

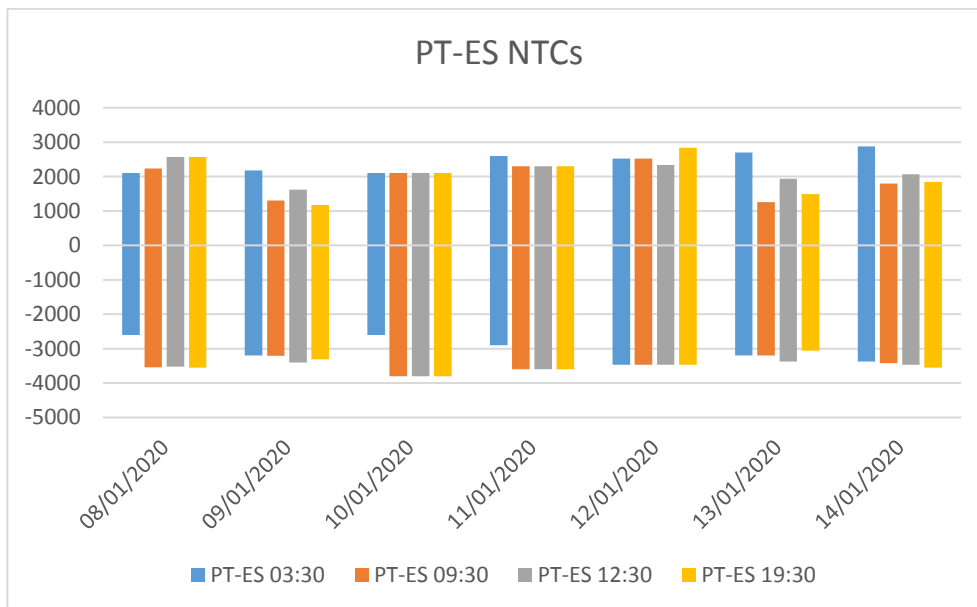
SWE Capacity Calculation report for Stakeholders

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 8/01/2020 to the 14/01/2020.

ES-PT NTCs

	08/01/2020		09/01/2020		10/01/2020		11/01/2020		12/01/2020		13/01/2020		14/01/2020	
	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly
ES->PT														
03h30	2100	2100	2178	2100	2100	2100	2600	2600	2520	2600	2700	2600	2880	2600
09h30	2236	2100	1305	2100	2100	2100	2300	2300	2520	2600	1260	2300	1800	2300
12h30	2565	2100	1620	2100	2100	2100	2300	2300	2340	2600	1935	2300	2070	2300
19h30	2565	2100	1170	2100	2100	2100	2300	2300	2835	2300	1485	2300	1845	2300
PT->ES														
03h30	2600	2600	3195	2600	2600	2600	2900	2900	3465	2900	3195	2900	3375	2900
09h30	3545	3800	3211	3800	3800	3800	3600	3600	3465	2900	3195	3600	3420	3600
12h30	3529	3800	3401	3800	3800	3800	3600	3600	3465	2900	3375	3600	3465	3600
19h30	3551	3800	3313	3800	3800	3800	3600	3600	3465	3600	3060	3600	3555	3600



Comments:

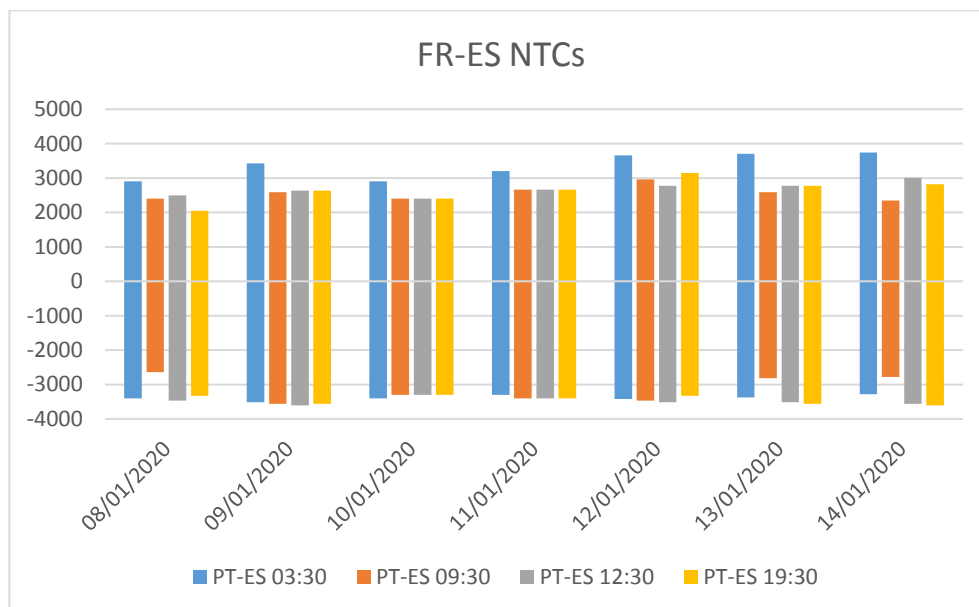
Eighteen computations failed for the PT-ES border over this twenty-sixth week of External parallel run with good results. Please note that not all the hours have been validated by TSOs at this moment. However all of them were replaced by Long term values (marked in blue) as fallback procedure (weekly values used as Long term values)¹.

¹ Computation failures on 10th and 11th January were due to other causes external to the optimization algorithm.

Please keep in mind from 12th January onwards multiple voltage angle started to be monitored and can limit the capacity.

FR-ES NTCs

	08/01/2020		09/01/2020		10/01/2020		11/01/2020		12/01/2020		13/01/2020		14/01/2020	
	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly
ES->FR														
03h30	2900	2900	3423	2900	2900	2900	3200	3200	3654	3200	3700	3200	3746	3200
09h30	2400	2400	2590	2400	2400	2400	2665	2600	2960	3200	2590	2600	2350	2600
12h30	2498	2400	2636	2400	2400	2400	2665	2600	2775	3200	2775	2600	3006	2600
19h30	2050	2400	2636	2400	2400	2400	2665	2600	3145	2600	2775	2600	2821	2600
FR->ES														
03h30	3400	3400	3515	3400	3400	3400	3300	3300	3423	3300	3376	3300	3284	3300
09h30	2636	3300	3561	3300	3300	3300	3400	3400	3469	3300	2821	3400	2775	3400
12h30	3469	3300	3608	3300	3300	3300	3400	3400	3515	3300	3515	3400	3561	3400
19h30	3330	3300	3561	3300	3300	3300	3400	3400	3330	3400	3561	3400	3608	3400



Comments:

Eighteen computations failed for the FR-ES over this twenty-sixth week of External parallel run with good results. However all of them were replaced by Long term values (marked in blue as fallback procedure (weekly values used as Long term values)².

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.

² Computation failures on 10th and 11th January were due to other causes external to the optimization algorithm.

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	60.7%
	N-2 Interconnector 400 kV		32.1%
	N-2 400 kV (ES)		21.4%
	N-1 400 kV (ES)		7.1%
# 2 Computation Failed			32.1%
	Long Term Value		32.1%
# 3 L-220 kV		PT	3.6%
	N-1 Interconnector 400 kV		3.6%
# 4 GLSK limitation		PT	3.6%
	N state		3.6%

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

Critical Network Elements and Contingencies ES->PT		Location CNE	Frequency
# 1 Angle difference		PT	67.9%
	N-2 Interconnector 400 kV		67.9%
# 2 Computation Failed			32.1%
	Long Term Value		32.1%

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 Computation Failed			32.1%
	Long Term Value		32.1%
# 2 L-400 kV		FR	28.6%
	N-1 Interconnector 400 kV		17.9%
	N state		10.7%
# 3 L-220 kV Interconnector		FR-ES	10.7%
	N-1 400 kV (FR)		3.6%
	N-1 Nuclear Power Plant (ES)		3.6%
	N-1 Interconnector 400 kV		3.6%
# 4 L-220 kV		FR	7.1%
	N-1 Interconnector 400 kV		3.6%
	N-1 400 kV (FR)		3.6%
# 4 L-220 kV Interconnector		FR-ES	7.1%
	N-1 Interconnector 400 kV		7.1%

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

Critical Network Elements and Contingencies ES ->FR		Location CNE	Frequency
# 1 L-220 kV Interconnector		FR-ES	42.9%
	N-1 Interconnector 400 kV		39.3%
	N-1 400 kV (FR)		3.6%
# 2 Computation Failed			32.1%
	Long Term Value		32.1%
# 3 L-220 kV Interconnector		FR-ES	17.9%
	N-2 400 kV (ES)		14.3%
	N-1 Interconnector 400 kV		3.6%
# 4 L-400 kV Interconnector		FR-ES	7.1%
	N state		7.1%