

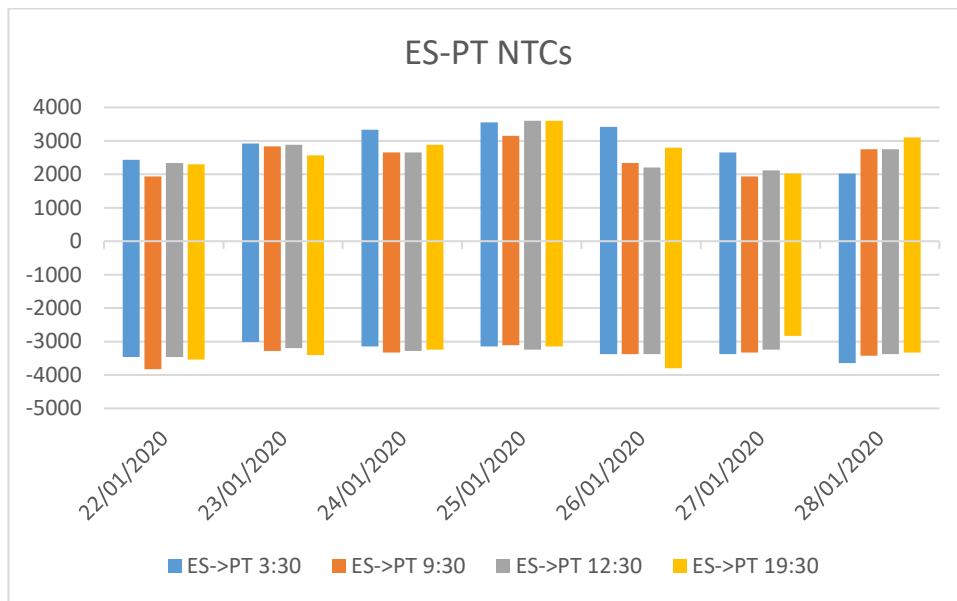
SWE Capacity Calculation report for Stakeholders

The elements in this report are based on ongoing experimentation with continuous tool improvement. The values/limiting elements

This document reports results of the external parallel run from the 22/01/2020 to the 28/01/2020

ES-PT NTCs

Oriented Borders	TS	22/01/2020		23/01/2020		24/01/2020		25/01/2020		26/01/2020		27/01/2020		28/01/2020	
		D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly
ES->PT	3:30	2430	2300	2925	2300	3330	2300	3555	2700	3420	2700	2655	2900	2025	2900
	9:30	1935	2800	2835	2800	2655	2800	3150	2800	2340	2700	1935	2800	2745	2800
	12:30	2340	2800	2880	2800	2655	2800	3600	2800	2205	2700	2115	2800	2745	2800
	19:30	2295	2800	2565	2800	2880	2800	3600	2800	2800	2800	2025	2800	3105	2800
PT->ES	3:30	3465	3100	3015	3100	3150	3100	3150	4050	3375	4050	3375	4400	3645	4400
	9:30	3825	3100	3285	3100	3330	3100	3105	3800	3375	4050	3330	3800	3420	3800
	12:30	3465	3100	3195	3100	3285	3100	3240	3800	3375	4050	3240	3800	3375	3800
	19:30	3541	3100	3407	3100	3240	3100	3150	3800	3800	3800	2835	3800	3330	3800



Comments:

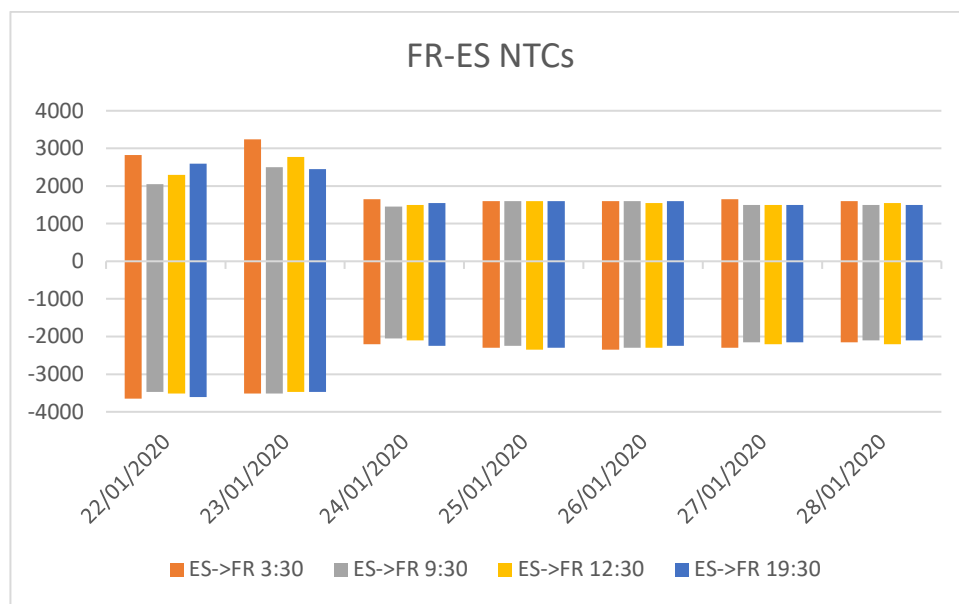
Two computations failed for the PT-ES border over this twenty-eighth week of External parallel run. The two were replaced by Long term values as fallback procedure (weekly values used as Long term values).

Please note that not all the hours have been validated by TSOs at this moment.

Please keep in mind that today only one voltage angle is monitored during the computation. Multiple voltage angle monitoring should be tackled before Go-Live.

FR-ES NTCs

Oriented Borders	TS	22/01/2020		23/01/2020		24/01/2020		25/01/2020		26/01/2020		27/01/2020		28/01/2020	
		D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly
ES->FR	3:30	2821	3200	3238	3200	1650	3200	1600	1600	1600	1600	1650	1600	1600	1600
	9:30	2050	2600	2498	2600	1450	2600	1600	1500	1600	1600	1500	1500	1500	1500
	12:30	2300	2600	2775	2600	1500	2600	1600	1500	1550	1600	1500	1500	1550	1500
	19:30	2590	2600	2450	2600	1550	2600	1600	1500	1600	1500	1500	1500	1500	1500
FR->ES	3:30	3654	3300	3515	3300	2200	3300	2300	2000	2350	2000	2300	2000	2150	2000
	9:30	3469	3350	3515	3350	2050	3350	2250	2000	2300	2000	2150	2000	2100	2000
	12:30	3515	3350	3469	3350	2100	3350	2350	2000	2300	2000	2200	2000	2200	2000
	19:30	3608	3350	3469	3350	2250	3350	2300	2000	2250	2000	2150	2000	2100	2000



Comments:

One computation failed for the FR-ES over this twenty-eighth week of External parallel run.

For the moment, the voltage is monitored in the computation but cannot limit the capacity. During External parallel run voltage will be monitored through the local validation of results by TSOs even if it is a common task.

Limiting elements PT-ES

Please find below the 5 limiting elements appearing more often over the period for PT->ES direction:

Critical Network Elements and Contingencies PT->ES		Location CNE	Frequency
# 1 L-400 kV interconnector		ES-PT	71,43%
	N-2 Interconnector 400 kV (ES-PT)		71,43%
# 2 Angle difference		PT	10,71%
	N-2 Interconnector 400 kV (ES-PT)		10,71%
# 3 L-220 kV		PT	7,14%
	N-1 Interconnector (ES-PT)		7,14%
# 4 Computation Failed			3,57%
	Long Term Value		3,57%
# 4 Loadflow divergence			3,57%
	N-2 Interconnector 400 kV (ES)		3,57%
# 4 GSLK limitation		PT	3,57%
	N state		3,57%

Find below the 2 limiting element appearing over the period for ES->PT direction:

Critical Network Elements and Contingencies ES ->PT		Location CNE	Frequency
# 1 Angle Constraint		PT	96,43%
	N-2 Interconnector 400 kV (ES-PT)		96,43%
# 2 Computation Failed			3,57%
	LT Value		3,57%

Limiting elements FR-ES

Find below the 5 limiting elements appearing more often over the period for FR->ES direction:

Critical Network Elements and Contingencies FR->ES		Location CNE	Frequency
# 1 L-400 kV		FR	39,29%
	N-1 Interconnector 400 kV (FR-ES)		39,29%
# 2 L-220 kV interconnector		ES-FR	35,71%

		N-1 Interconnector 400 kV (FR-ES)	32,14%
		N-1 400 kV (ES)	3,57%
# 3	L-220 kV	FR	14,29%
		N-1 Interconnector 400 kV (FR-ES)	14,29%
# 4	L-400 kV	ES	7,14%
		N-1 Interconnector 400 kV (FR-ES)	7,14%
# 5	L-220 kV Interconnector	ES-FR	3,57%
		N-1 400 kV (FR)	3,57%

Find below the 4 limiting elements appearing more often over the period for ES->FR direction:

Critical Network Elements and Contingencies ES->FR		Location CNE	Frequency
# 1	L-400 kV	ES	53,57%
	N-1 Interconnector 400 kV (FR-ES)		53,57%
# 2	L-220 kV Interconnector	ES-FR	28,57%
	N-1 Interconnector 400 kV (FR-ES)		25,00%
	N-1 Interconnector 400 kV (FR-ES)		3,57%
# 3	L-220 kV Interconnector	ES-FR	14,29%
	N-1 400kV (ES-FR)		14,29%
# 4	L-220 kV	FR	3,57%
	N-1 400 kV (FR)		3,57%