

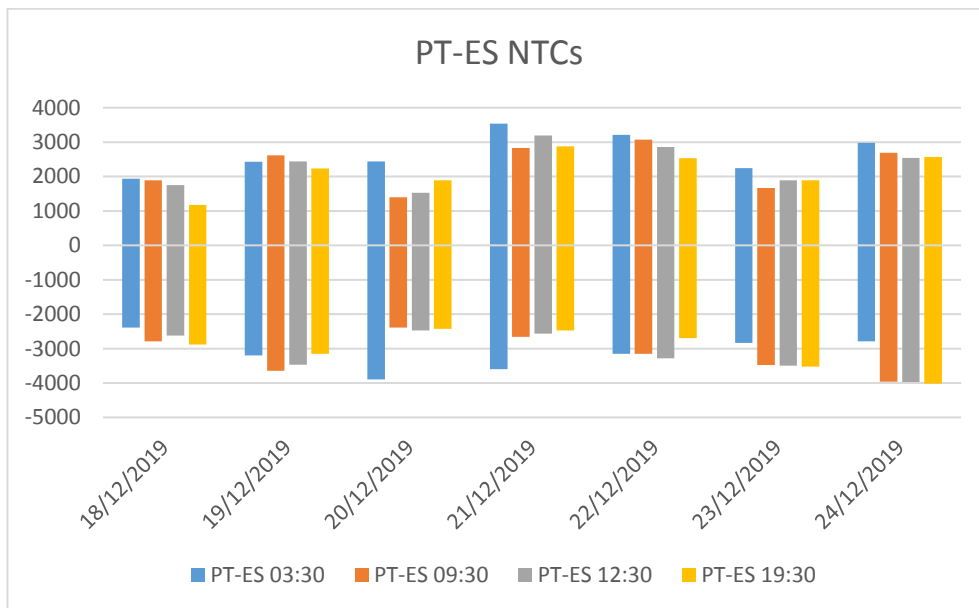
SWE Capacity Calculation report for Stakeholders

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 18/12/2019 to the 24/12/2019.

ES-PT NTCs

	18/12/2019		19/12/2019		20/12/2019		21/12/2019		22/12/2019		23/12/2019		24/12/2019	
	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly
ES->PT														
03h30	1937	2800	2430	2800	2437	2800	3533	2200	3208	2200	2247	2200	2982	2200
09h30	1890	2500	2614	2500	1395	2500	2828	2000	3070	2200	1665	2000	2687	2000
12h30	1755	2500	2440	2500	1530	2500	3195	2000	2861	2200	1890	2000	2538	2000
19h30	1170	2500	2235	2500	1890	2500	2880	2000	2532	2000	1890	2000	2570	2000
PT->ES														
03h30	2385	3900	3195	3900	3900	3900	3600	3600	3150	3600	2835	3600	2790	3600
09h30	2790	2800	3645	2800	2385	2800	2655	4000	3150	3600	3477	4000	3960	4000
12h30	2623	2800	3465	2800	2475	2800	2565	4000	3285	3600	3493	4000	3968	4000
19h30	2880	2800	3150	2800	2430	2800	2475	4000	2700	4000	3526	4000	4020	4000



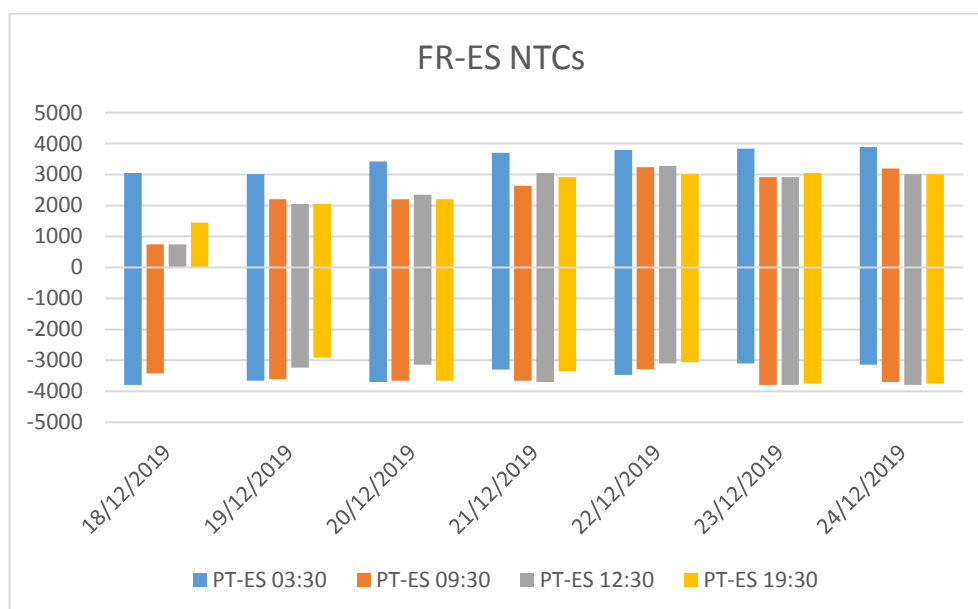
Comments:

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

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

	18/12/2019		19/12/2019		20/12/2019		21/12/2019		22/12/2019		23/12/2019		24/12/2019	
	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly
ES->FR														
03h30	3053	3200	3006	3200	3423	3200	3700	3700	3793	3700	3839	3700	3885	3700
09h30	750	1800	2200	1900	2200	1900	2636	1700	3238	3700	2914	2600	3191	2600
12h30	750	1800	2050	1900	2350	1900	3053	1700	3284	3700	2914	2600	3006	2600
19h30	1450	1900	2050	1900	2200	1900	2914	1700	3006	2600	3053	2600	3006	2600
FR->ES														
03h30	3793	3600	3654	3600	3700	3600	3300	3300	3469	3300	3099	3300	3145	3300
09h30	3423	3400	3608	3400	3654	3400	3654	3600	3284	3300	3793	3600	3700	3600
12h30	N/A	3400	3238	3400	3145	3400	3700	3600	3099	3300	3793	3600	3793	3600
19h30	N/A	3400	2914	3400	3654	3400	3350	3600	3053	3600	3746	3600	3746	3600



Comments:

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

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	85.7%
	N-2 Interconnector 400 kV		85.7%
# 2 Computation Failed			7.1%
	Long Term Value		7.1%
# 3 Loadflow divergence			3.6%
	N-1 Interconnector 400 kV		3.6%
# 3 L-400 kV		PT	3.6%
	N-2 Interconnector 400 kV		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	92.9%
	N-2 Interconnector 400 kV		92.9%
# 2 GLSK limitation		PT	3.6%
	N state		3.6%
# 2 Loadflow divergence			3.6%
	N-1 Interconnector 400 kV		3.6%

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	17.9%
	N-1 Interconnector 400 kV		17.9%
# 1	Loadflow divergence		17.9%
	N-1 Nuclear Power Plant (ES)		17.9%
# 1	L-220 kV	FR	17.9%
	N-1 400 kV (FR)		10.7%
	N-1 Interconnector 400 kV		7.1%
# 1	L-220 kV Interconnector	FR-ES	17.9%
	N-1 400 kV (FR)		7.1%
	N-1 Interconnector 400 kV		7.1%
	N-1 Interconnector 400 kV		3.6%
# 2	L-400 kV Interconnector	FR-ES	10.7%
	N-1 Interconnector 400 kV		10.7%
# 2	Computation Failed		10.7%
	Computation Failed		7.1%
	Long Term Value		3.6%

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	46.4%
	N-1 Interconnector 400 kV		28.6%
	N-1 400 kV (FR)		14.3%
	N-1 220 kV (FR)		3.6%
# 2	L-220 kV Interconnector	FR-ES	39.3%
	N-1 Interconnector 400 kV		25.0%
	N-1 400 kV (FR)		10.7%
	N-1 400 kV (ES)		3.6%
# 3	L-400 kV	FR	7.1%
	N-1 Interconnector 220 kV		7.1%
# 4	Computation Failed		3.6%
	Long Term Value		3.6%
# 4	L-220 kV	FR	3.6%
	N-1 400 kV (FR)		3.6%