TSO(s) responsible for the allocation of the cross-zonal capacity of that Interconnector*”. A list of the Responsible TSO(s) in the Channel Region is given in Annex 1 of this explanatory note.

Several new Interconnectors are anticipated to join the Channel Region in the near future (e.g. ElecLink, IFA2, FABLink). Channel TSOs have been careful to make sure that the Channel Splitting Rules will not require amendments to introduce these new Interconnectors (for example all references to individual Interconnectors have been removed).

For the avoidance of doubt, this Channel Splitting Rules proposal only deals with the distribution of capacity between the different long-term time frames. It does not deal with the calculation of capacity, or any associated curtailment events.

### 3. Principles

Channel TSOs considered some key principles which they applied when drafting the Channel Splitting Rules:

1. The developed Channel Splitting Rules need to be flexible enough to not require regular amendment;
2. The Channel Splitting Rules shall apply to all long-term capacity as governed by the FCA;
3. The Channel Splitting Rules need to achieve a balance between definition and flexibility to react to the market;
4. The Channel Splitting Rules shall meet the hedging needs of market participants, as per FCA Article 16;
5. The Channel Splitting Rules shall not require the allocation of low/zero value capacity where does not facilitate the principles in FCA Article 16;
6. The Channel Splitting Rules should have an implementation date aligned with the long-term capacity calculation methodology; and
7. The Channel Splitting Rules should aim to allow for different products splits on different Interconnectors on the same border, although if the Channel Splitting Rules allows TSOs to optimise within boundaries, there should be minimal discrepancies.

## 4. Option Analysis

During the development of the Channel Splitting Rules, the following questions were examined to determine the appropriate set of options to consider in more detail. The primary variables considered by the workgroup were capacity and resolution of Long Term Transmission Rights splitting. This section should be read alongside the table in Annex 2 which shows the matrix of options considered by the Channel TSOs when developing the Channel Splitting Rules.

### 1. Capacity

#### a) Should capacity split be defined for each LTTR time frame or combined across all LTTR time frames?

The wording in the FCA Article 16 states that the methodology developed should split long-term cross-zonal capacity in a coordinated manner between *different* long-term time frames. This reference to different long-term time frames has been interpreted to mean that capacity needs to be split for each LTTR time frame (or group of time frames) rather than having a value that applies to the total long-term capacity.

#### b) Should capacity be split using percentages, MW values or combination of the two?

This question was examined in the context of deciding that capacity should be split for each LTTR time frame.

It was agreed that using percentages would offer the most flexibility as they can be easily applied to the varied capacities of each Interconnector. Using only a MW value was determined to be impractical as any future changes to capacity would require an update to the splitting rules to establish a new MW value for each LTTR time frame.

Having determined that a percentage was most appropriate, the group discuss if a single figure or a range for each LTTR time frame should be used for each. The group determined that a range gave Channel TSOs the ability to vary the capacity offered would reduce the likelihood of regular amendment to the splitting rules whilst giving flexibility to meet the needs of the market.

The group agreed that there would need to be a limit applied to the total capacity offered to LTTR time frames relevant to the TSO's Nominal Capacity. Establishing this limit across all LTTR time frames would give market participants an indication of the volume of capacity they can expect to be available in the Day Ahead and Intraday markets.

For Annual and Monthly LTTR time frames, the group discussed whether a minimum should be established to ensure that capacity is offered for these time frames. This minimum could be a percentage of the Nominal Capacity. The Capacity Split will be reviewed following any long-term capacity calculation to ensure that the capacity allocation is consistent with the NTC values produced by these calculations.

## 2. Resolution

### c) Should the capacity split apply to the Channel Region as a whole, each Bidding Zone Border within the Channel Region or each TSO within the Channel Region?

This question was examined in the context of determining that long-term capacity would be split between each LTTR time frame using a percentage range with a defined minimum for Annual and Monthly, and a limit for all LTTR capacity that cannot be exceeded.

Based on the above, it was determined that applying the capacity split at the Channel Region level was impractical because each Bidding Zone Border has different LTTR time frames. It was noted that if all products with a time period of less than monthly were grouped together, harmonisation would be possible at the Channel Region level.

It would therefore be possible to apply the capacity split at the Bidding Zone Border, TSO, or Channel Region level.

### d) Should the capacity split be defined per direction or be identical for both directions?

It was determined that applying a split per direction, or applying the same split to both directions, were both possible options.

## 5. Methodology Development

The capacity is split over a calendar year. For Seasonal and all products shorter than Monthly, there is the possibility of the capacity split going into a subsequent year as the end date of the auctioned product may not be on or before 31 December. The end date could be applied for a few days in the case of products shorter than Monthly but for Winter Seasonal it will apply until 31<sup>st</sup> March of the following year.

Once it was agreed to use ranges, the group investigated how these ranges could be determined. The long-term products available on each border within the Channel Region are shown in Table 1.

	BE-GB	FR-GB	NL-GB
Annual	✓	✓	✓
Seasonal	✓	✓	✓
Quarterly	✓	✓	✓
Monthly	✓	✓	✓
Weekly	✓	✗	✓
Easter Weekend	✗	✗	✓
Long Weekend	✗	✗	✓
Weekend	✓	✓	✓

Table 1

Weekly, Easter, Long and Weekend are all products that carve up a 7 day period, as shown in Table 2.

	Weekday					Weekend	
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
<b>Annual</b>	✓	✓	✓	✓	✓	✓	✓
<b>Seasonal</b>	✓	✓	✓	✓	✓	✓	✓
<b>Quarterly</b>	✓	✓	✓	✓	✓	✓	✓
<b>Monthly</b>	✓	✓	✓	✓	✓	✓	✓
<b>Weekly</b>	✓	✓	✓	✓	✓	✗	✗
<b>Easter Weekend</b>	✓	✗	✗	✗	✓	✓	✓
<b>Long Weekend</b>	✓	✗	✗	✗	✗	✓	✓
<b>Weekend</b>	✗	✗	✗	✗	✗	✓	✓

Table 2

There is increased complexity (and limited added value) in applying ranges individually to each product shorter than monthly. For example, a Weekend product with a range of 5-10%, for a 1000MW Interconnector, would result in 50-100MW being made available for allocation across only Weekend products for a whole year, which may not be aligned to the Weekly products split (and Easter Weekend, Long Weekend products would add to this complexity).

	Ranges	
	Min	Max
<b>Annual</b>	5%	85%
<b>Seasonal</b>	0%	80%
<b>Quarterly</b>	0%	80%
<b>Monthly</b>	5%	85%
<b>all Long-Term time frames shorter than Monthly</b>	0%	80%

Table 3

Article 31(2) of FCA requires that TSOs shall offer transmissions rights for at least annual and monthly time frames. The Channel Splitting Rules therefore specify a non-zero minimum for the percentages for monthly and annual time frames. All other time frames are considered additional time frames and therefore do not have a required minimum value.

By having a required minimum for Annual and Monthly, it is possible to determine the maximum permissible for additional time frames.

Long Term Limit – (Min Annual + Min Monthly) = Maximum for additional time frames

*i.e.* 90% - (5% + 5%) = 80% (Maximum permissible for Seasonal, Quarterly, or time frames shorter than Monthly )

## 6. Definition for Nominal Capacity

In some cases, HVDC Interconnectors in the Channel Region have two potential capabilities: a long term or continuous capability and also a shorter-term dynamic rating. This shorter-term dynamic rating has resulted in grid entry capacities being agreed with connected network TSOs at levels higher than the continuous rating of the Interconnector. Any dynamic capacity (and hence capability up to the level of the grid entry capacity) can only be confirmed as available in short term time frames (usually day-ahead) and so cannot be considered by the Channel Splitting Rules to be sold in the Long-Term time frames. This, as well as inconsistencies in the level of dynamic capability between Interconnectors, results in the Channel Splitting Rules being unable to use the grid entry capacity as a measure on which to base the capacity to be split. The region has therefore developed a new definition which defines the Interconnector capacity on which to base the proportion considered by the Channel Splitting Rules:

*‘Nominal Capacity’ shall mean the ‘maximum HVDC active Power transmission capability’ as defined in Commission Regulation (EU) 2016/1447 and taking account of the losses of the Interconnector.*

This definition for Nominal Capacity refers to a definition in the HVDC Code and adds consideration for losses of the Interconnector. This addition is required as Channel Interconnectors make long-term capacity available at a fictitious point half way between the two AC grid connection points rather than at the grid connection points. The DC losses on the Interconnector can then be taken into account in order to maximise the capacity made available on the Interconnector.

The full description of how losses are taken into account is given within the proposal for nomination rules for Physical Transmission Rights for the bidding zone borders of the Channel Region in accordance with Article 36 of FCA.

The following is an example of how the Nominal Capacity relates to the Interconnector capability (This example considers a 1000MW Interconnector with 2% DC losses):

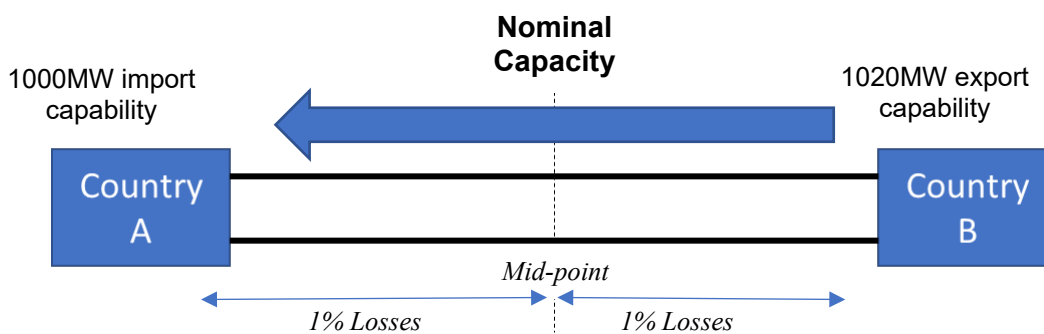


Figure 1



## 7. New Interconnectors

Within the Channel Splitting Rules, new Interconnectors that are yet to begin operations are able to offer less than the minimum % range as stipulated in the Channel Splitting Rules (Art 4(5.3)). This is required as it is unlikely that new Interconnectors will be able to fulfil the minimum requirements over all time frames in the year in which they become commercially available for the first time.

There are three distinct stages at the end of a construction period in order for an Interconnector to be fully proven, as shown in Table 4.

Period	Interconnector availability
<b>Commissioning</b>	<p>This period normally lasts between one and three months and is the initial period of testing on the Interconnector.</p> <p>No cross-border capacity is offered commercially and flow test power requirements are bought specifically for the test.</p>
<b>Trial Operations</b>	<p>This is a period normally lasting between 30 and 60 days following completion of the commissioning period.</p> <p>The Interconnector is made available to the market but is not fully proven and may not be 'taken over' by the Interconnector owner.</p> <p>During this period the potential for a fault on the Interconnector is higher than an Interconnector that has been in operation for some time. It is therefore expected that an Interconnector will not make long-term capacity available during this time due to wanting to avoid providing less certain capacity to the market and ensuring flexibility of availability if required.</p>
<b>Fully commissioned</b>	<p>Fully commissioned is achieved once the trial operations period has been successfully completed.</p> <p>At this time the Interconnector will be 'taken over' by the owners and it is expected that the capability will be considered within the LT CCM and receive an NTC in order to sell the next possible timescale. However, depending on the date of an Interconnector being 'fully commissioned' and the timing of annual auctions it may not be possible to fully comply with the Channel Splitting Rules until the 2<sup>nd</sup> full calendar year of operation.</p>

Table 4

## 8. Provisional vs later splits

Before any long-term capacity calculation, the Responsible TSO(s) will calculate a provisional split based on the Nominal Capacity of the Interconnector. This aims at giving a first indication to market participants of the value of the splitting ratios which will be applied to the results of the long-term capacity calculation.

As no long-term capacity calculation is run at the time of the provisional split, the Nominal Capacity of each Interconnector is used as a basis for the split. The Nominal Capacity of each Interconnector will be published alongside the provisional split.

At any time, including following each long-term capacity calculation, the split may be reassessed. The splitting ratios will be updated to take into account new information from the market and the grid, e.g. a change in the bidding behaviour of the market participants, or an outage which was previously unplanned, for example.

For the avoidance of doubt, there shall not be curtailment due to changes of the capacity split. There may be curtailment due to capacity calculation, but this is described in separate methodologies.

## 9. Explanation on how we use various factors to calculate the split

The Channel Region is comprised of multiple Interconnectors, operated by TSOs, with a variety of regulatory and ownership arrangements. As a result, the process that TSOs use to set their capacity split and the products offered each year will vary between TSOs and is used as a differentiating factor from their competitors. The Channel Splitting Rules purposely doesn't attempt to detail the exact process a TSO will follow to determine their capacity split. Whilst the Channel Splitting Rules doesn't detail an exact process, factors that the TSOs may consider include:

- Historic and forecast prices for power, fuels and carbon across each Channel Region Bidding Zone Border and within each Channel Region Bidding Zone;
- Performance of previous auctions across each time frame including the number of participants, spread percentage and the total demand;
- Auction schedules;
- Feedback from market parties through surveys and bilateral discussions;
- Planned outages for Interconnectors in the Channel Region and wider;
- Industry reports for price analysis, relevant news, markets evolutions and technological improvements; and
- Individual TSO business strategy.

Each TSO will consider the above information and determine a capacity split that will maximise the hedging opportunities of market parties. Due to the difficulty in accurately predicting the market demands, Interconnectors will monitor the auctions results closely and may need to refine the capacity split throughout the year to optimise the remaining planned auctions.

## 10. Process example/walkthrough

Consider the example of a 1000MW Interconnector within the Channel Region allocating long-term transmission rights for the calendar year 2030.

By December 2028, the TSO(s) are considering the provisional capacity split for the calendar year 2030. They will do this considering analysis based on factors such as historic allocation results and prices, forward energy curves, energy and fuel price forecasts, planned market evolutions, new technologies and direct feedback from market parties. (See section 9).

Respecting the splitting ranges in Annex 1 (shown in Table 5) of the Channel Splitting Rules the Responsible TSO(s) publish a provisional capacity split (See Table 6 and Figure 2).

<b>Timeframe</b>	<b>Min % of Nominal Capacity</b>	<b>Max % of Nominal Capacity</b>
Annual	5%	85%
Seasonal	0%	80%
Quarterly	0%	80%
Monthly	5%	85%
Sum of all Long-Term time frames shorter than Monthly	0%	80%

*Table 5 - Splitting Ranges from Annex 1 of the Channel Splitting Rules*

<b>Timeframe</b>	<b>Example provisional Capacity Split Direction 1</b>
Annual	500MW
Seasonal	0
Quarterly	0
Monthly	400MW
Sum of all Long-Term time frames shorter than Monthly	0

*Table 6 - Example provisional Capacity Split for a 1000MW Interconnector*

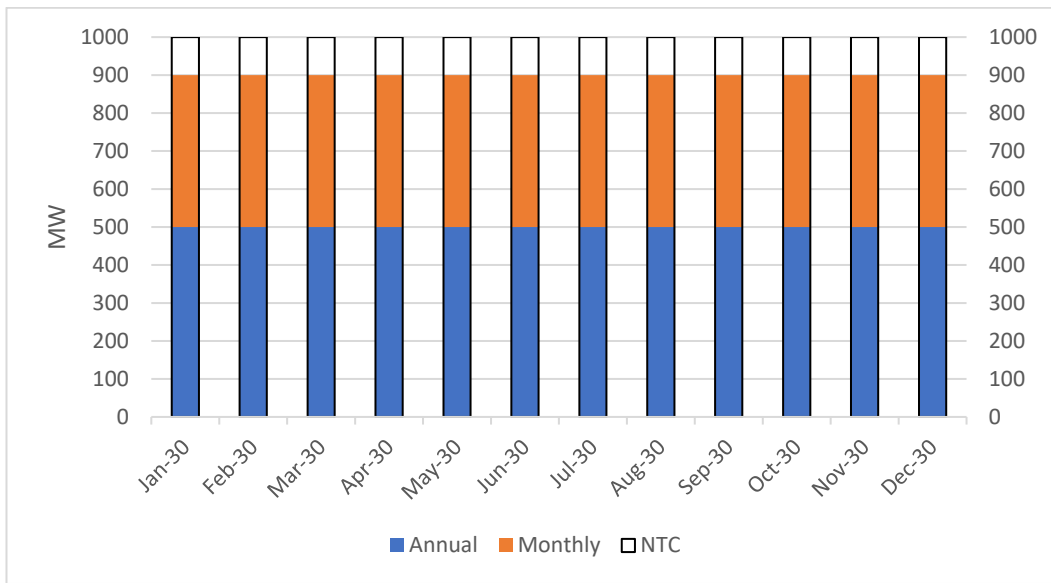


Figure 2 - Example provisional Capacity Split for a 1000MW Interconnector

However, in July 2029, the Channel TSO(s) run a long-term capacity calculation. The result determines that capacity will be significantly reduced (reduced to 200MW) during July - September 2030 and reduced to 0MW during June 2030.

In light of this new information the TSO(s) reconsider the Capacity Split. They again do this considering analysis based on factors such as historic allocation results and prices, forward energy curves, energy and fuel price forecasts, planned market evolutions, new technologies and direct feedback from market parties. The Channel TSO(s) publish a revised capacity split (see Table 7 and Figure 3).

Timeframe	Example Capacity Split Direction 1
Annual	200MW (with June 2030 defined as a restriction period)
Seasonal	0
Quarterly	0
Monthly	700MW (Jan – April 2030), (October – December 2030) 0 MW (June - September 2030)
Sum of all Long-Term time frames shorter than Monthly	0

Table 7 - Example Capacity Split following long-term capacity calculation

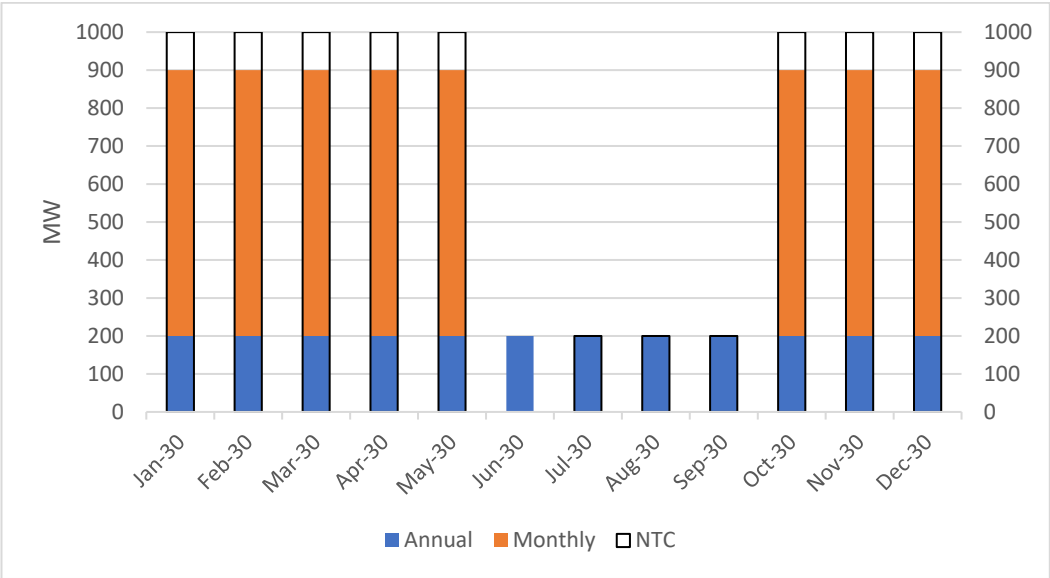


Figure 3 - Example Capacity Split following long-term capacity calculation

Note that in this example it was necessary to reduce the total volume of capacity allocated in the long-term time frame. It was also necessary to define a restriction period (in accordance with the HAR) for the month of June 2030 in order to allocate in the annual time frame. This restriction period will be defined in advance of any annual capacity being allocated.

In the months June - September 2030, the long-term capacity calculation result is equal or less than 200MW. As 200MW has already been allocated in the annual time frame it is not possible to allocate in the monthly time frame.

Before the first allocation of capacity for 2030, the TSO(s) shall publish the Capacity Split. Throughout the year the Capacity Split may need to be re-published following any unplanned outages. Following any revision the Responsible TSO(s) will publish the revised Capacity Split.

### 11. Implementation timeline examples (including new Interconnector example)

Article 8 of the Channel Splitting Rules sets out the implementation approach. As the split of capacity will be applied to the calculated capacity (as determined in the Channel LT CCM) the Channel Splitting Rules implementation is aligned to the Channel LT CCM implementation.

To take into account new Interconnectors joining the Channel Region, and to allow for a transition period for Interconnectors with allocated capacity spanning two calendar years, the implementation of the Channel Splitting Rules will start with the first calendar year for which no long-term allocation has yet taken place.

The following examples highlight why this approach is necessary.

#### Example 1

Implementation of Splitting Rules for an existing Channel Interconnector

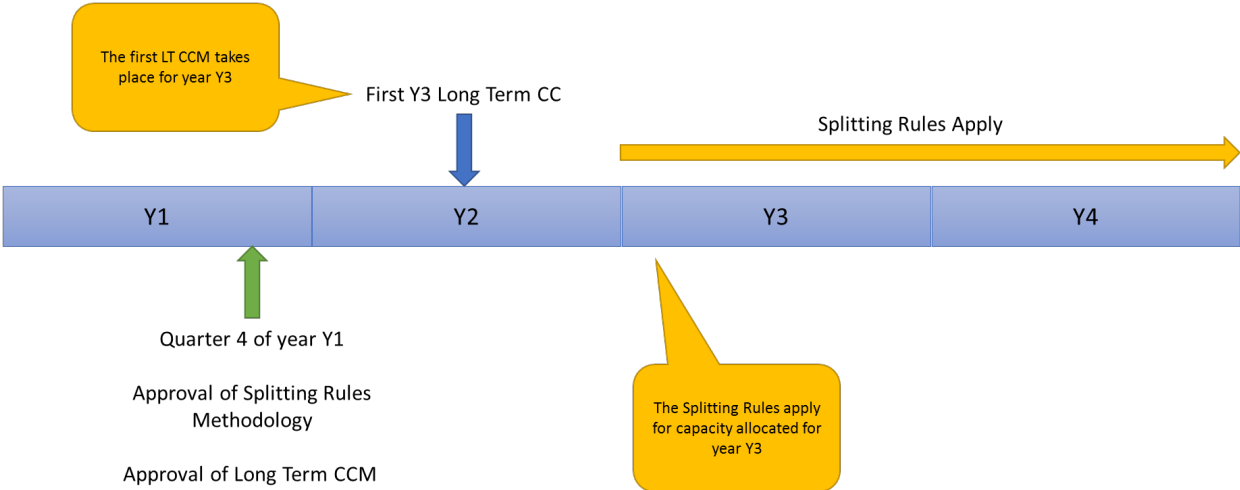


Figure 4

**Example 2**

Implementation of Splitting Rules for an existing Channel Interconnector with products across two years (e.g. Winter Seasonal)

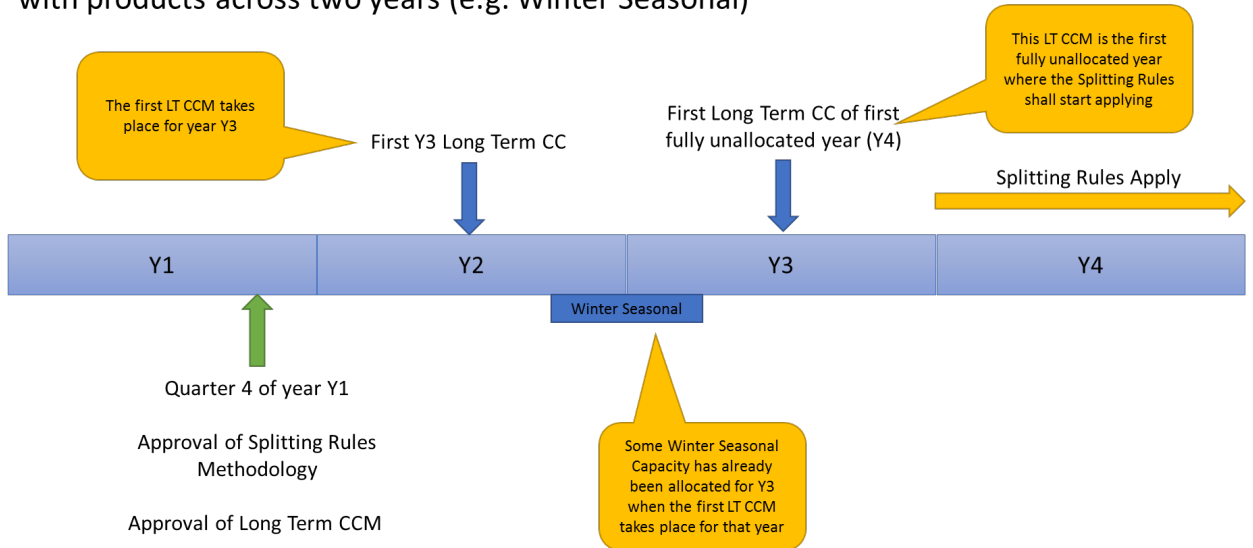


Figure 5

**Example 3**

Implementation of Splitting Rules for a new Channel Interconnector

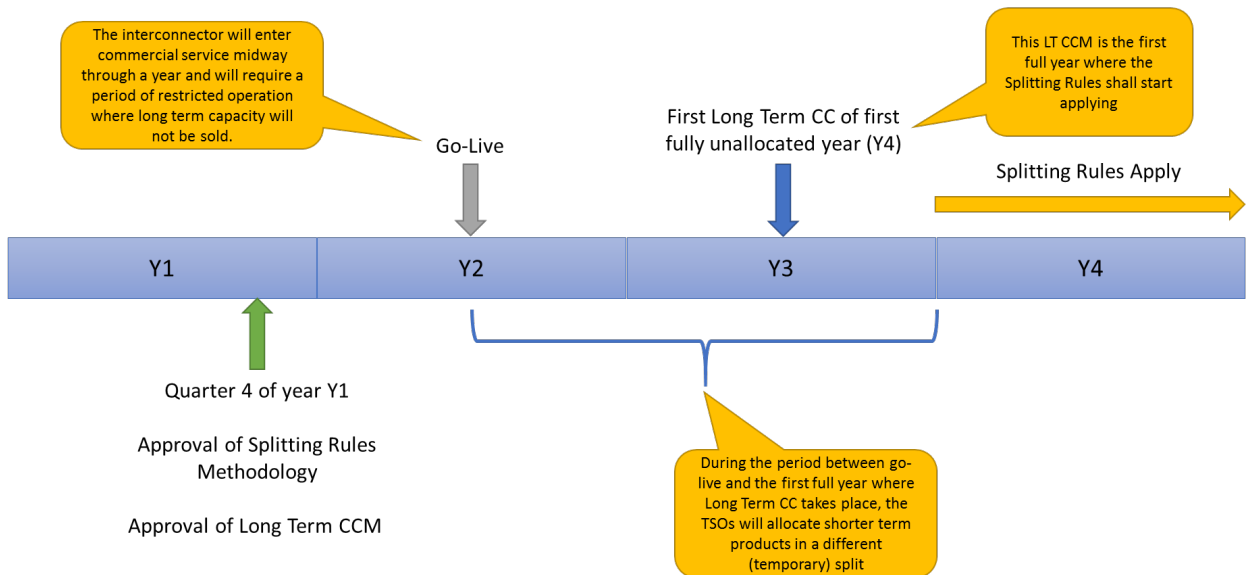


Figure 6

## 12. Publication and reporting requirements

Following each revision of the capacity split, TSOs will publish the MW volumes for each long-term product, at the same time as the publication of the auction calendar. An example template is given below.

<b>Timeframe</b>	<b>Direction 1 (e.g. GB-FR)</b>	<b>Direction 2 (e.g. FR-GB)</b>
Annual	900MW	900MW
Seasonal	200MW	200MW
Quarterly	300MW	300MW
Monthly	300MW	250MW
Sum of all Long-Term time frames shorter than Monthly	100MW	50MW

*Table 8*



## Annex 1 – Responsible TSOs

The Responsible TSO(s) for each Interconnector are detailed below.

<b>Interconnector</b>	<b>Bidding Zone Border</b>	<b>Responsible TSO(s)</b>
ElecLink	GB-FR	ElecLink Limited
BritNed	GB-NL	BritNed Development Limited
IFA	GB-FR	National Grid Interconnectors Limited, and Réseau de Transport d'Électricité
Nemo Link	GB-BE	Nemo Link Limited
IFA2	GB-FR	National Grid IFA2 Limited, and Réseau de Transport d'Électricité

*Table 9*

## Annex 2 – Option Analysis

			Capacity Split shall be determined:					
			across all LTR time frames			for each LTR time frame		
			Using percentages	Using MW values	Using a combination of Percentages and MW values	Using percentages	Using MW values	Using a combination of Percentages and MW values
Capacity Split should apply to:	Channel Region	Per direction	X	X	X	Possible (if all products less than Monthly are grouped)	X	X
		Both directions	X	X	X	Possible (if all products less than Monthly are grouped)	X	X
	Bidding Zone Border	Directional	X	X	X	Possible	X	Possible
		Non-directional	X	X	X	Possible	X	Possible
	TSO	Directional	X	X	X	Possible	Possible	Possible
		Non-directional	X	X	X	Possible	Possible	Possible

Table 10