Explanatory note on the Italy North TSOs proposal 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

February 2020

DISCLAIMER This document is released on behalf of the transmission system operators ("TSOs") of Italy North Region solely for the purposes of public consultation on the proposal on 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 (FCA). This version is a draft proposal and does not constitute a firm, binding or definitive TSOs' position on the content.

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1. INTRODUCTION

This document is the explanatory note accompanying the proposal developed by the Transmission System Operators (hereafter referred to as "TSOs") of the Italy North Capacity Calculation Region (hereinafter referred to as "Italy North CCR") for a splitting methodology of long-term cross-zonal capacity in a coordinated manner between different time frames (hereinafter "Splitting Methodology") in accordance with Article 16 of Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a Guideline on Forward Capacity Allocation (hereafter referred to as the "FCA Regulation").

The FCA Regulation lays down detailed rules on:

- forward capacity calculation of cross-zonal capacity;
- a methodology for splitting long-term cross-zonal capacity;
- cross-zonal capacity allocation in the forward markets;
- the establishment of a single allocation platform at European level offering long-term transmission rights.

With reference to Article 16 of the FCA Regulation, TSOs intend to jointly develop a Splitting Methodology.

The proposal shall cover the bidding zone borders of the Italy North CCR as defined in accordance with Article 15 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (hereinafter referred to as "the CACM Regulation"). In particular:

a. Italy Nord-France bidding zone border;

b. Italy Nord-Austria bidding zone border;

c. Italy Nord-Slovenia bidding zone border.

2. SPLITTING METHODOLOGY

2.1. PROCESS AND INTERACTION WITH THE LT CCM

The Splitting Methodology is strictly linked to the capacity calculation methodology for long-term time frame in accordance with Article 10 of the FCA Regulation (hereinafter "CC-FCA methodology"). The two methodologies have been developed together by TSOs to ensure consistency on the various processes of the long-term allocation chain.

The basic approach used by TSOs is to have a long-term capacity calculation methodology giving as a result a capacity with a pre-defined level of firmness for each time frame. The splitting methodology uses this capacity as input and should maximize the available capacity to the market as far in advance of real-time as possible, respecting all FCA requirements. Further releases of capacities at shorter time horizons in the forward time frame should be the result of capacity recalculations, or gradual release of the margins and constraints initially applied by the TSOs for year-ahead allocations when uncertainties reduce as real time is approached. Of course we have to keep in mind that monthly capacity calculation methodology could




also lead to lower or identical values of available capacity due to new possible constraints not taken into account when performing yearly calculation so we need to reserve some of the long-term cross-zonal capacities also for the monthly allocation in order to respect all FCA requirements where yearly and monthly allocation is required.

2.2. FCA REQUIREMENTS AND CRITERIA USED TO DEFINE THE METHODOLOGY

According to Article 16(2) of the FCA Regulation, the methodology for splitting long-term cross-zonal capacity shall comply with the following conditions:

1) it shall meet the hedging needs of market participants;
2) it shall be coherent with the capacity calculation methodology;
3) it shall not lead to restriction in competition, in particular for access to long-term transmission rights.

In order to meet these conditions, Italy North TSOs considered several possible criteria to be applied. The main criteria were initially:

Product Validity

This criterion has been investigated since the long-term Net Transfer Capacity (hereinafter "NTC") on North Italian borders may show great variability on an hourly granularity throughout the year. For that reason, this criterion is based on:

- the Product Validity Percentage, that represents the percentage of hours in which the product is available compared to all possible hours of the related delivery period;
- the Number of Reduction Periods, that represents the number of periods in which the product cannot be allocated.

Requested Capacity Ratio

The idea behind this criterion was to evaluate the hedging needs of the market participants in each time frame, comparing the capacity requested by Market Participants to the offered capacity in each long-term time frame. In the time frame in which the ratio is higher more capacity should be offered.

Minimum Quantity

This criterion aims to offer a product with a pre-defined minimum threshold. If the available capacity is lower than the threshold value no long-term product is offered, and the capacity will be given to the day-ahead market.

The first condition of the Article 16(2) of the FCA Regulation represented the hardest point to fulfill. Therefore, in order to understand the hedging needs of Market Participants, TSOs published an informal public survey on the ENTSO-E consultation hub.

2.3. RESULTS OF THE QUESTIONNAIRE

The informal survey was completed by three respondents: two companies and one association. A short summary of the feedbacks received is reported in the following points.

- All respondents report that the maximum available capacity should be offered as far in advance of real time as possible. Further release of capacity at shorter time horizons in the forward timeframe should be the results of subsequent recalculations, or gradual release of the margins and constraints initially applied by the TSOs for year-ahead allocations.
- All respondents are in favor of applying the Product Validity Criterion. However, one suggestion has been received about the minimum level of percentage of product validity, indicating 80% validity for both yearly and monthly time frames. No suggestion has been received about the maximum number of reduction periods. All respondents recommend TSOs to maximize the product validity and minimize the number of reduction periods.
- With reference to the requested capacity ratio, there is common consensus on the fact that this criterion would not be suitable for the definition of a splitting methodology. In particular, general opinion is that market dynamics change continuously, so any criteria based on historical data would not capture the actual reality of hedging and portfolio management by Market Participants.
- With reference to the minimum quantity criterion, there is common view on the fact that this criterion should not be taken into account for the splitting methodology as Market Participants are against the possibility to withholding long term capacity to be released in the day-ahead time frame.

Analyzing the answers received from the Market Participants, different points of views on the subject arise. This is enough to understand how difficult and complex it is to define the hedging needs of Market Participants unambiguously.
The strategy of hedging for each Market Participant strongly depends on a lot of different factors and assumptions like individual need of energy (physical need or pure trading) by a company, their own portfolio planning over time intervals (long-term, short-term), average traded volume, expected production and consumption of energy which is especially relevant for renewables, the expected grid situation and therefore available capacities and many others. Furthermore, for each trading company this is one of the key-assets to generate profit and therefore they would not tell too much details about their real hedging needs respectively bidding strategy for different timeframes.

2.4. CHOSEN CRITERIA

Since it is not possible to satisfy in full all Market Participants and their different views, TSOs tried to find the best criteria to define long-term products matching the views of the Market Participants and the FCA requirements.

2.4.1. MINIMUM PRODUCT VALIDITY PERCENTAGE CRITERION

TSOs have decided to include this criterion in the methodology because of feedback received from Market Participants, which clearly expressed the need for products that are suitable for hedging and are valid for significant number of hours during the delivery period. The Minimum Product Validity Percentage is set at 80% in the Splitting Methodology as it represents, according to TSOs, the minimum suitable percentage of product that can be priced and hedged. Further increasing the minimum Product Validity Percentage may cause lower volume of capacities offered on long-term profile.

2.4.2. MAXIMUM NUMBER OF REDUCTION PERIODS CRITERION

According to the approved Regional design of long-term transmission rights according to Article 31 of the FCA Regulation for the Italy North CCR, the long-term transmission rights shall be offered in the form of base load products that may include reduction periods.

Since NTC on Italy-North borders has specific case of volatility due to system security and system arrangements, TSOs are usually forced to offer long-term products with reduction periods. With many years of experience and receiving many complaints regarding the products with reduction periods, TSOs aim to offer products that have the least possible number of reduction periods. An analysis based on experience in past years and considering historical NTC profiles showed that products for yearly time frame should not have more than 25 reduction periods. A product for monthly time frame should not include more than 5 reduction periods. This number of reduction periods is the compromise between offering a stable product and offering products with sufficient capacity. TSOs highlight that this number represents the maximum number of the reduction periods and stress that they will try to offer products with no or the least possible number of reduction periods.

2.4.3. REDUCTION PERIODS RESOLUTION

Feedback from Market Participants also showed that from hedging point of view the reduction periods should be on daily resolution and not on hourly as it is currently applied.

2.4.4. MAXIMUM CAPACITY FOR YEARLY TIME FRAME CRITERION

From most of the received feedback it emerges that the market participants would like to get as much as possible long-term cross-zonal capacities on yearly time frame, while the monthly timeframe should be used to adjust the position through more accurate forecast closer to real-time.

Nevertheless, TSOs shall offer long-term cross-zonal capacity in both yearly and monthly time frames according to Article 31(2) of the FCA Regulation.

Therefore, TSOs introduced the “Maximum Capacity for Yearly time frame” criterion in order to prevent the allocation of whole long-term cross-zonal capacities in the yearly timeframe and, therefore, to ensure that a capacity is available also on the monthly time frame, giving to the Market Participants the hedging possibility in all long-term time frames.

In fact, this criterion states that the offered capacity on the yearly time frame in import direction to Italy shall not exceed the 85% of the average capacity resulting from the yearly capacity calculation according to Article 10 of the FCA Regulation.

This criterion does not ensure in all cases the availability of the capacity for the monthly time frame. TSOs investigated on the possibility to apply further criteria to ensure in all cases the availability of the capacity for the monthly time frame, however, such criteria would lead to a severe reduction of the offered capacity in the yearly time frame in contrast with the hedging needs of the market participant highlighted by the feedbacks received during the informal survey.

Therefore, TSOs consider that 85% of the average capacity resulting from the yearly capacity calculation offered on yearly time frame is a suitable compromise, as it guarantees that most of the long-term capacity

would be allocated in the yearly time frame, but at the same time, it guarantees the capacity allocation in the monthly time frame in most of the cases. The capacity on the monthly time frame would not be guaranteed only in the very seldom case in which the capacity in one month is equal to the yearly product. In fact, the results of the simulations carried out show that the monthly product is always guaranteed. Therefore, it does not seem necessary to investigate on further criteria that would penalize the offered yearly product in terms of quantity.

Concerning the offered capacities in the export direction from Italy, TSOs consider that the capacity offered on the yearly time frame shall not exceed the 20% of the average capacity resulting from the yearly capacity calculation according to Article 10 of the FCA Regulation and the offered capacity in the export direction of Italy on the monthly time frame and already allocated capacities on yearly time frame shall not exceed 50% of the average capacity resulting from the monthly capacity calculation according to Article 10 of the FCA Regulation.

Historical data show that on the export direction of Italy the situation is significantly different compared to the import direction since most of capacity is not required on yearly time frame, but on monthly or even on day-ahead time frame. In fact, the capacity in export direction from Italy is usually not used by market participants because of negative market spread. Usage of the capacity is typically observed in limited periods during the year, strictly linked to not predictable factors on the long-term time frames, like generation outages, unexpected forecast of renewable generation, cold spell, etc. Indeed, historical data show that there are not long-term contracts in export direction. This seems to suggest that long-term cross-zonal capacities in export direction is not used for hedging long term purchasing contracts from price fluctuation but is more linked to the application of (speculative) UIOSI. Additionally, in the export direction of Italy the D-2 capacity calculation is not yet implemented, therefore no further capacity will be available in the day-ahead and intraday time frame. A constant undervaluation/underselling of yearly and monthly capacity offered over the last few years can be noticed.

Underselling is defined as a situation where the marginal price of the long-term cross-zonal capacities determined in the auction of long-term cross-zonal capacities, for a given timeframe, is lower than the average day ahead price spread between two bidding zones used as the reference price for settlement of the long-term cross-zonal capacities. Underselling in short means a situation where the buyer of the long-term cross-zonal capacities systematically obtains a higher cash flow from the variable settlement than what was paid by the buyer of the transmission right. In case of well-functioning competition one should (to some degree) expect the auction price should be statistically distributed around the price spread. If underselling was present in a product, then with perfect competition it would be expected that new market participants enter the auctions and drive up the price until equality is reached where no underselling is present. The market has also not attracted enough speculators to ensure the liquidity that would give perfect competition. The impact of underselling materializes in an increase of grid tariffs. The basic approach to manage the risk of underselling is done by calculating the amount of long-term cross-zonal capacities that can be allocated, securing that the expected price spread is equal to the expected auction price. This means, that if the auction price is below the price spread, the amount of long-term cross-zonal capacities will be reduced. On the other hand, if the auction price is above the price spread, the amount should be increased.

This finally results in the fact, that from market aspect the optimum of hedging is not, fulfilled if all available long-term cross-zonal capacity is allocated as soon as possible, as it was requested by majority of traders. Moreover a split of available long-term cross-zonal capacities could be more effective to consider the hedging needs of all MPs with their very different needs (e.g. for long term portfolio trading as well as for the need to hedge against price risks e.g. for contractual short-term physical delivery of energy).

For that reason, and the reasons stated above TSOs have in line with Article 17(2) of regulation 2019/943 proposed to have a limit in order to prevent the allocation of all available capacity from yearly capacity calculation on the long-term time frame and leave 50% of the capacity available for the daily timeframe, enabling the Market Participants to hedge closer to the delivery day using more and accurate information.

2.5. RELAXING OF THE PVP CRITERION

Basing on the analysis made by TSOs, it resulted that in some cases, the product calculated with the product validity of 80%, was very low, but reducing the validity it was possible to have a quite higher product. Due to this reason, TSOs introduced the possibility to relax the PVP criterion.

In Article 4(7) of the proposed Splitting Methodology it is underlined that in cases in which the product calculated according all the criteria described in Article 3 and Article 4 results to be lower than 10 MW, a revision process is activated. In particular, TSOs bilaterally check if reducing PVP till 50% would increase the overall volume of the product and if this is the case, proceed to allocate the product with higher volume over the period. This clause is important in cases where applying all before mentioned criteria would lead to very low available capacities for the long-term timeframe and relaxing the PVP constraint, would result in more suitable products. TSOs are still able to offer to the market at least some capacity on long-term timeframe even in exceptional circumstances.

2.6. DISCARDED CRITERIA

Following the results of the public informal survey, TSOs have considered more appropriate to not include the Requested Capacity Ratio and the Minimum Quantity criteria in the Splitting Methodology.

3. SIMULATION RESULTS

TSOs performed a simulation calculating the long-term products for the year 2019 using the proposed Splitting Methodology. The NTC used as input data for the simulation comes from the simulation of the proposed CC-FCA methodology.

In particular, compared with the current approach, the results of the simulation show that:

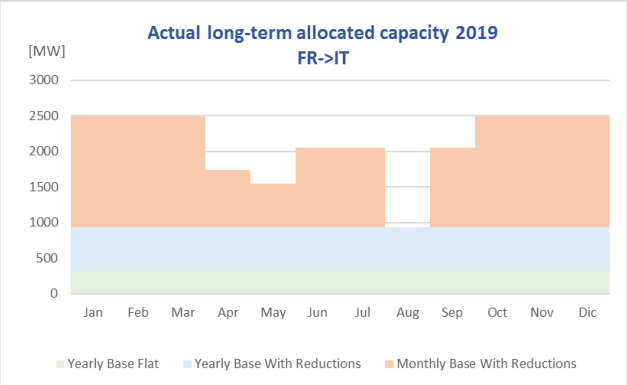
- For the import direction to Italy, the methodology leads to:
  - an increase of the capacity offered to the yearly auctions;
  - a reduction of the capacity offered to the monthly auctions;
  - a slight increase of the total capacity offered in the long-term time frames.
- Regarding to the export direction from Italy, the methodology leads to:

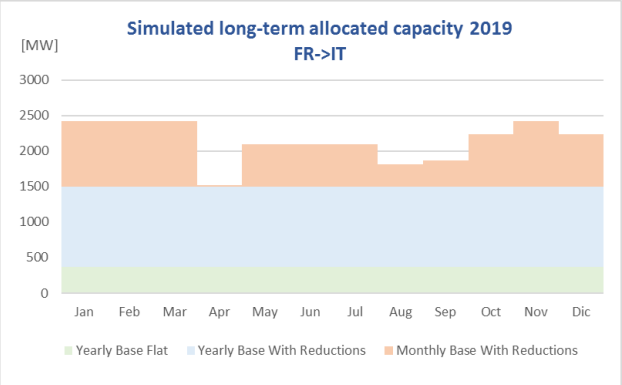
- a reduction of the capacity offered to the yearly auctions;
- an increase of the capacity offered to the monthly auctions;
- a reduction of the total capacity offered in the long-term time frames, with the only exception of the Slovenian border.

In the following paragraphs the comparison between the results of the simulation and the actual allocated products for the year 2019 is reported. In particular, for each border and direction:

- a graph reporting the actual long-term products;
- a graph reporting the simulated long-term products;
- a table reporting the average offered capacity on the yearly and monthly time frames and the related splitting percentages.

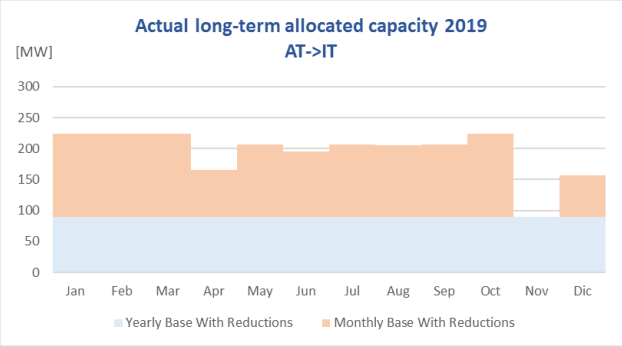
3.1. CAPACITY FROM FRANCE TO ITALY

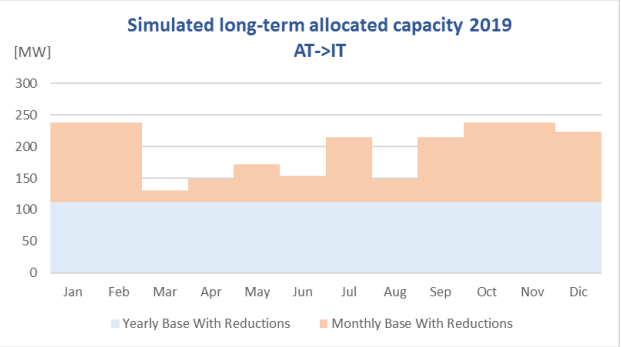




FR → IT	Actual		Simulated	
Time-frame	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*
Yearly	864	49%	1279	70%
Monthly	901	51%	548	30%
Total Long-term	1765	100%	1827	100%

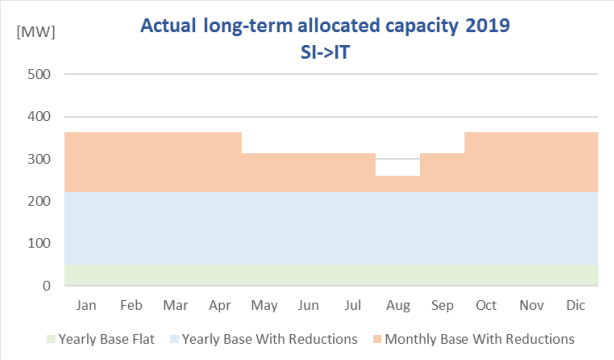
3.2. CAPACITY FROM AUSTRIA TO ITALY

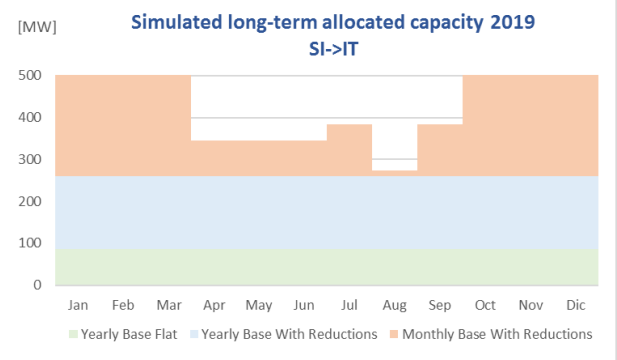




AT → IT	Actual		Simulated	
Time-frame	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*
Yearly	76	46%	95	56%
Monthly	89	54%	74	44%
Total Long-term	165	100%	169	100%

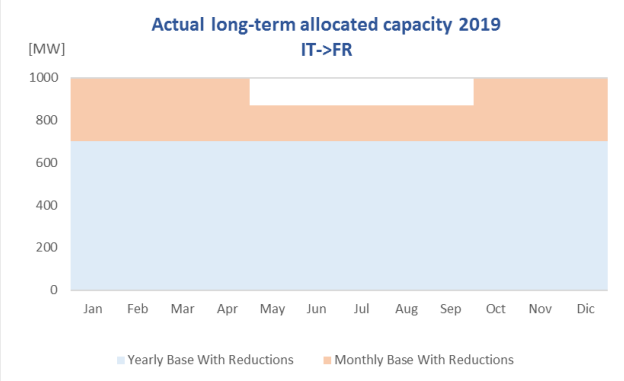
3.3. CAPACITY FROM SLOVENIA TO ITALY

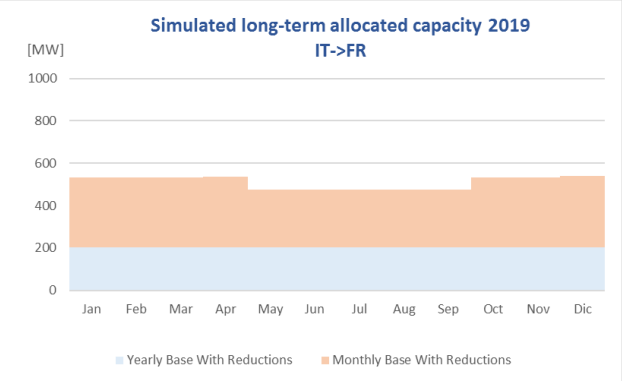




SI → IT	Actual		Simulated	
Time-frame	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*
Yearly	198	64%	236	62%
Monthly	109	36%	144	38%
Total Long-term	307	100%	380	100%

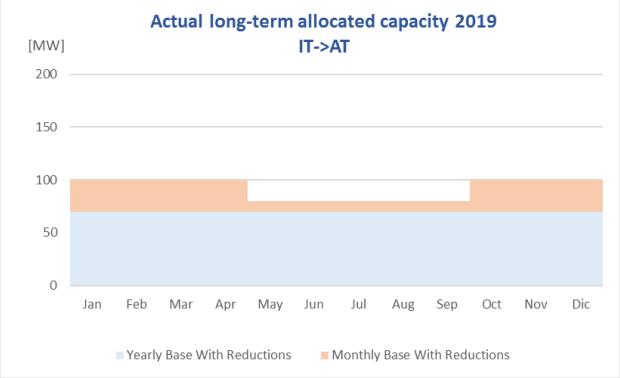
3.4. CAPACITY FROM ITALY TO FRANCE

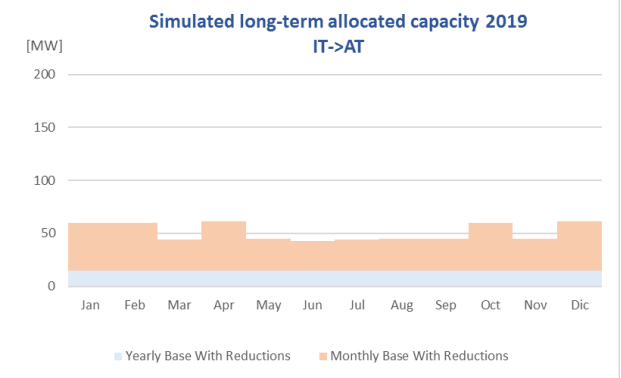




IT → FR	Actual		Simulated	
Time-frame	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*
Yearly	700	74%	204	40%
Monthly	243	26%	306	60%
Total Long-term	943	100%	510	100%

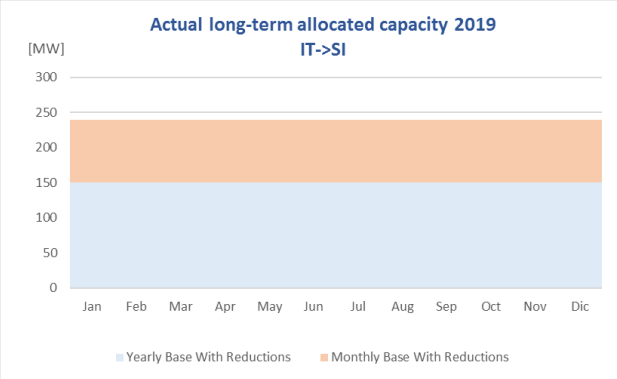
3.5. CAPACITY FROM ITALY TO AUSTRIA

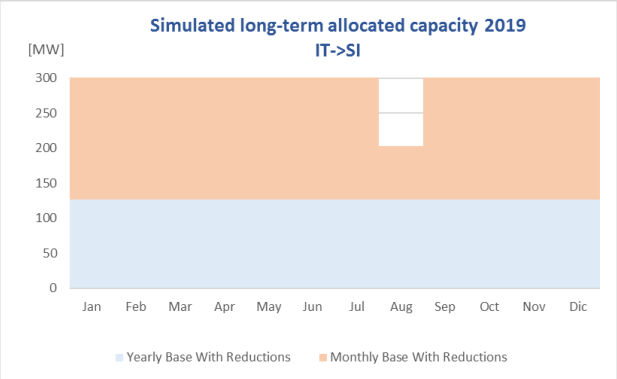




IT → AT	Actual		Simulated	
Time-frame	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*
Yearly	66	77%	15	31%
Monthly	20	23%	34	69%
Total Long-term	86	100%	49	100%

3.6. CAPACITY FROM ITALY TO SLOVENIA





IT → SI	Actual		Simulated	
Time-frame	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*	*Average allocated capacity [MW]*	*Split between long-term time frames [%]*
Yearly	150	62,5%	127	40%
Monthly	90	37,5%	191	60%
Total Long-term	240	100%	318	100%

4. TIME SCHEDULE FOR IMPLEMENTATION

Concerning the implementation, one precondition is that the Splitting Methodology has been approved by relevant NRAs of Italy North TSOs or ACER.

Furthermore, as already mentioned, this Splitting Methodology is strictly linked to the CC-FCA methodology, since the two methodologies are developed together to ensure consistency on the various processes of the long-term allocation chain. As a consequence, the implementation of CC-FCA methodology is another precondition for the implementation of the splitting rules as described in this Splitting Methodology.

In practical terms, that would mean this Splitting Methodology can be used for the determination of long-term cross-zonal capacities starting from the first Yearly auctions after - or in parallel with the implementation of the CC-FCA methodology for Italy North CCR borders.