CORESO Engineers ***North :*** BRIEGERT Robin ***South :*** KESRAOUI Mickael	**Day Ahead report for** **14 January 2018**

Security Levels:

CWE: No critical constraint detected.

CEE: No constraint detected.

CSE: Constraints detected on Lavorgo-Musignano and Sils-Soazza that are manageable with usual topological measures in Switzerland.

Key overall conditions

Load & Generation margin forecast			Main generating units connected to the grid in DACF					
ELIA			Elia	Doel	Pmax (MW)	1000	**1**	1900
						450	2	
Peak load [MW]	10200	18:00		Tihange		1000	2	2900
						450	2	
Generation Margin	Sufficient			Coo		230	3	1170
						160	3	
			50HzT	Rostock	Pmax (MW)	530	**0**	0
				Janschwalde		500	**5**	2500
				Boxberg		500	2	2800
						900	2	
				Schw. Pumpe		800	2	1600
				Lippendorf		920	2	1840
RTE			RTE	Gravelines	Pmax (MW)	900	6	5400
Peak load [MW]	96700	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]	42900	17:30		Paluel		1300	**3**	3900
Generation Margin	Sufficient			Nogent s/ Seine		1300	2	2600
				Bugey		900	4	3600
TERNA				St Alban		1300	2	2600
Peak load [MW]	34100	19:30		Cruas		900	**2**	1800
Generation Margin	Sufficient			Tricastin		900	4	3600

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

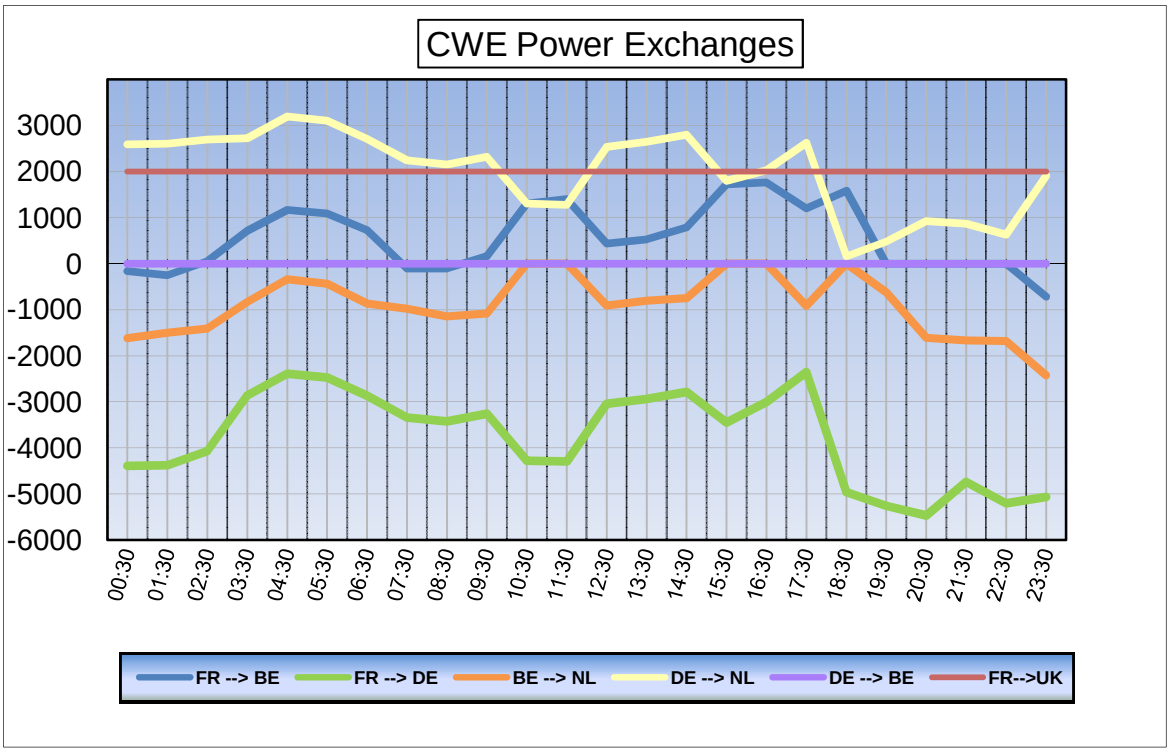
RTE: high load variation all day long of around 2000MW, which has an impact on the results. However it is a calm situtation forseen from RTE side.

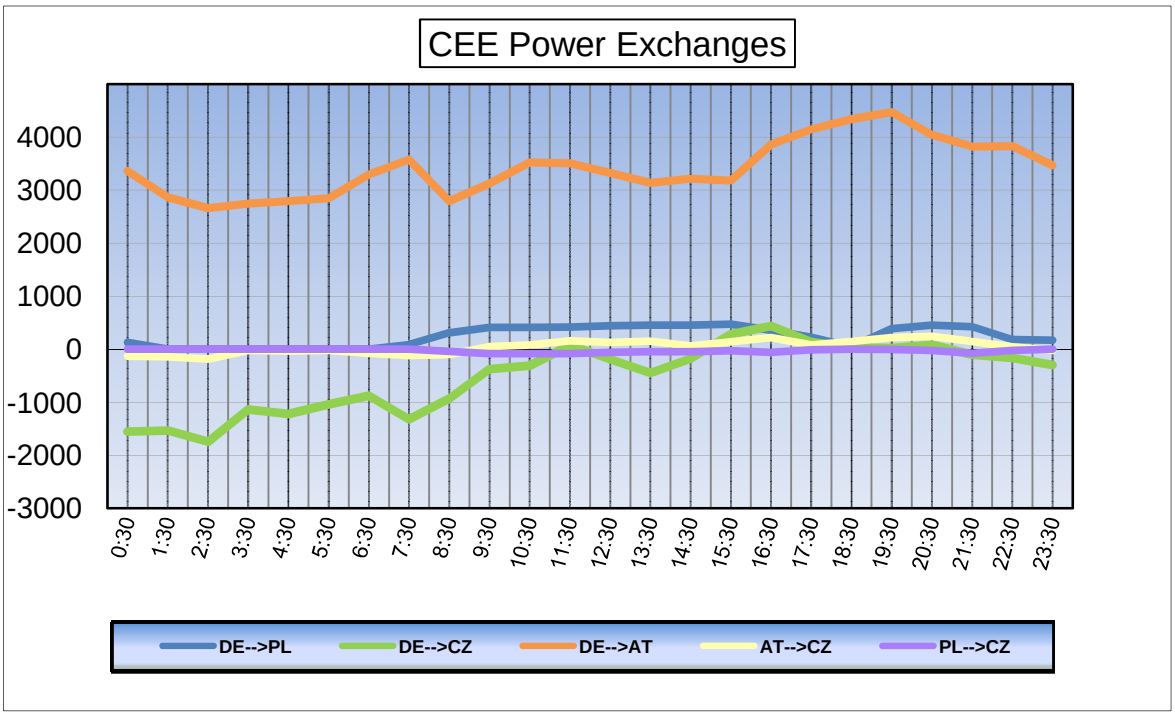
CSE

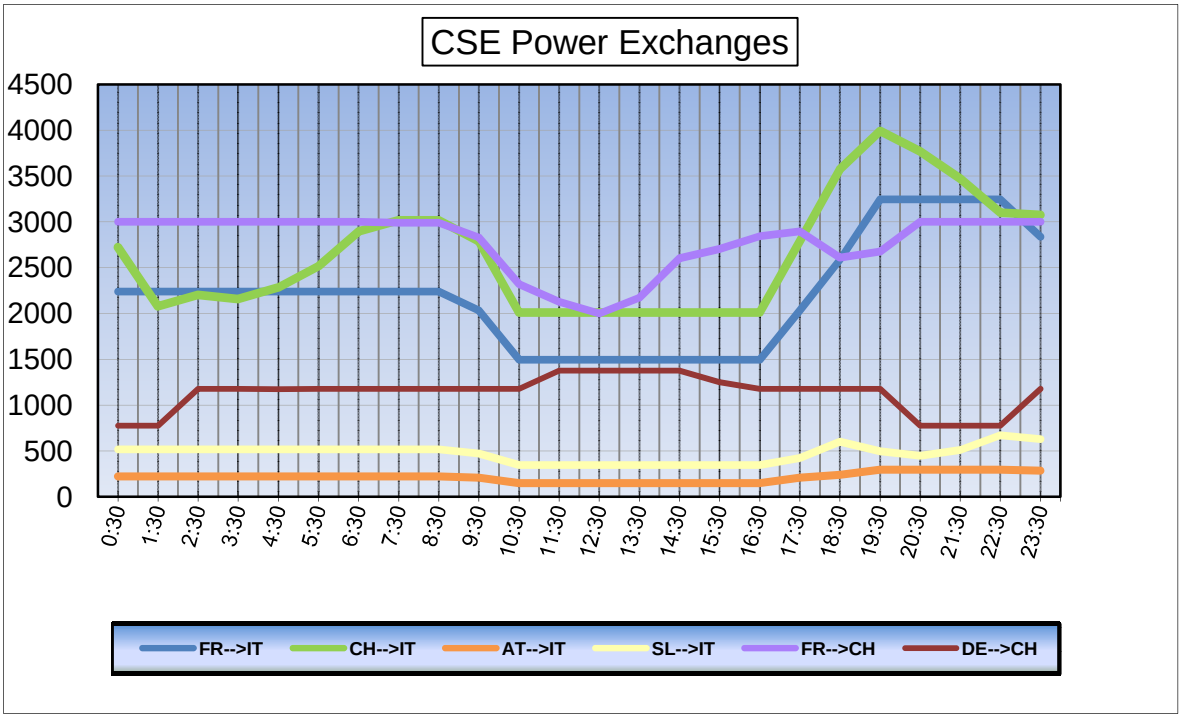
Outages table

OUTAGES					
Owner	Type of element	Line name	start	end	Comments
50HzT	Hydro.Gen	MARKERSBACH _ Unit D 400 kV	28/09/2017	27/04/2018	160 MW
50HzT	Line	EULA _ Wolkramhausen 357 220 kV	06/10/2017	16/03/2018	
50HzT	Line	HAMBURG Nord _ BRUNSBUTTEL 951 400 kV	14/01/2018	21/01/2018	
50HzT	Line	LUBMIN _ WIKINGER 281 220 kV	26/09/2017	31/01/2018	
50HzT	Line	RAGOW _ Förderstedt 531 400 kV	02/01/2018	14/01/2018	
50HzT	Line	RAGOW _ FORDERSTEDT 532 380 kV	02/01/2018	14/01/2018	
50HzT / PSE	Line	KRAJNIK _ VIERRADEN 507 225 kV	22/06/2016	21/01/2018	Long term outage
50HzT / PSE	Line	KRAJNIK _ VIERRADEN 508 225 kV	22/06/2017	21/01/2018	Long term outage
AMP / TEN DE	Line	NEHDEN _ TWISTETAL W 400 kV	08/01/2018	23/02/2018	
APG	Line	TAUERN _ PST 220 kV	14/12/2017	15/01/2018	
CEPS	Line	DASNY _ KOCIN 473 400 kV	08/01/2018	26/01/2018	
CREOS	Line	BERTRANGE _ SCHIFFLANGE West 220 kV	08/01/2018	02/03/2018	
ELIA	Line	GEZELLE _ STEVIN 111 400 kV	19/09/2017	02/03/2018	
ELIA	Line	GEZELLE _ STEVIN 112 400 kV	19/09/2017	02/03/2018	
ELIA	Nuc.Gen	DOEL _ Unit 3 (1000MW) 400 kV	23/09/2017	16/04/2018	Forced outage
RTE	Nuc.Gen	CRUAS _ Unit 2 (900MW) 400 kV	02/12/2017	30/03/2018	
RTE	Nuc.Gen	FESSENHEIM _ Unit 2 (900MW) 400 kV	01/01/2017	15/03/2018	
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	LIMMERN _ TIERFEHD 1 400 kV	28/01/2017	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
TENNET DE	Line	TWISTETAL _ BORKEN 3 400 kV	16/05/2017	11/10/2018	
TENNET NL	Line	HENGELO _ ZWOLLE WT 400 kV	13/01/2018	19/01/2018	permanent
TERNA	Line	PIAN CAMUNO _ S.FIORANO 358 400 kV	09/01/2018	19/01/2018	Forced outage

Exchange program forecasts






CSE Power Exchanges
4500
4000
3500
3000
2500
2000
1500
1000
500
0
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	01:30	03:30	06:30	07:30	08:30	10:30	12:30	17:30	18:30	19:30	21:30	23:30
BE	FR	ACHENE	LONNY	380.19	365	91	150	348	279	283	265	48	390	654	445	611
BE	FR	AUBANGE	MONT ST MARTIN	220.51	12	-73	-62	22	19	4	-4	-25	71	159	84	130
BE	FR	AUBANGE	MOULAINE	220.51	-2	-81	-70	11	1	-13	-20	-40	55	137	67	110
BE	FR	AVELGEM	AVELIN	380.80	141	-195	-116	52	72	109	84	-380	82	455	259	403
BE	FR	AVELGEM	MASTAING	380.79	-128	-219	-190	-122	-149	-176	-199	-424	-218	-36	-80	-13
BE	FR	MONCEAU	CHOOZ	220.48	-112	-132	-115	-92	-106	-107	-114	-157	-77	-22	-75	-53
BE	NL	VAN EYCK 1	MAASBRACHT	380.27	-700	-560	-611	-472	-466	-518	-527	-488	-601	-619	-648	-870
BE	NL	VAN EYCK 2	MAASBRACHT	380.28	-364	-320	-393	-87	-38	-104	-104	34	-142	-150	-393	-731
BE	NL	ZANDVLIET	BORSSELE	380.29	-249	-121	-169	-275	-301	-371	-335	-260	-466	-502	-535	-525
BE	NL	ZANDVLIET	GEERTRUIDENBERG	380.30	-224	25	-46	-260	-301	-347	-342	-287	-546	-604	-690	-650
BE	LU	BELVAL	SCHIFFLANGE	220.511	-3	25	12	-10	-69	-82	-80	-154	-146	-108	-112	-134

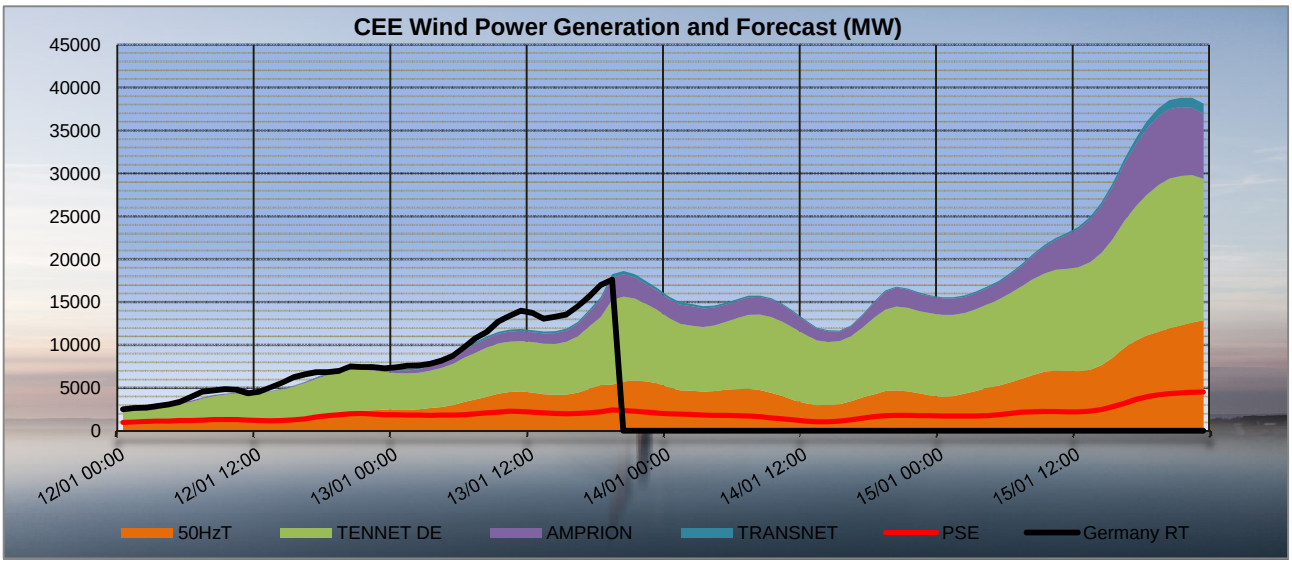
BE	FR	TOTAL		276	-609	-403	219	116	100	12	-978	303	1347	700	1188
BE	NL	TOTAL		-1537	-976	-1219	-1094	-1106	-1340	-1308	-1001	-1755	-1875	-2266	-2776
BE	LU	TOTAL		-3	25	12	-10	-69	-82	-80	-154	-146	-108	-112	-134
TOTAL BELGIAN IMPORT/EXPORT				-1264	-1560	-1610	-885	-1059	-1322	-1376	-2133	-1598	-636	-1678	-1722

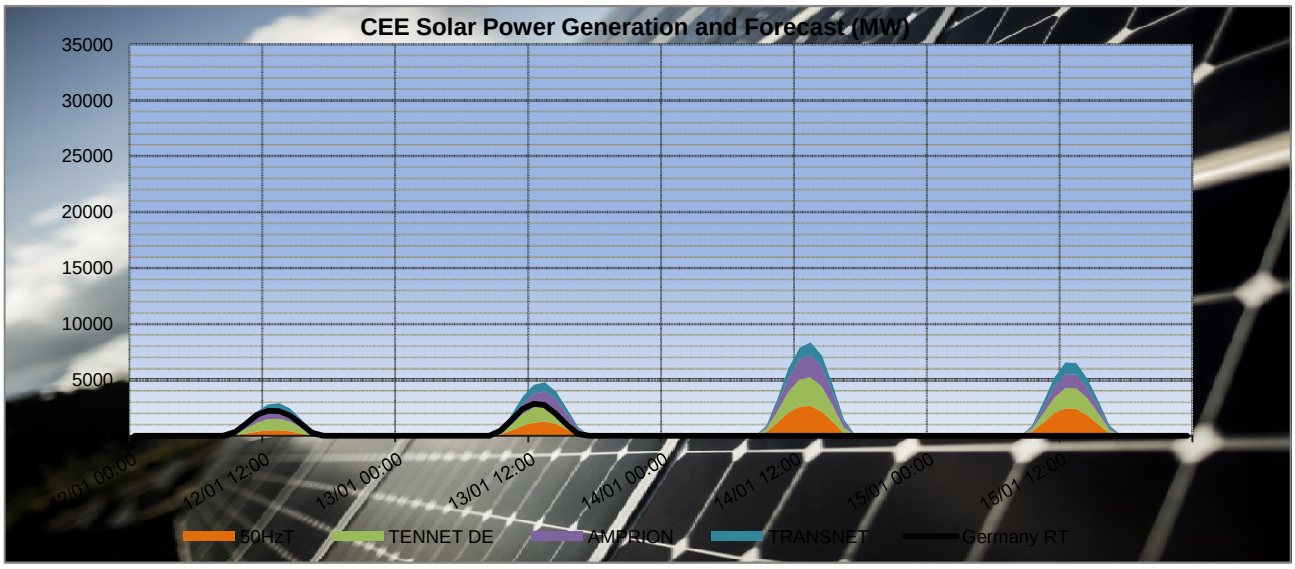
PST taps in DACF	**Zandvliet 1**	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Zandvliet 2	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Van Eyck 1	15	15	15	12	12	12	12	12	12	12	12	12	12	15
	Van Eyck 2	15	15	15	12	12	12	12	12	12	12	12	12	12	15
	Average	14	14	14	12	12	12	12	12	12	12	12	12	12	14

CREOS PST in DACF	**Schifflange**	15	15	15	15	15	15	15	15	15	15	15	15	15	15

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]**	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Zandvliet PST 2	**[1;35]**	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Van Eyck PST 1	**[1;35]**	15	15	15	15	15	15	15	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	15
Van Eyck PST 2	**[1;35]**	15	15	15	15	15	15	15	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	15
Schifflange PST 1	**[1;35]**	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13

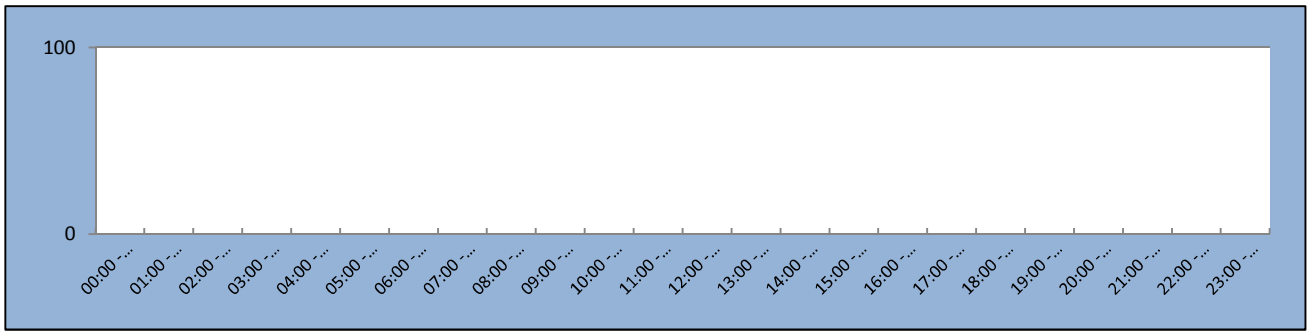
CEE Renewable Power Generation & Forecast



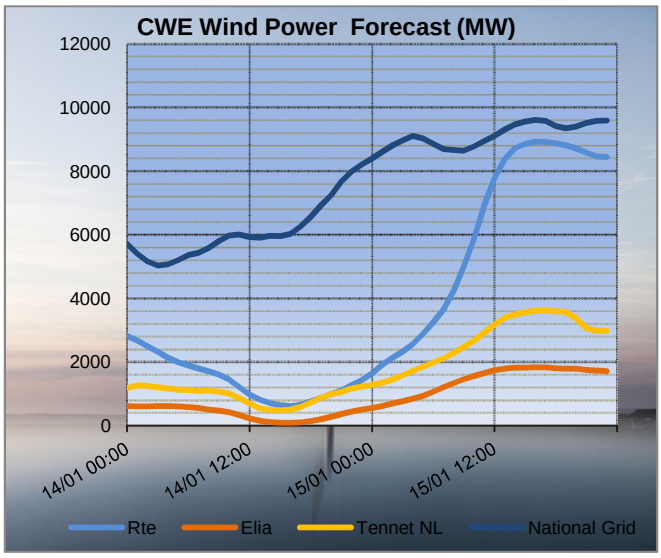


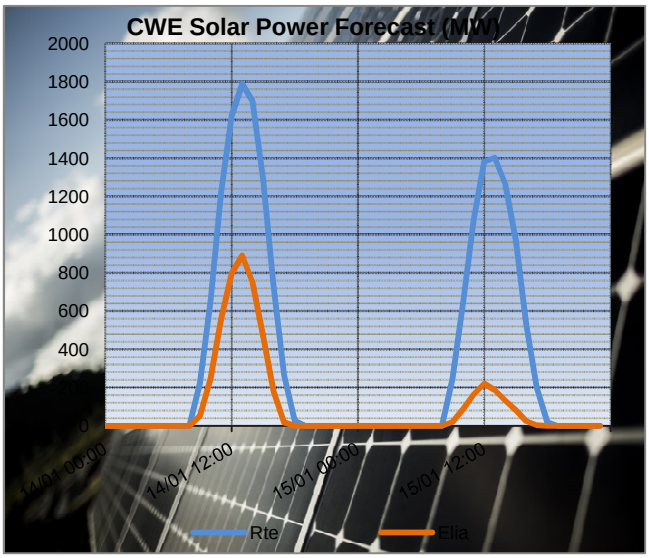
The charts above show the wind and solar generation forecasts for the TSOs in CEE (most significant) from D+1 until D-2 and the realised generation in Germany in real time. Source: Meteologica and 50HzT (RT)

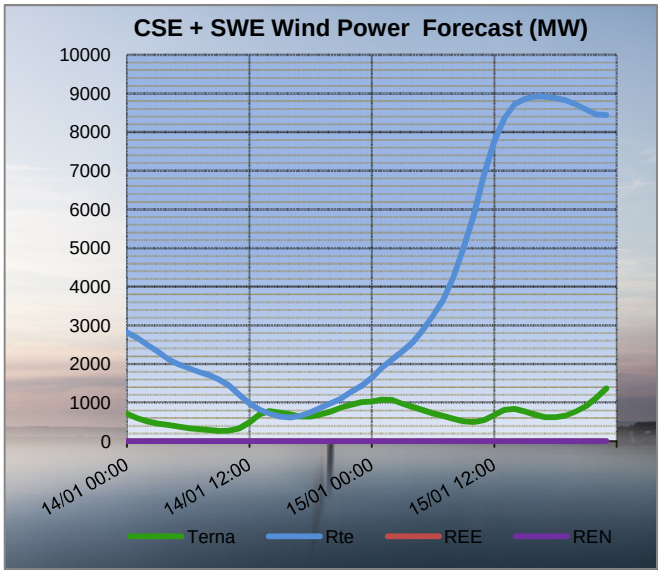
50HzT Preventive Redispatch

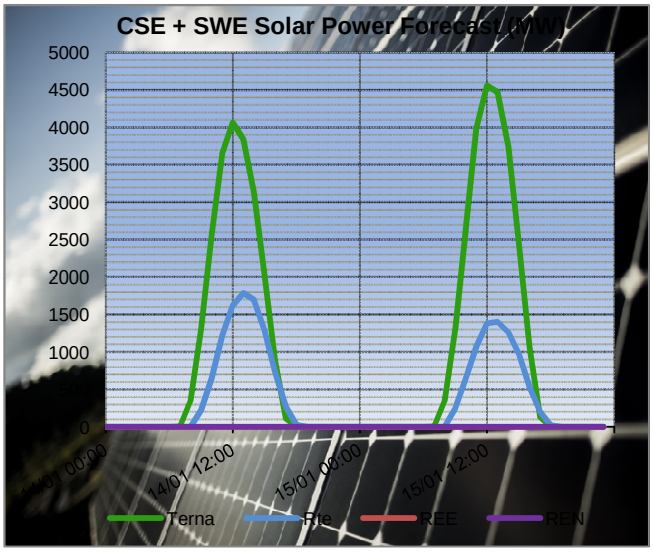


CWE, CSE & SWE Renewable Power Forecast (D-1 and D-2)









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	-102	-91	11	-449	-348	101	-359	-283	76	-265	-265	0
FR	BE	MONT ST MARTIN	AUBANGE	114	73	-41	13	-22	-35	54	-4	-58	42	4	-38
FR	BE	MOULAINE	AUBANGE	120	81	-39	23	-11	-34	68	13	-55	57	20	-37
FR	BE	AVELIN	AVELGEM	118	195	77	-167	-52	115	-169	-109	60	-90	-84	6
FR	BE	MASTAING	AVELGEM	233	219	-14	106	122	16	192	176	-16	248	199	-49
FR	BE	CHOOZ	MONCEAU	0	132	132	0	92	92	0	107	107	0	114	114
FR	DE	MUHLBACH	EICHSTETTEN	-296	194	**490**	-306	129	**435**	-589	-30	**559**	-647	-82	**565**
FR	DE	VOGELGRUN	EICHSTETTEN	-99	-15	84	-84	-37	47	-101	-44	57	-87	-40	47
FR	DE	ST AVOLD	ENSDORF	0	0	0	0	0	0	0	0	0	0	0	0
FR	DE	VIGY	ENSDORF 1	-249	69	**318**	-257	-114	143	-214	-148	66	-223	-143	80
FR	DE	VIGY	ENSDORF 2	-419	-32	**387**	-424	-223	201	-430	-305	125	-453	-306	147

				17:30			19:30			23:30		
		Node 1	Node 2	DACF	Merge	Delta	DACF	Merge	Delta	DACF	Merge	Delta
FR	BE	LONNY	ACHENE	59	-48	-107	-511	-654	-143	-488	-611	-123
FR	BE	MONT ST MARTIN	AUBANGE	148	25	-123	-50	-159	-109	-20	-130	-110
FR	BE	MOULAINE	AUBANGE	157	40	-117	-32	-137	-105	-5	-110	-105
FR	BE	AVELIN	AVELGEM	314	380	66	-656	-455	201	-510	-403	107
FR	BE	MASTAING	AVELGEM	434	424	-10	-52	36	88	-10	13	23
FR	BE	CHOOZ	MONCEAU	0	157	157	0	22	22	0	53	53
FR	DE	MUHLBACH	EICHSTETTEN	-419	210	**629**	-527	45	**572**	-515	18	**533**
FR	DE	VOGELGRUN	EICHSTETTEN	-72	5	77	-108	-45	63	-129	-40	89
FR	DE	ST AVOLD	ENSDORF	0	0	0	0	0	0	0	0	0
FR	DE	VIGY	ENSDORF 1	-48	-1	47	-443	-281	162	-657	-353	**304**
FR	DE	VIGY	ENSDORF 2	-228	-114	114	-661	-426	235	-891	-514	**377**

				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	52	173	121	-39	249	**288**	-228	89	**317**	-273	18	**291**
FR	CH	MAMBELIN	BASSECOURT	-384	-207	177	-456	-249	207	-523	-305	218	-531	-321	210
FR	CH	SIERENTZ	BASSECOURT	481	457	-24	478	483	5	421	432	11	390	391	1
FR	CH	BOIS TOLLOT	ROMANEL	-12	-1	11	-67	-44	23	-108	-69	39	-113	-57	56
FR	CH	SIERENTZ	LAUFENBURG	148	252	104	75	237	162	-153	34	187	-257	-12	245
FR	CH	CORNIER	RIDDES	-91	-29	62	-106	-38	68	-122	-48	74	-119	-39	80
FR	CH	CORNIER	ST TRIPHON	-138	-47	91	-159	-70	89	-148	-67	81	-140	-56	84
FR	CH	PRESSY	VALLORCINES	-204	-130	74	-228	-144	84	-235	-152	83	-226	-138	88
FR	CH	BOIS TOLLOT	VERBOIS	134	210	76	131	215	84	146	212	66	161	232	71
FR	CH	GENISSIAT	VERBOIS	54	100	46	27	78	51	53	98	45	53	105	52
FR	CH	GENISSIAT	VERBOIS	54	100	46	27	78	51	53	98	45	53	105	52
FR	IT	ALBERTVILLE	RONDISSONE	538	462	-76	592	497	-95	401	382	-19	426	415	-11
FR	IT	ALBERTVILLE	RONDISSONE	579	413	-166	649	472	-177	445	372	-73	458	424	-34
FR	IT	MENTON	CAMPOROSSO	254	329	75	153	290	137	156	147	-9	152	130	-22
FR	IT	VILLARODIN	VENAUS	154	196	42	145	205	60	130	259	129	140	286	146

				17:30			19:30			23:30		
		Node 1	Node 2	DACF	Merge	Delta	DACF	Merge	Delta	DACF	Merge	Delta
FR	CH	SIERENTZ	ASPHARD	-126	220	**346**	-160	176	**336**	-125	165	**290**
FR	CH	MAMBELIN	BASSECOURT	-431	-200	231	-541	-271	**270**	-518	-319	199
FR	CH	SIERENTZ	BASSECOURT	417	451	34	445	478	33	507	489	-18
FR	CH	BOIS TOLLOT	ROMANEL	-37	9	46	-73	-98	-25	-81	-64	17
FR	CH	SIERENTZ	LAUFENBURG	-63	123	186	-133	97	230	25	116	91
FR	CH	CORNIER	RIDDES	-86	-10	76	-105	-36	69	-127	-59	68
FR	CH	CORNIER	ST TRIPHON	-119	-33	86	-151	-89	62	-187	-99	88
FR	CH	PRESSY	VALLORCINES	-191	-111	80	-222	-208	14	-271	-194	77
FR	CH	BOIS TOLLOT	VERBOIS	150	219	69	88	165	77	100	188	88
FR	CH	GENISSIAT	VERBOIS	97	147	50	77	113	36	54	107	53
FR	CH	GENISSIAT	VERBOIS	98	147	49	77	113	36	54	107	53
FR	IT	ALBERTVILLE	RONDISSONE	581	564	-17	711	667	-44	587	550	-37
FR	IT	ALBERTVILLE	RONDISSONE	621	580	-41	795	711	-84	650	542	-108
FR	IT	MENTON	CAMPOROSSO	151	208	57	144	124	-20	154	99	-55
FR	IT	VILLARODIN	VENAUS	246	397	151	655	778	123	368	512	144

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	37	2448	42
	Doel - Mercator (51)	2239	33	2239	39
	Doel - Mercator (52)	2239	33	2239	39
	Doel - Mercator (54)	2448	32	2448	39
	Doel - Zandvliet (25)	2349	13	2349	22
	Mercator - Horta (73)	2569	33	2569	47
	Courcelles - Gramme (31)	2349	42	2349	46
	Mercator - Rodenhuize/Horta (74)	2349	38	2349	53
RTE	Attaques - Warande 2	3780	56	3780	59
	Avelin - Gavrelle	2622	37	2622	55
	Avelin - Warande	3458	9	3458	5
	Lonny - Seuil	4149	24	4149	29
	Mandarins - Warande 1	3780	52	3780	55
	Muhlbach - Scheer	2598	17	2598	25
	Revigny - Vigy	2596	40	2596	45
	Warande - Weppes	3458	14	3458	11

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	32	2520	22
		Hagenwerder - Mikulowa (567)	2520	28	2520	37
		Hagenwerder - Mikulowa (568)	2520	28	2520	37
		Remptendorf - Redwitz (413)	3529	43	3572	52
		Remptendorf - Redwitz (414)	3529	43	3572	52
		Röhrsdorf - Hradec (445)	2520	34	2520	46
		Röhrsdorf - Hradec (446)	2520	34	2520	46
		Vieselbach - Mecklar (449-1)	2520	32	2520	24
		Wolmirstedt - Helmstedt (491-1)	2400	19	2400	4
		Wolmirstedt - Helmstedt (492-2)	2400	19	2400	4
	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	2	2
		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	
		No constraints detected									

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	
TenneT DE / Amprion	17:30 - 23:30	380	Hanekenfähr - Doerpen West			135%	380	T-line Diele-Niederlangen-Meppen			20:30
		Preventive action: +1 taps on Meeden PST (already implemented by Tennet NL) **Info:** +3 taps on Meeden PST and 2 nodes in Doerpen West => 99% remaining									

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 detected									

50HzT DC loopflows sensitivity

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

South analyses results

Security analyses have been performed for these 2 timestamps:

- Off-peak period (23:00 – 07:00): **04:30**
- Peak period (07:00 – 23:00): **19:30**

Adaptations made on merged DACFs:

Off-peak:

- SI ➔ IT physical flow adapted to the target flow : **800 MW**
- Mendrisio-Cagno flow adapted to the schedule : **150 MW**
- PST of Lienz adapted to **120 MW**
- PST of Camporosso adapted to **200 MW**

Peak:

- SI ➔ IT physical flow adapted to the target flow : **800 MW**
- Mendrisio-Cagno flow adapted to the schedule : **197 MW**
- PST of Lienz adapted to **120 MW**
- PST of Camporosso adapted to **200 MW**

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	1	1
		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	37	2370	43
		Albertville - Rondissone 2	2370	37	2370	45
		Bulciago - Soazza	2300	26	2300	51
		Cagno - Mendrisio	855	26	855	38
		Musignano - Lavorgo	2270	41	2270	69
		Redipuglia - Divaca	2700	33	2700	34
		Robbia - San Fiorano	2530	23	2530	52
		Robbia - Gorlago	2530	40	2530	69
		Venaus - Villarodin	2715	17	2715	42
	220 kV	Airolo - Ponte	900	16	900	12
		Lienz - Soverzene	750	38	750	40
		Menton - Campo Rosso	1165	41	1165	45
		Padriciano - Divaca	960	39	960	37
		Riddes - Avise	1010	9	1010	29
		Riddes - Valpelline	1010	11	1010	34
		Serra - Pallanzeno	900	30	900	40

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	1708	2607	116	787
	Compensation ratio (calculated from NTC)	37%	50%	4%	9%
	Pentalateral impact on physical flows	-25%	-57%	-4%	-14%
Peak	Initial physical flows on adapted base case	2401	4673	120	779
	Compensation ratio (calculated from NTC)	40%	49%	4%	8%
	Pentalateral impact on physical flows	-27%	-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	RTE	380	Albertville	busbar	1A	107%(1')	220	Albertville	Longefan Randens	
		Preventive action: 1-node operation at Albertville 220kV **=> no more constraint with night Imax**								

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	Terna / SWG	380	Robbia	Filisur Pradella-Sils	N-K	102%	380	Sils	Soazza	
						100%	380	Lavorgo	Musignano	
		Preventive actions: 2-node operation at Sils and increase 2 taps (7 to 9) on Lavorgo PST (agreed by SWG) **=> 99% remaining on Lavorgo Musignano and Sils-Soazza**								
No more constraint detected after preventive actions above.										

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	309
Rondissone 1 (1/33)	31	596
Rondissone 2 (1/33)	33	597
Camporosso (-32/32)	-10	199
Lienz (-32/32)	-4	117
Padriciano (1/33)	30	152
Divaca (-32/32 each)	-20	637

PST	Peak	
	Tap position	Physical flow to Italy (MW)
La Praz (1/33)	1	579
Rondissone 1 (1/33)	32	724
Rondissone 2 (1/33)	33	676
Camporosso (-32/32)	-15	204
Lienz (-32/32)	-9	125
Padriciano (1/33)	21	142
Divaca (-32/32 each)	-5	646

Conclusion

CWE: No critical constraint detected.
CEE: No constraint detected.
CSE: Constraints detected on Lavorgo-Musignano and Sils-Soazza that are manageable with usual topological measures in Switzerland.