CORESO Engineers ***North :*** KROMLIDIS Stylianos LEROY-BIASUTTI Emilie ***South :*** BIVONA Ignazio HOYAL Matias	**Day Ahead report for** **06 February 2018**

Security Levels:

CWE: Constraint detected that's manageable with classical remedial actions.

CEE: No critical constraint detected.

CSE: No constraint detected.

Key overall conditions

Load & Generation margin forecast			Main generating units connected to the grid in DACF					
ELIA			Elia	Doel	Pmax (MW)	1000	**3**	3900
						450	2	
Peak load [MW]	11500	18:30		Tihange		1000	2	2900
						450	2	
Generation Margin	Sufficient			Coo		230	3	1170
						160	3	
			50HzT	Rostock	Pmax (MW)	530	1	530
				Janschwalde		500	6	3000
				Boxberg		500	2	2800
						900	2	
				Schw. Pumpe		800	2	1600
				Lippendorf		920	2	1840
RTE			RTE	Gravelines	Pmax (MW)	900	**5**	4500
Peak load [MW]	88000	19:00		Chooz		1500	2	3000
Generation Margin	Sufficient			Cattenom		1300	4	5200
				Fessenheim		900	**1**	900
NATIONAL GRID (UK time)				Penly		1300	2	2600
Peak load [MW]	50545	17:30		Paluel		1300	**3**	3900
Generation Margin	Sufficient			Nogent s/ Seine		1300	2	2600
				Bugey		900	4	3600
TERNA				St Alban		1300	**1**	1300
Peak load [MW]	47069	18:30		Cruas		900	**3**	2700
Generation Margin	Sufficient			Tricastin		900	**3**	2700

Generation margin legend:

Green: Sufficient margin available. No risk for need of inter-TSO solicitation due to margin issues.

Orange: Tight margin available. Low risk for need of inter-TSO solicitation due to margin issues.

Red: Insufficient margin available. High risk for need of inter-TSO solicitation due to margin issues.

Comments:

CWE / CEE

CSE

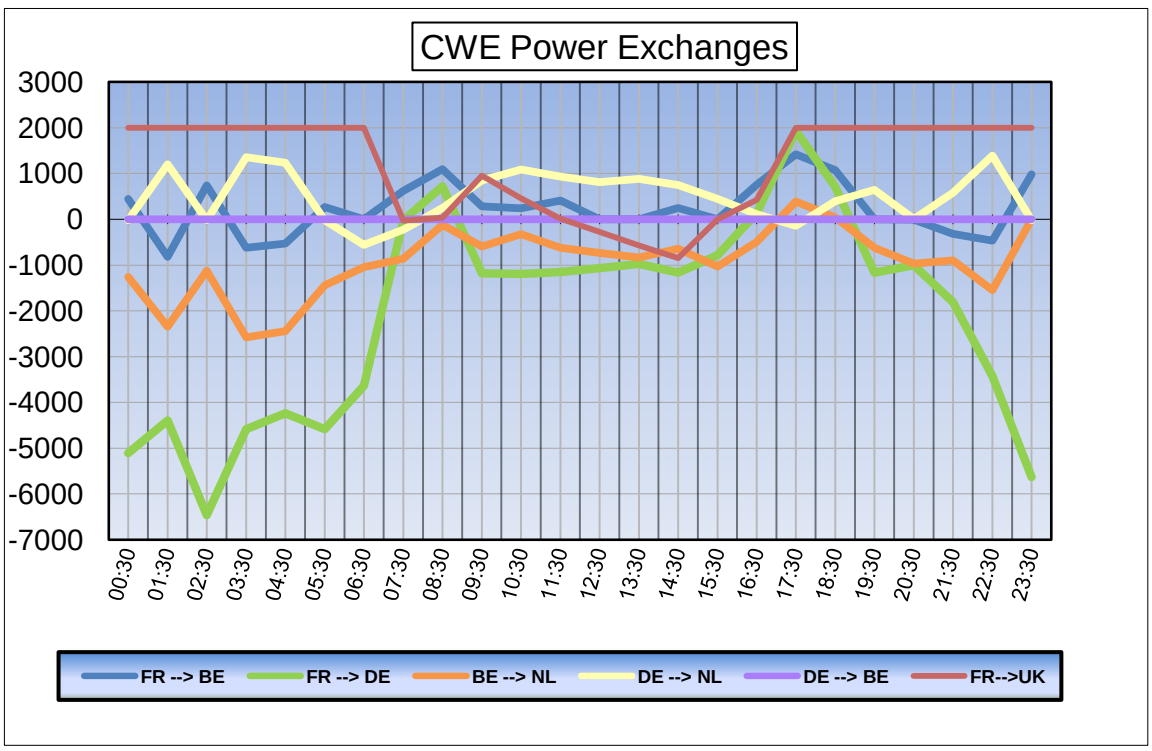
Swissgrid was not able to provide the timestamp of 17:30. It has been replaced with the one of 18:30.

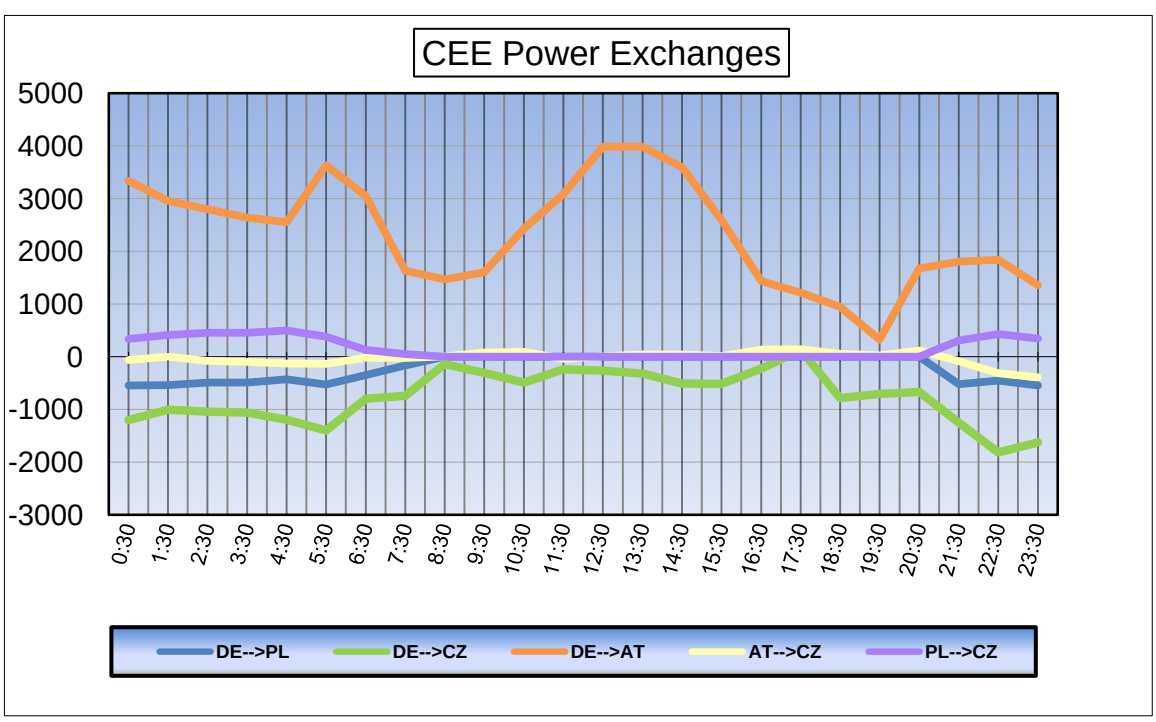
Outages table

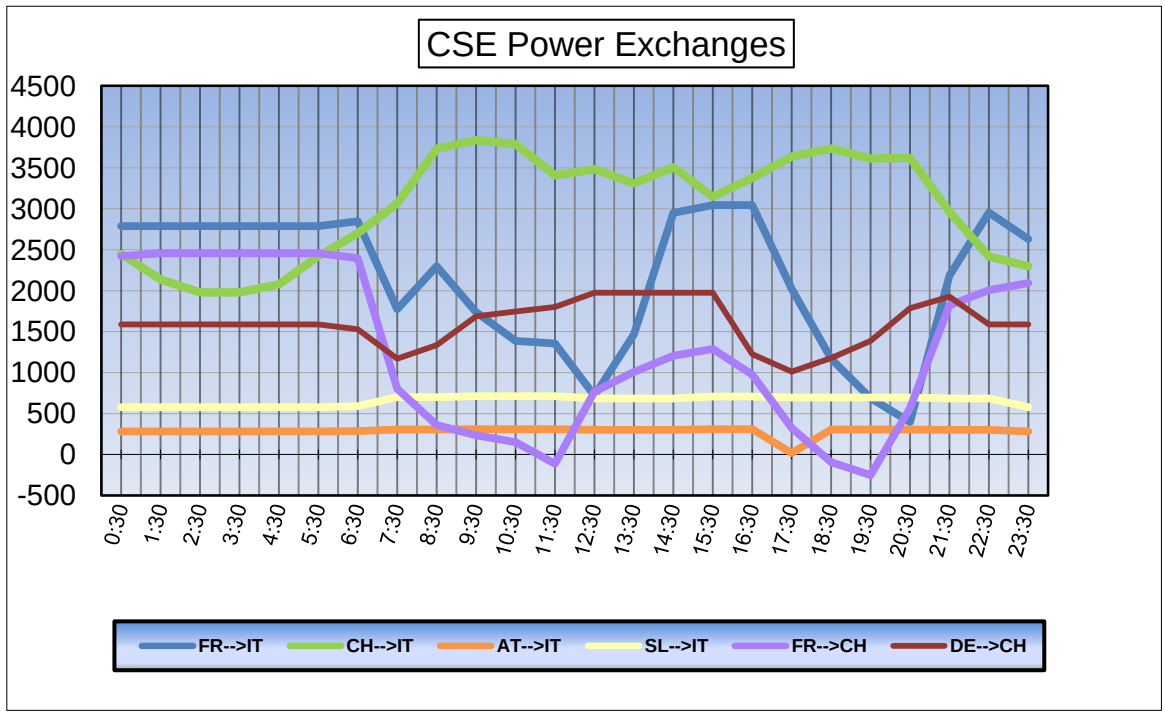
OUTAGES					
Owner	Type of element	Line name	start	end	Comments
50HzT	Hydro.Gen	MARKERSBACH _ Unit A-C 400 kV	06/02/2018	06/02/2018	reduced
50HzT	Hydro.Gen	MARKERSBACH _ Unit D 400 kV	28/09/2017	27/04/2018	160 MW
50HzT	Hydro.Gen	MARKERSBACH _ Unit E 400 kV	06/02/2018	06/02/2018	reduced
50HzT	Line	EULA _ Wolkramhausen 357 220 kV	04/02/2018	11/02/2018	
50HzT	Line	HAGENWERDER _ SCHMÖLLN 554 400 kV	22/01/2018	09/02/2018	permanently
50HzT	Line	HAMBURG Nord _ HAMBURG Ost 962 400 kV	05/02/2018	09/02/2018	daily - alternatively with line 961
50HzT	Line	REMPTENDORF _ VIESELBACH 416 400 kV	05/02/2018	11/02/2018	permanently
50HzT	Line	WOLMIRSTEDT _ WUSTERMARK 494 400 kV	04/02/2018	11/02/2018	
50HzT / PSE	Line	KRAJNIK _ VIERRADEN 507 225 kV	22/06/2016	31/05/2018	long term outage
50HzT / PSE	Line	KRAJNIK _ VIERRADEN 508 225 kV	22/06/2017	31/05/2018	long term outage
50HzT / TEN DE	Line	HELMSTEDT _ WOLMIRSTEDT 491 400 kV	05/02/2018	09/02/2018	daily
50HzT / TEN DE	Line	HELMSTEDT _ WOLMIRSTEDT 491 400 kV	05/02/2018	09/02/2018	daily
AMP / TEN DE	Line	NEHDEN _ TWISTETAL W 400 kV	08/01/2018	23/02/2018	daily
APG	Line	BISAMBERG _ SARASDORF 443C 400 kV	06/02/2018	06/02/2018	
CEPS	Line	BABYLON _ BEZDECIN 451 400 kV	01/02/2018	20/02/2018	permanently
CEPS	Line	KOCIN _ REPORYJE 1 400 kV	29/01/2018	14/02/2018	permanently
CEPS / SEPS	Line	NOSOVICE _ VARIN 404 400 kV	15/01/2018	02/03/2018	permanently
CREOS	Line	BERTRANGE _ SCHIFFLANGE West 220 kV	08/01/2018	02/03/2018	
ELES / HOPS	Line	KRSKO _ TUMBRI 1 400 kV	22/01/2018	02/03/2018	permanently
ELIA	Line	DOEL _ MERCATOR 52 400 kV	01/02/2018	07/02/2018	permanently
ELIA	Line	GEZELLE _ MAERLANT 109 400 kV	25/01/2018	09/02/2018	permanently
ELIA	Line	GEZELLE _ STEVIN 111 400 kV	19/09/2017	02/03/2018	permanently
ELIA	Line	GEZELLE _ STEVIN 112 400 kV	19/09/2017	02/03/2018	permanently
ELIA	Line	GRAMME _ VANEYCK 12 380 kV	06/02/2018	08/02/2018	permanently
ELIA	Line	MAERLANT _ GEZELLE 110 400 kV	25/01/2018	09/02/2018	permanently
ELIA	Line	MAERLANT _ HORTA 104 400 kV	05/02/2018	09/02/2018	permanently
ELIA	Nuc.Gen	DOEL _ Unit 3 (1000MW) 400 kV	23/09/2017	16/04/2018	forced outage
PSE	Fossil.Gen	DOLNA ODRA _ Unit 7 400 kV	30/01/2018	07/02/2018	
PSE	Line	POLANIEC _ TARNOW 400 kV	05/02/2018	10/02/2018	daily
PSE	Line	TUCZNAWA _ RZESZOW 400 kV	05/02/2018	09/02/2018	daily
RTE	Line	BARNABOS _ TERRIER 2 400 kV	06/02/2018	07/02/2018	
RTE	Line	BEAUMONT _ CHAFFARD 2 400 kV	05/02/2018	06/02/2018	
RTE	Line	CHEVALET _ ARGOEUVES 1 380 kV	24/01/2018	23/02/2018	
RTE	Line	CHEVALET _ ARGOEUVES 1 380 kV	24/01/2018	23/02/2018	
RTE	Line	CREYS _ ST VULBAS 1 400 kV	31/01/2018	07/02/2018	
RTE	Line	GENISSIAT _ VIELMOULIN 1 400 kV	29/01/2018	23/02/2018	
RTE	Line	MAZURES _ REVIN 2 400 kV	05/02/2018	09/02/2018	
RTE	*Nuc.Gen*	CRUAS _ Unit 2 (900MW) 400 kV	02/12/2017	30/03/2018	

Owner	Type of element	Line name	start	end	Comments
RTE	Nuc.Gen	PALUEL _ Unit 2 (1300MW) 400 kV	01/08/2015	15/04/2018	
S.GRID	Line	CHAMOSON _ MUHLEBERG "Sanetsch 2" 220 kV	24/10/2017	30/03/2018	
S.GRID	Line	CHATELARD _ NANT DE DRANCE 400 kV	16/01/2018	27/04/2018	
S.GRID	Line	HANDECK _ MOREL 220 kV	17/01/2018	06/02/2018	
S.GRID	Line	LIMMERN _ TIERFEHD 1 400 kV	28/01/2018	31/07/2018	
S.GRID	Nuc.Gen	BEZNAU _ BEZNAU G11 220 kV	13/03/2015	28/02/2018	182 MW
S.GRID	Nuc.Gen	BEZNAU _ BEZNAU G12 220 kV	13/03/2015	28/02/2018	182 MW
S.GRID	Transformer	BASSECOURT _ Transformer 400 kV	13/12/2017	31/03/2018	Trfo 32
TENNET DE	Generation	KUHTAI _ Unit 1 220 kV	02/10/2017	31/01/2019	142 MW
TENNET DE	Generation	KUHTAI _ Unit 2 220 kV	01/01/2017	01/10/2019	142 MW
TENNET DE	Generation	SILZ _ 2 220 kV	01/10/2017	01/10/2019	250 MW
TENNET DE	Hydro.Gen	WALDECK _ UNIT 5 400 kV	15/01/2018	30/11/2018	240 MW
TENNET DE	Hydro.Gen	WALDECK _ UNIT 6 400 kV	15/01/2018	14/02/2018	240 MW
TENNET DE	Line	BORKEN _ BERGHAUSEN 1 400 kV	05/02/2018	06/02/2018	daily
TENNET DE	Line	FLENSBURG _ AUDORF GRUN 380 kV	05/02/2018	07/02/2018	
TENNET DE	Line	GROHNDE _ KLEIN ILSEDE 1 400 kV	05/02/2018	06/02/2018	daily
TENNET DE	Line	IRSCHING _ OTTENHOFEN 421 400 kV	05/02/2018	07/02/2018	daily
TENNET DE	Line	ISAR _ PLEINTING 451 400 kV	06/02/2018	06/02/2018	
TENNET DE	Line	JARDELUND _ AUDORF Grün 380 kV	06/02/2018	09/02/2018	daily
TENNET DE	Line	KARBEN _ BORKEN 2 380 kV	05/02/2018	07/02/2018	daily
TENNET DE	Line	SOTTRUM _ LANDESBERGEN 2 400 kV	06/02/2018	06/02/2018	
TENNET DE	Line	TWISTETAL _ BORKEN 3 400 kV	16/05/2017	11/10/2018	
TENNET DE	Line	WAHLE _ ALGERMISSEN 2 400 kV	05/02/2018	06/02/2018	daily
TENNET NL	Fossil.Gen	EEMSCENTRAAL _ EC6 400 kV	05/02/2018	09/02/2018	359 MW
TENNET NL	Fossil.Gen	EEMSHAVEN _ UNIT 1 400 kV	05/02/2018	09/02/2018	442 MW
TENNET NL	Generation	HEMWEG _ 8 380 kV	05/02/2018	09/02/2018	650 MW
TENNET NL	Generation	MD _ 1 380 kV	05/02/2018	09/02/2018	348 MW
TENNET NL	Generation	MD _ 2 380 kV	05/02/2018	09/02/2018	426 MW
TENNET NL	Line	DOEKEGAT _ OUDESCHIP WT 400 kV	06/02/2018	06/02/2018	
TENNET NL	Line	ENS _ ZWOLLE WT 400 kV	03/02/2018	09/02/2018	
TENNET NL	Line	WATERINGEN _ BLEISWIJK White 400 kV	04/02/2018	09/02/2018	
TransnetBW	Line	BUNZWANGEN _ LAICHINGEN Grün 380 kV	01/01/2018	24/02/2018	
TransnetBW	Line	BUNZWANGEN _ LAICHINGEN Grün 380 kV	05/02/2018	24/02/2018	
TransnetBW	Line	DAXLANDEN _ PHILIPPSBURG GE 400 kV	05/02/2018	09/02/2018	daily
TransnetBW	Line	NEUROTT _ PHILIPPSBURG RT 400 kV	15/01/2018	07/02/2018	daily
TransnetBW / S.Gri	Line	KUHMOOS _ LAUFENBURG ws 220 kV	06/02/2018	06/02/2018	

Exchange program forecasts






CSE Power Exchanges
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-500
0:30
1:30
2:30
3:30
4:30
5:30
6:30
7:30
8:30
9:30
10:30
11:30
12:30
13:30
14:30
15:30
16:30
17:30
18:30
19:30
20:30
21:30
22:30
23:30
FR-->IT
CH-->IT
AT-->IT
SL-->IT
FR-->CH
DE-->CH

ELIA expected flows & PSTs tap position

		Node 1	Node 2	Order	00:30	03:30	06:30	07:30	08:30	10:30	12:30	15:30	17:30	18:30	19:30	23:30
BE	FR	ACHENE	LONNY	380.19	702	642	610	308	271	514	483	335	89	285	581	625
BE	FR	AUBANGE	MONT ST MARTIN	220.51	36	14	25	-16	-59	-10	7	-5	-97	-50	41	96
BE	FR	AUBANGE	MOULAINE	220.51	25	-3	11	-27	-71	-25	-11	-22	-113	-58	20	77
BE	FR	AVELGEM	AVELIN	380.80	664	561	576	83	-17	505	507	222	-129	135	728	641
BE	FR	AVELGEM	MASTAING	380.79	71	83	0	-216	-288	-58	5	-93	-342	-246	8	43
BE	FR	MONCEAU	CHOOZ	220.48	-133	-118	-46	-110	-126	-30	2	-26	-108	-90	-26	7
BE	NL	VAN EYCK 1	MAASBRACHT	380.27	-823	-831	-641	-538	-452	-600	-603	-500	-305	-496	-688	-831
BE	NL	VAN EYCK 2	MAASBRACHT	380.28	-1051	-1201	-753	-54	118	-74	-198	-112	254	110	-137	-377
BE	NL	ZANDVLIET	BORSSELE	380.29	-803	-704	-760	-772	-688	-744	-789	-755	-554	-678	-843	-602
BE	NL	ZANDVLIET	GEERTRUIDENBERG	380.30	-335	-351	-103	-146	32	-32	-97	-89	205	57	-243	-502
BE	LU	BELVAL	SCHIFFLANGE	220.511	-65	-61	24	-7	53	-27	-52	1	59	-10	-72	-172

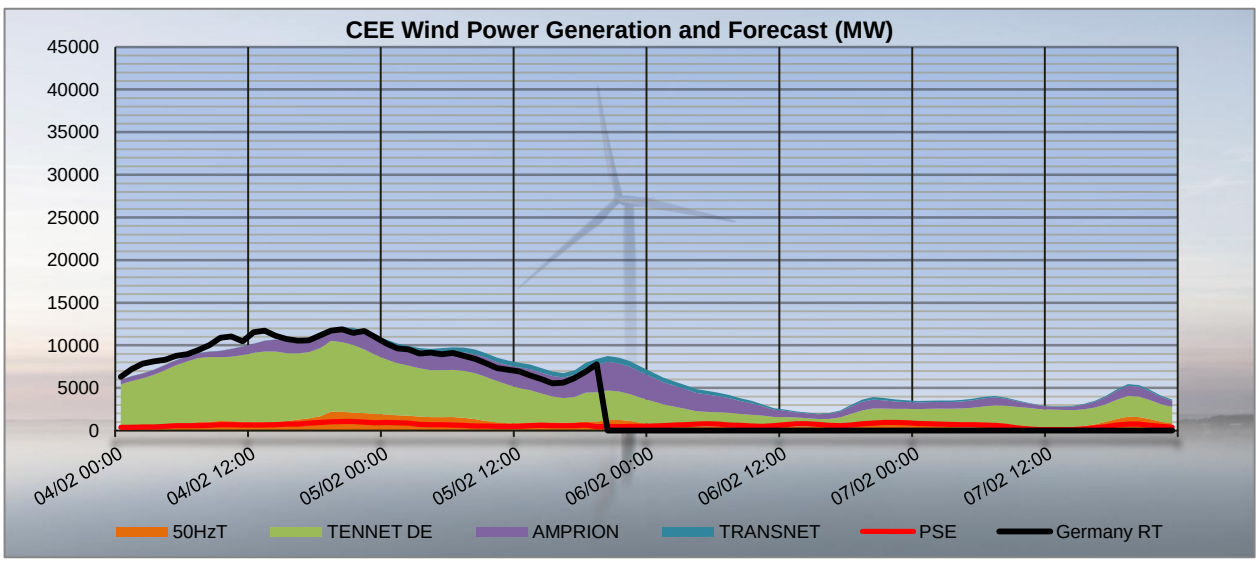
BE	FR	TOTAL		1365	1179	1176	22	-290	896	993	411	-700	-24	1352	1489
BE	NL	TOTAL		-3012	-3087	-2257	-1510	-990	-1450	-1687	-1456	-400	-1007	-1911	-2312
BE	LU	TOTAL		-65	-61	24	-7	53	-27	-52	1	59	-10	-72	-172
TOTAL BELGIAN IMPORT/EXPORT				-1712	-1969	-1057	-1495	-1227	-581	-746	-1044	-1041	-1041	-631	-995

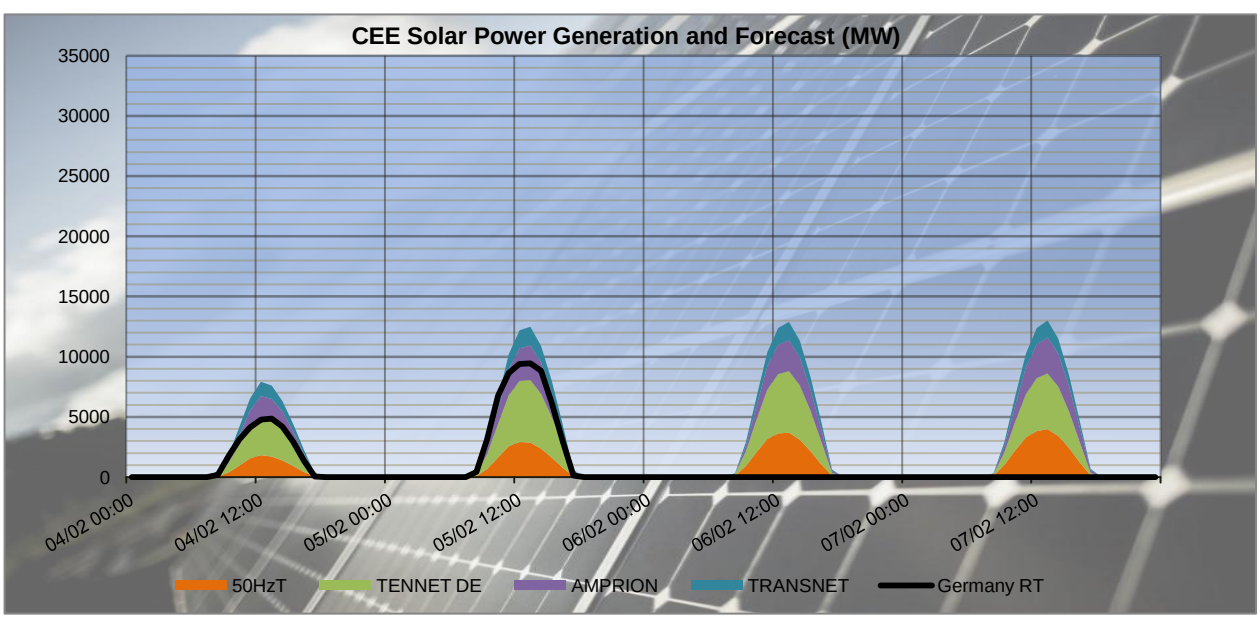
PST taps in DACF	**Zandvliet 1**	6	6	6	12	12	12	12	12	12	12	12	12	12	12
	Zandvliet 2	6	6	6	12	12	12	12	12	12	12	12	12	12	12
	Van Eyck 1	12	12	12	15	15	15	15	15	15	15	15	15	15	15
	Van Eyck 2	15	15	15	15	15	15	15	15	15	15	15	15	15	15
	Average	10	10	10	14	14	14	14	14	14	14	14	14	14	14

CREOS PST in DACF	**Schifflange**	13	13	13	17	17	17	17	17	17	17	17	17	17	17

Proposal for real time after D-1 studies																								
Timestamps		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
PSTs																								
Zandvliet PST 1	[1;35]	6	6	6	6	6	6	6	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Zandvliet PST 2	[1;35]	6	6	6	6	6	6	6	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Van Eyck PST 1	[1;35]	12	12	12	12	12	12	12	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Van Eyck PST 2	[1;35]	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Schifflange PST 1	[1;35]	11	11	11	11	11	11	11	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17

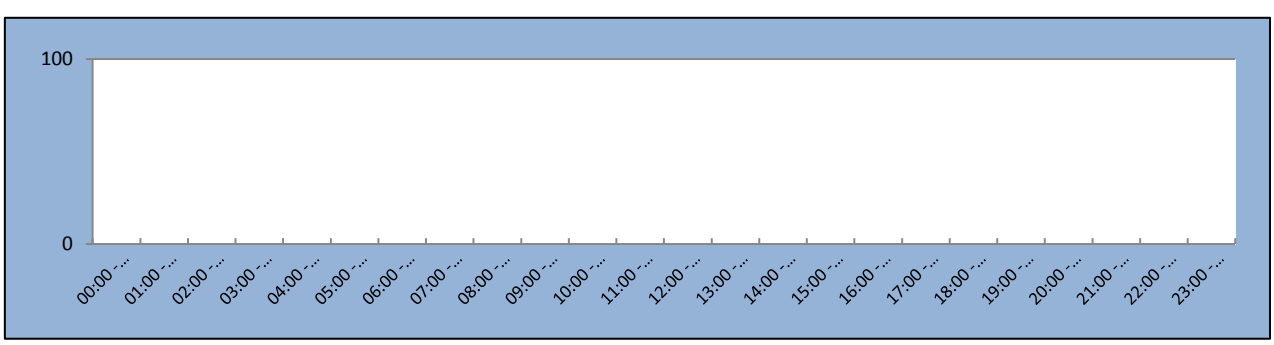
CEE Renewable Power Generation & Forecast



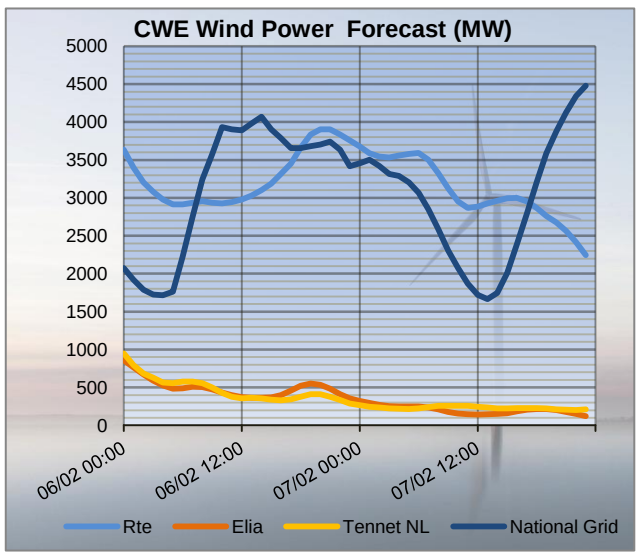


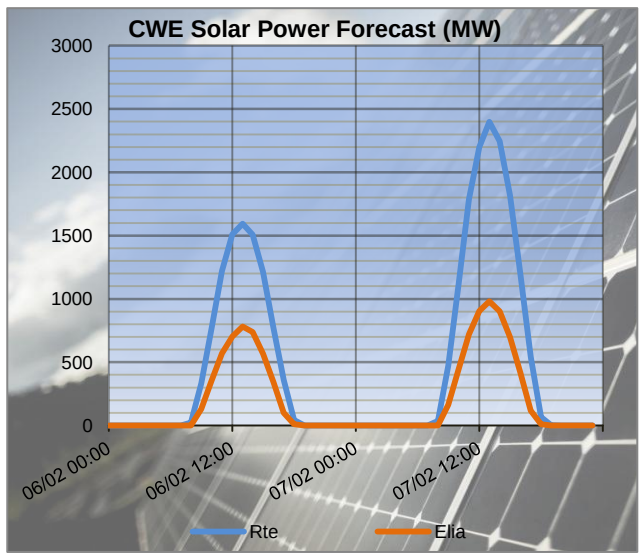
The charts above show the wind and solar generation forecasts for the TSOs in CEE (most significant) from D+1 until D-2 and the realised generation in Germany in real time. Source: Meteologica and 50HzT (RT)

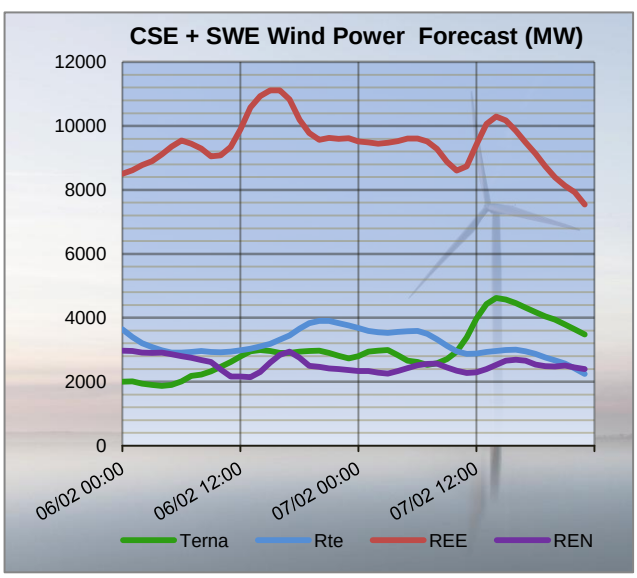
50HzT Preventive Redispatch

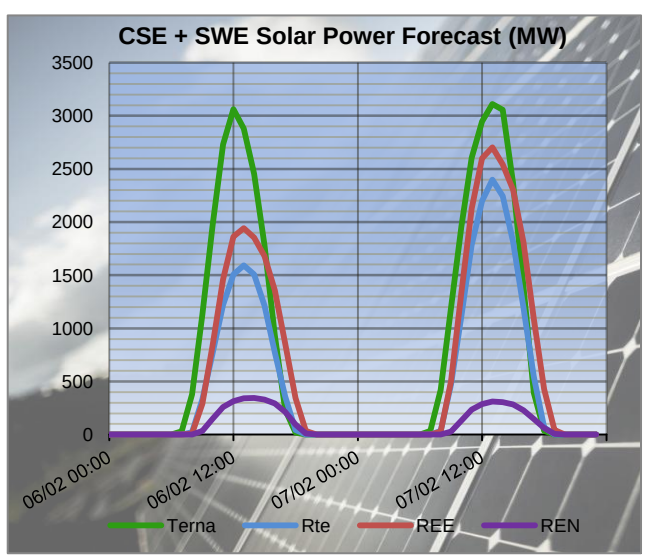


CWE, CSE & SWE Renewable Power Forecast (D-1 and D-2)









The charts above show the latest wind and solar generation forecasts for D-1 and D-2 for all the European TSOs in CWE, CSE and SWE with a significant installed capacity. Source: Meteologica

RTE flows on cross-border lines

With last provided tap position on Belgian PSTs:

				03:30			07:30			10:30			12:30		
		Node 1	Node 2	DACF	Merge	Delta	DACF	Merge	Delta	DACF	Merge	Delta	DACF	Merge	Delta
FR	BE	LONNY	ACHENE	-414	-642	-228	-268	-308	-40	-332	-514	-182	-401	-483	-82
FR	BE	MONT ST MARTIN	AUBANGE	-26	-14	12	5	16	11	63	10	-53	14	-7	-21
FR	BE	MOULAINE	AUBANGE	-9	3	12	17	27	10	75	25	-50	30	11	-19
FR	BE	AVELIN	AVELGEM	-636	-561	75	-219	-83	136	-438	-505	-67	-404	-507	-103
FR	BE	MASTAING	AVELGEM	-123	-83	40	146	216	70	106	58	-48	71	-5	-76
FR	BE	CHOOZ	MONCEAU	69	118	49	125	110	-15	86	30	-56	85	-2	-87
FR	DE	MUHLBACH	EICHSTETTEN	-109	-72	37	331	229	-102	-230	-87	143	-149	-13	136
FR	DE	VOGELGRUN	EICHSTETTEN	-125	-94	31	97	41	-56	-55	-42	13	-44	-36	8
FR	DE	ST AVOLD	ENSDORF	0	0	0	0	0	0	0	0	0	0	0	0
FR	DE	VIGY	ENSDORF 1	-524	-397	127	205	333	128	-88	51	139	-120	6	126
FR	DE	VIGY	ENSDORF 2	-506	-357	149	304	451	147	-64	102	166	-104	63	167

				17:30			19:30			23:30		
		Node 1	Node 2	DACF	Merge	Delta	DACF	Merge	Delta	DACF	Merge	Delta
FR	BE	LONNY	ACHENE	-94	-89	5	-536	-581	-45	-541	-625	-84
FR	BE	MONT ST MARTIN	AUBANGE	103	97	-6	-32	-41	-9	-44	-96	-52
FR	BE	MOULAINE	AUBANGE	118	113	-5	-12	-20	-8	-27	-77	-50
FR	BE	AVELIN	AVELGEM	157	129	-28	-560	-728	-168	-524	-641	-117
FR	BE	MASTAING	AVELGEM	382	342	-40	115	-8	-123	37	-43	-80
FR	BE	CHOOZ	MONCEAU	155	108	-47	102	26	-76	59	-7	-66
FR	DE	MUHLBACH	EICHSTETTEN	409	392	-17	-312	-180	132	-187	-56	131
FR	DE	VOGELGRUN	EICHSTETTEN	106	64	-42	-42	-32	10	-100	-64	36
FR	DE	ST AVOLD	ENSDORF	0	0	0	0	0	0	0	0	0
FR	DE	VIGY	ENSDORF 1	529	623	94	-81	51	132	-283	-203	80
FR	DE	VIGY	ENSDORF 2	663	780	117	-96	75	171	-280	-176	104

				03:30			07:30			10:30			12:30		
		Node 1	Node 2	DACF	Merge	Delta	DACF	Merge	Delta	DACF	Merge	Delta	DACF	Merge	Delta
FR	CH	SIERENTZ	ASPHARD	148	224	76	94	121	27	-159	-53	106	-117	25	142
FR	CH	MAMBELIN	BASSECOURT	-314	-232	82	-255	-181	74	-403	-301	102	-378	-255	123
FR	CH	SIERENTZ	BASSECOURT	691	686	-5	383	421	38	401	413	12	468	444	-24
FR	CH	BOIS TOLLOT	ROMANEL	79	-140	-219	-75	-331	**-256**	-45	-380	**-335**	-1	-406	**-405**
FR	CH	SIERENTZ	LAUFENBURG	152	200	48	-89	-9	80	-226	-91	135	-191	36	227
FR	CH	CORNIER	RIDDES	-111	-75	36	-101	-71	30	-123	-106	17	-109	-108	1
FR	CH	CORNIER	ST TRIPHON	-132	-126	6	-92	-76	16	-121	-108	13	-111	-122	-11
FR	CH	PRESSY	VALLORCINES	-216	-197	19	-267	-240	27	-277	-285	-8	-262	-295	-33
FR	CH	BOIS TOLLOT	VERBOIS	112	159	47	161	256	95	157	287	130	153	235	82
FR	CH	GENISSIAT	VERBOIS	57	37	-20	33	24	-9	10	12	2	71	39	-32
FR	CH	GENISSIAT	VERBOIS	57	37	-20	33	24	-9	10	12	2	71	39	-32
FR	IT	ALBERTVILLE	RONDISSONE	546	446	-100	609	538	-71	561	503	-58	508	480	-28
FR	IT	ALBERTVILLE	RONDISSONE	602	476	-126	661	569	-92	606	523	-83	526	448	-78
FR	IT	MENTON	CAMPOROSSO	257	193	-64	147	198	51	156	198	42	146	207	61
FR	IT	VILLARODIN	VENAUS	310	335	25	704	774	70	567	751	184	334	546	212

				17:30			19:30			23:30		
		Node 1	Node 2	DACF	Merge	Delta	DACF	Merge	Delta	DACF	Merge	Delta
FR	CH	SIERENTZ	ASPHARD	75	238	163	-292	-103	189	0	150	150
FR	CH	MAMBELIN	BASSECOURT	-164	-35	129	-476	-324	152	-319	-253	66
FR	CH	SIERENTZ	BASSECOURT	228	309	81	291	336	45	616	610	-6
FR	CH	BOIS TOLLOT	ROMANEL	124	-244	**-368**	-121	-481	**-360**	-87	-132	-45
FR	CH	SIERENTZ	LAUFENBURG	-43	-14	29	-328	-236	92	18	69	51
FR	CH	CORNIER	RIDDES	-34	-28	6	-127	-118	9	-128	-73	55
FR	CH	CORNIER	ST TRIPHON	-33	-38	-5	-126	-121	5	-169	-108	61
FR	CH	PRESSY	VALLORCINES	-137	-185	-48	-259	-289	-30	-258	-186	72
FR	CH	BOIS TOLLOT	VERBOIS	117	253	136	70	204	134	128	191	63
FR	CH	GENISSIAT	VERBOIS	81	86	5	-20	-16	4	30	55	25
FR	CH	GENISSIAT	VERBOIS	81	86	5	-20	-16	4	30	55	25
FR	IT	ALBERTVILLE	RONDISSONE	788	731	-57	486	339	-147	604	404	-200
FR	IT	ALBERTVILLE	RONDISSONE	865	787	-78	529	478	-51	627	478	-149
FR	IT	MENTON	CAMPOROSSO	152	195	43	156	204	48	146	199	53
FR	IT	VILLARODIN	VENAUS	724	873	149	581	723	142	474	487	13

N state flows at 10:30 and 19:30

The Imax and load values in the table below are extracted from the merged TSOs' DACF.

TSO	Line (380 kV)	10:30		19:30	
		Imax (A)	% of Imax	Imax (A)	% of Imax
ELIA	Champion - Gramme (32)	2448	41	2448	41
	Doel - Mercator (51)	2239	47	2239	53
	Doel - Mercator (52)	2239	0	2239	0
	Doel - Mercator (54)	2448	47	2448	52
	Doel - Zandvliet (25)	2349	14	2349	23
	Mercator - Horta (73)	2569	38	2569	46
	Courcelles - Gramme (31)	2349	44	2349	46
	Mercator - Rodenhuize/Horta (74)	2349	42	2349	51
RTE	Attaques - Warande 2	3780	42	3780	57
	Avelin - Gavrelle	2622	60	2622	64
	Avelin - Warande	3458	8	3458	5
	Lonny - Seuil	4149	30	4149	29
	Mandarins - Warande 1	3780	38	3780	53
	Muhlbach - Scheer	2598	15	2598	8
	Revigny - Vigy	2596	51	2596	50
	Warande - Weppes	3458	15	3458	6

X < 50 % of Imax 50 ≤ X < 75 % of Imax X ≥ 75 % of Imax

TSO	Voltage	Line (380 kV)	10:30		19:30	
			Imax (A)	% of Imax	Imax (A)	% of Imax
50 HzT	380 kV	Eisenach - Mecklar (450-2)	2520	29	2520	20
		Hagenwerder - Mikulowa (567)	2520	7	2520	10
		Hagenwerder - Mikulowa (568)	2520	7	2520	10
		Remptendorf - Redwitz (413)	3600	36	3600	32
		Remptendorf - Redwitz (414)	3600	36	3600	32
		Röhrsdorf - Hradec (445)	2520	28	2520	9
		Röhrsdorf - Hradec (446)	2520	18	2520	9
		Vieselbach - Mecklar (449-1)	2520	32	2520	25
		Wolmirstedt - Helmstedt (491-1)	2400	0	2400	8
		Wolmirstedt - Helmstedt (492-2)	2400	0	2400	8
	220 kV	Vierraden - Krajnik (507)	1370	0	1370	0
		Vierraden - Krajnik (508)	1370	0	1370	0

X < 50 % of Imax 50 ≤ X < 75 % of Imax X ≥ 75 % of Imax

Special topologies at 10:30 and 19:30

Nodes in North area			10:30	19:30
380 kV	Elia	Doel	1	1
		Avelgem	1	1
	Rte	Warande	1	1
		Cergy	2	2
		Terrier	1	1
		Plessis Gassot	1	1
		Mery/Seine	2	2
		Muhlbach	1	1
		Vigy	2	2
	Transnet bw	Eichstetten	1	1
	Amprion	Uchtelfangen	1	1
	Tennet DE	Redwitz	1	1
	50 HzT	Remptendorf	1	1
		Wolmirstedt	1	1
	CEPS	Hradec Vychod	1	1
220 kV	50 HzT	Pasewalk	1	1

North analyses results

Security analyses have been performed for 24 timestamps.
All remedial actions have been agreed with concerned TSO during the day ahead process.

Constraints on Elia, RTE (North) and 50HzT 400kV grids and tie-lines

TSO	Validity	Contingency				Constraint					Timestamps of max
		U (kV)	Substation 1	Substation 2	Code	Overload	U (kV)	Substation 1	Substation 2	Code	
Rte	23:30	380	Mandarins	Warande		108%	380	Attaques	Warande		23:30
		Curative action : 2-nodes operation in Warande 380 kV substation (busbar coupler A and C open) => 93% remaining.									

Constraints greater than 100% on NL + Amprion 400kV grids and greater than 120% on DE, CZ, PL and SK 400kV grids

TSO	Validity	Contingency				Constraint					Timestamps of max
		U (kV)	Substation 1	Substation 2	Code	Overload	U (kV)	Substation 1	Substation 2	Code	
		No constraints to report									

Constraints on ELIA 220/150kV grid at 10:30

Contingency				Constraint					Comments
U (kV)	Substation 1	Substation 2	Code	Overload	U (kV)	Substation 1	Substation 2	Code	
No constraint to report									

50HzT DC loopflows sensitivity

Vierraden-Krajnik 220kV axis in long term outage till end of May 2018.

South analyses results

Security analyses have been performed for these 2 timestamps:

- Off-peak period (23:00 – 07:00): **06:30**
- Peak period (07:00 – 23:00): **14:30**

Adaptations made on merged DACFs:

Off-peak:

- SI ➔ IT physical flow adapted to **800 MW**
- Mendrisio-Cagno flow adapted to the schedule : **130 MW**
- PST of Lienz adapted to **110 MW**
- PST of Camporosso adapted to **200 MW**
- PST of La Praz on **tap 1**

Peak:

- SI ➔ IT physical flow adapted to the target of **800 MW**
- Mendrisio-Cagno flow adapted to the schedule : **110 MW**
- PST of Lienz adapted to **120 MW**
- PST of Camporosso adapted to **200 MW**
- PST of La Praz on **tap 1**

Special topologies

Nodes in South area				
			Off Peak	Peak
380 kV	Swissgrid	Sils	1	1
		Robbia	2	2
	Rte	Génissiat	1	1
		Albertville	2	2
		Grande Ile	1	1
	Terna	Turbigo	1	1
		Baggio	1	1
		Bovisio	2	2
		Ostiglia	1	1

N state flows Off-Peak & Peak

The Imax and load values in the table below are extracted from the **adapted** merged TSOs' DACF.

TSO	Voltage	Line (380 kV)	Off Peak		Peak	
			Imax (A)	% of Imax	Imax (A)	% of Imax
Terna	380 kV	Albertville - Rondissone 1	2370	38	2370	45
		Albertville - Rondissone 2	2370	38	2370	49
		Bulciago - Soazza	2300	32	2300	39
		Cagno - Mendrisio	855	24	855	21
		Musignano - Lavorgo	2270	45	2270	52
		Redipuglia - Divaca	2700	34	2700	35
		Robbia - San Fiorano	2530	48	2530	52
		Robbia - Gorlago	2530	52	2530	56
		Venaus - Villarodin	2715	30	2715	44
	220 kV	Airolo - Ponte	900	30	900	10
		Lienz - Soverzene	750	37	750	39
		Menton - Campo Rosso	1165	44	1165	43
		Padriciano - Divaca	960	41	960	48
		Riddes - Avise	1010	6	1010	19
		Riddes - Valpelline	1010	6	1010	19
		Serra - Pallanzeno	900	40	900	49

For Terna:

X < 50 % of Imax | 50 ≤ X < 75 % of Imax | X ≥ 75% of Imax

Sensitivity coefficients for the Pentalateral instruction

The amount of the control program curtailment on peak and off-peak can be calculated thanks to the sensitivities in the table below:

		FR → IT	CH → IT	AT → IT	SI → IT
Off Peak	Initial physical flows on adapted base case	2002	3443	112	809
	Compensation ratio (calculated from NTC)	39%	49%	4%	8%
	Pentalateral impact on physical flows	-27%	-55%	-4%	-14%
Peak	Initial physical flows on adapted base case	2539	3890	118	836
	Compensation ratio (calculated from NTC)	38%	50%	4%	9%
	Pentalateral impact on physical flows	-26%	-55%	-4%	-15%

OFF PEAK

Off Peak constraints on APG, Eles, RTE (South), Swissgrid and Terna 400kV grids and tie-lines

	TSO	Contingency				Constraint				
		U (kV)	Substation 1	Substation 2	Code	Overload	U (kV)	Substation 1	Substation 2	Code
Off - Peak										
		No constraint detected.								

PEAK

Peak constraints on APG, Eles, RTE (South), Swissgrid and Terna 400kV grids and tie-lines

	TSO	Contingency				Constraint				
		U (kV)	Substation 1	Substation 2	Code	Overload	U (kV)	Substation 1	Substation 2	Code
Peak										
		No constraint detected.								

Final PSTs settings

The tables below present the tap positions and the physical flows on different PSTs with the adaptations described at the top of the page (IT-SI target flow...) and preventive actions (before Pentalateral reduction).

PST	Off Peak	
	Tap position	Physical flow to Italy (MW)
La Praz (1/33)	1	448
Rondissone 1 (1/33)	33	609
Rondissone 2 (1/33)	33	604
Camporosso (-32/32)	-8	208
Lienz (-32/32)	-14	113
Padriciano (1/33)	31	158
Divaca (-32/32 each)	-21	653

PST	Peak	
	Tap position	Physical flow to Italy (MW)
La Praz (1/33)	1	616
Rondissone 1 (1/33)	33	777
Rondissone 2 (1/33)	33	711
Camporosso (-32/32)	-3	200
Lienz (-32/32)	-17	119
Padriciano (1/33)	33	183
Divaca (-32/32 each)	-24	655

Conclusion

CWE: Constraint detected that's manageable with classical remedial actions.
CEE: No critical constraint detected.
CSE: No constraint detected.