

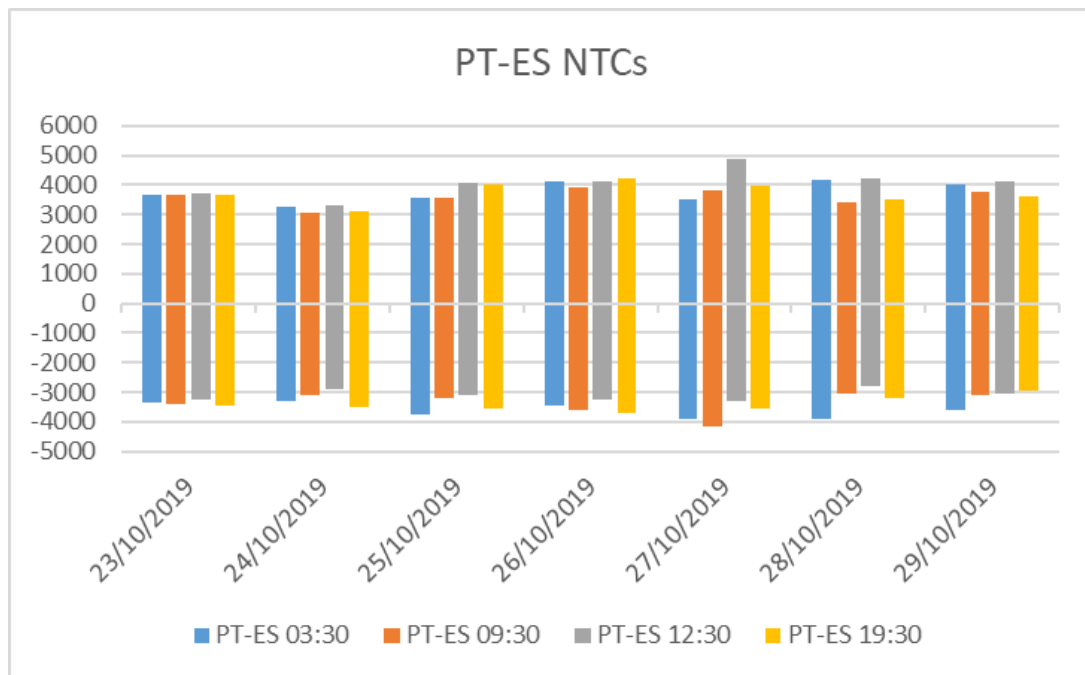
# SWE Capacity Calculation report for Stakeholders

The elements in this report are based on ongoing experimentation with continuous tool improvement. The values/limiting elements can still evolve a bit until Go-Live.

This document reports results of the external parallel run from the 23/10/2019 to the 29/10/2019.

## PT-ES NTCs

	3:30				9:30				12:30				19:30			
	ES>PT		PT>ES		ES>PT		PT>ES		ES>PT		PT>ES		ES>PT		PT>ES	
	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly
29/10/2019	4033	3300	3599	3800	3749	3800	3110	3200	4095	3800	3060	3200	3600	3800	2959	3200
28/10/2019	4166	3300	3915	3800	3420	3800	3038	3200	4230	3800	2805	3200	3510	3800	3200	3200
27/10/2019	3534	3300	3915	3800	3826	3300	4140	3800	4857	3300	3315	3800	3967	3800	3547	3200
26/10/2019	4121	3300	3456	3800	3918	3800	3624	3200	4126	3800	3271	3200	4230	3800	3686	3200
25/10/2019	3551	2500	3757	4000	3555	2400	3199	3400	4050	2400	3093	3400	4005	2800	3545	3400
24/10/2019	3281	2500	3314	4000	3060	2400	3126	3400	3285	2400	2892	3400	3105	2400	3517	3400
23/10/2019	3668	2500	3375	4000	3645	2400	3398	3400	3690	2400	3244	3400	3645	2400	3433	3400



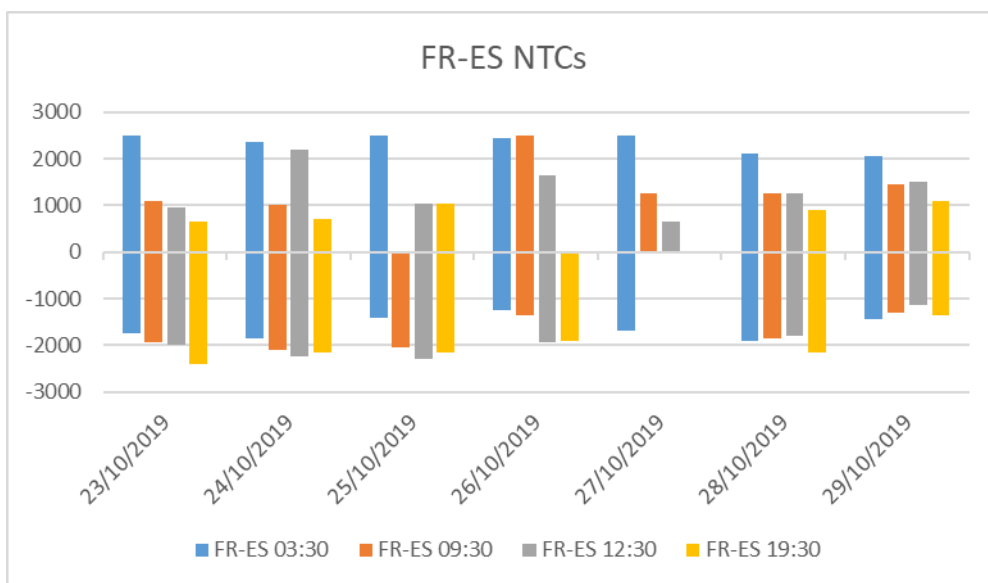
### Comments:

None computations failed for the PT-ES border over this fifteenth week of External parallel run with generally 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

	3:30				9:30				12:30				19:30			
	ES>FR		FR>ES		ES>FR		FR>ES		ES>FR		FR>ES		ES>FR		FR>ES	
	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly	D-2	Weekly
29/10/2019	2050	2500	1450	2050	1450	2350	1300	2200	1500	2350	1150	2200	1100	2350	1350	2200
28/10/2019	2100	2500	1900	2050	1250	2350	1850	2200	1250	2350	1800	2200	900	2350	2150	2200
27/10/2019	2500	2500	1700	2050	1250	1200	NA	1850	650	1200	NA	1850	NA	2350	NA	2200
26/10/2019	2450	2500	1250	2050	2500	2350	1350	2200	1650	2350	1950	2200	NA	2350	1900	2200
25/10/2019	2500	2500	1400	1750	NA	2350	2050	2300	1050	2350	2300	2300	1050	2350	2150	2300
24/10/2019	2350	2500	1850	1750	1000	2350	2100	2300	2200	2350	2250	2300	700	2350	2150	2300
23/10/2019	2500	2500	1750	1750	1100	2350	1950	2300	950	2350	2000	2300	650	2350	2400	2300



### Comments:

Six computations failed for the FR-ES over this fifteenth week of External parallel run with generally good results. Please note that not all the hours have been validated by TSOs at this moment.

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	28,57
		N-2 Interconnector 400 kV (ES-PT)		28,57
# 2	Angle difference		PT	25,00
		N-2 Interconnector 400 kV (ES-PT)		25,00
# 3	L-220 kV		ES	17,86
		N-2 400 kV (ES)		17,86
# 4	AT 400/220 kV		ES	10,71
		N-1 400 kV (ES)		10,71
# 5	GLSK limitation		PT	10,71
		N state		10,71

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

	Critical Network Elements and Contingencies ES->PT		Location CNE	Frequency
# 1	Angle difference		PT	71,43
		N-2 Interconnector 400 kV (ES-PT)		71,43
# 2	L-400 kV Interconnector		ES-PT	21,43
		N-2 Interconnector 400 kV (ES-PT)		21,43
# 3	L-220 kV		PT	3,57
		N-1 Interconnector 400 kV (ES-PT)		3,57
# 4	GLSK limitation		PT	3,57
		N state		3,57

### Limiting elements FR-ES

Please 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	AT 400/220 kV		FR	25,00
		AT 400/220 kV (FR)		25,00
# 2	L-220 kV Interconnector		ES-FR	14,29
		N-1 220 kV (FR)		7,14
		N-1 400 kV (ES)		7,14
# 3	L-220 kV		FR	14,28
		N-1 Power plant (ES)		7,14
		N state		7,14
# 4	L-220 kV		ES-FR	14,28
		N-1 220 kV (FR)		7,14
		N-1 Power plant (ES)		7,14
# 5	Computation Failed			10,71
		Computation Failed		10,71

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
<b># 1</b>	<b>L-220 kV Interconnector</b>		<b>ES-FR</b>	<b>60,71</b>
		N-1 220 kV (FR)		46,43
		N-1 Interconnector 400 kV (ES-FR)		7,14
		N-1 400 kV (ES)		3,57
		N-1 400 kV(ES)		3,57
<b># 2</b>	<b>L-220 kV Interconnector</b>		<b>ES-FR</b>	<b>14,29</b>
		N-1 Interconnector 400 kV (ES-FR)		10,71
		N-1 220 kV (FR)		3,57
<b># 3</b>	<b>Computation Failed</b>			<b>10,71</b>
		Computation Failed		10,71
<b># 4</b>	<b>L-220 kV</b>		<b>FR</b>	<b>3,57</b>
		N state		3,57
<b># 5</b>	<b>L-220 kV</b>		<b>ES</b>	<b>3,57</b>
		N-2 400 kV (ES)		3,57
<b># 5</b>	<b>L-220 kV</b>		<b>ES</b>	<b>3,57</b>
		N-1 220 kV (ES)		3,57
<b># 5</b>	<b>L-220 kV</b>		<b>ES</b>	<b>3,57</b>
		N state		3,57