

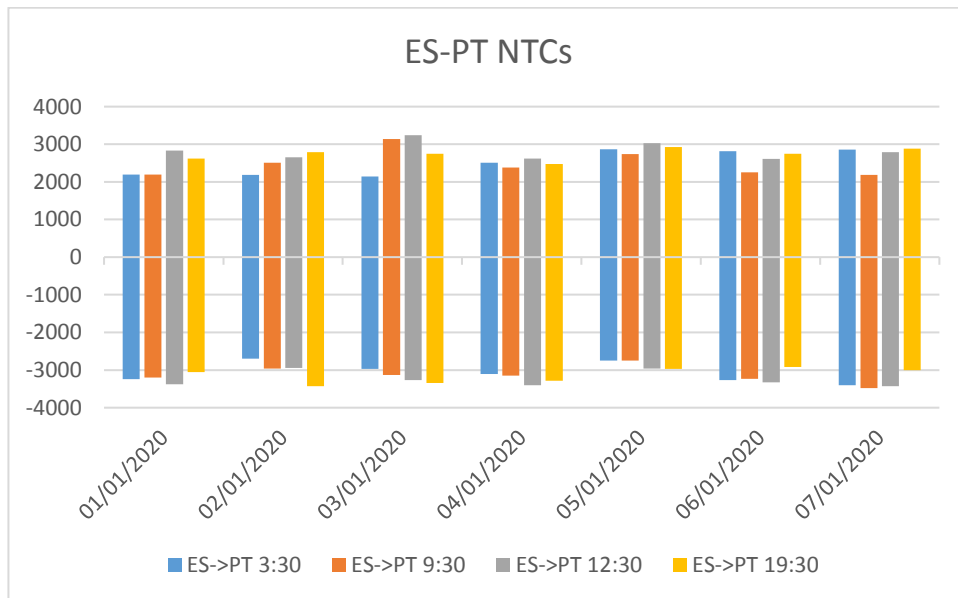
SWE Capacity Calculation report for Stakeholders

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 01/01/2020 to the 07/01/2020.

ES-PT NTCs

Oriented Borders	TS	01/01/2020		02/01/2020		03/01/2020		04/01/2020		05/01/2020		06/01/2020		07/01/2020	
		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	2194	3000	2185	3000	2147	3000	2511	2100	2868	2100	2817	2100	2862	2100
	9:30	2194	3000	2505	2300	3141	2300	2381	2100	2743	2100	2250	2100	2186	2100
	12:30	2835	3000	2655	2300	3240	2300	2622	2100	3028	2100	2610	2100	2790	2100
	19:30	2623	2300	2790	2300	2745	2300	2475	2100	2925	2100	2745	2100	2880	2100
PT->ES	3:30	3240	3200	2700	3200	2970	3200	3105	2600	2745	2600	3268	2600	3406	2600
	9:30	3195	3200	2963	3600	3135	3600	3150	3800	2745	2600	3236	2700	3476	3800
	12:30	3375	3200	2947	3600	3269	3600	3405	3800	2960	2600	3329	2700	3427	3800
	19:30	3055	3600	3428	3600	3345	3600	3280	3800	2973	3800	2920	3800	3001	3800



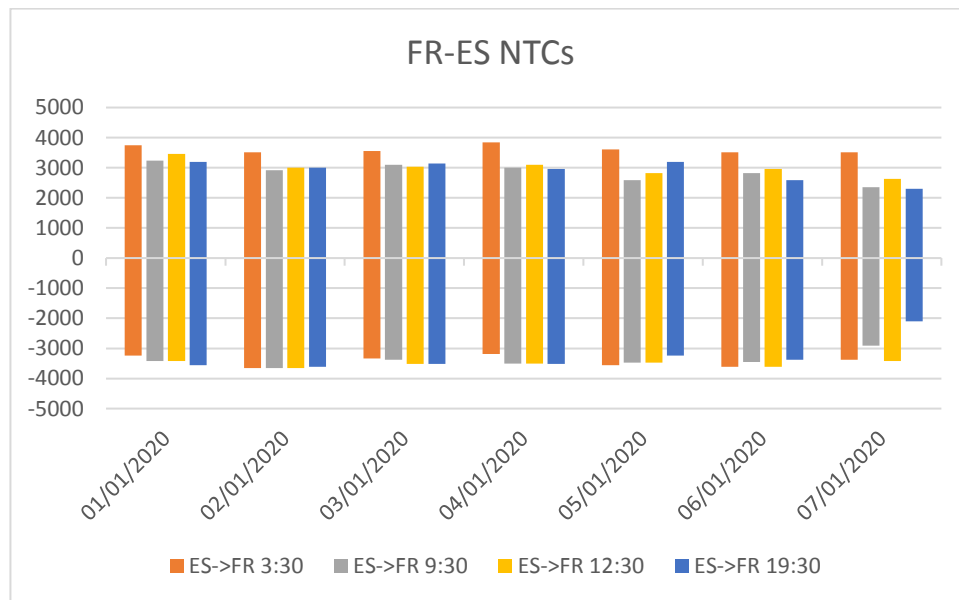
Comments:

No computation failed for the PT-ES border over this twenty-fifth week of External parallel run with very good results. 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

		01/01/2020		02/01/2020		03/01/2020		04/01/2020		05/01/2020		06/01/2020		07/01/2020	
Oriented Borders	TS	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	3746	3400	3515	3400	3561	3400	3839	2900	3608	2900	3515	2900	3515	2900
	9:30	3238	3400	2914	2650	3099	2650	3006	2400	2590	2900	2821	2400	2350	2400
	12:30	3460	3400	3006	2650	3032	2650	3099	2400	2821	2900	2960	2400	2636	2400
	19:30	3191	2650	3006	2650	3145	2650	2960	2400	3191	2400	2590	2400	2300	2400
FR->ES	3:30	3238	3000	3654	3000	3330	3000	3191	3400	3561	3400	3608	3400	3376	3400
	9:30	3423	3000	3654	3400	3376	3400	3506	3300	3469	3400	3452	3500	2914	3300
	12:30	3423	3000	3654	3400	3515	3400	3510	3300	3469	3400	3608	3500	3423	3300
	19:30	3561	3400	3608	3400	3515	3400	3515	3300	3238	3300	3376	3300	2100	3300



Comments:

No computation failed for the FR-ES over this twenty-fifth week of External parallel run with very good results.

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 2 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	ES-PT	92,86%
	N-2 400 kV (ES-PT)		92,86
# 2	GLSK limitation	PT	7,14%
	Base Case		7,14

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

Critical Network Elements and Contingencies ES->PT		Location CNE	Frequency
# 1	Angle difference	PT	85,71%
	N-2 400 kV (ES-PT)		85,71
# 2	L-400 kV	PT	14,29%
	N-2 400 kV (ES-PT)		14,29

Limiting elements FR-ES

Find below the 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-ES	21,43%
	Nuclear Power Plant (ES)		14,29
	N-1 400 kV (FR-ES)		10,71
# 2	L-220 kV	FR-ES	21,43%
	N-1 400 kV (FR-ES)		14,29
	N-1 Nuclear Power Plant (ES)		3,57
	N-1 400 kV (FR-ES)		3,57
# 3	L-400 kV	FR	17,86%
	N-1 400 kV (FR)		14,29
	N-1 400 kV (FR-ES)		3,57
# 4	L-400 kV	ES	7,14%
	N-1 400 kV (ES)		7,14
# 4	L-220 kV	ES-FR	7,14%
	N-1 400 kV (FR)		7,14
# 4	L-400 kV	ES	7,14%
	N-1 400kV (ES)		7,14
# 5	L-400 kV	FR	3,57%
	BaseCase Overload		3,57
# 5	L-220 kV	ES	3,57%
	Basecase		3,57
# 5	Loadflow Divergence	ES	3,57%
	N-1 Nuclear Power Plant (ES)		3,57

Find below the 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	FR-ES	46,43%
	N-1 400 kV (FR-ES)		25
	N-1 400 kV (FR)		21,43
# 2	L-220 kV	FR-ES	28,57%
	N-1 400 kV (FR-ES)		14,29
	N-1 400 kV (FR)		10,71
	N-2 220 kV(ES)		3,57
# 3	L-220 kV	FR-ES	10,71%
	N-1 220 kV (FR-ES)		10,71
# 4	L-220 kV	FR	7,14%
	N-1 400 kV (FR)		7,14
# 5	L-400 kV	FR	3,57%
	N-1 220 kV (FR-ES)		3,57
# 5	L-220 kV	ES	3,57%
	N-1 400 kV (FR)		3,57