

CORESO Engineers

North: BROUTA Karl South: BIVONA Ignazio

Day Ahead report for

02 January 2018

Security Levels:

CWE: No constraints detected.

CEE: No critical constraints detected.

CSE: No critical constraints detected, but coordination is needed in curative

between TSOs.

Key overall conditions

Outages table

Exchange program forecasts

ELIA expected flows & PSTs tap position

CEE Renewable Power Generation & Forecast

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

RTE flows on cross-border lines

N state flows at 10:30 and 19:30

Special topologies at 10:30 and 19:30

North analyses results

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

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

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

50HzT DC loopflows sensitivity

South analyses results

N state flows Off-Peak & Peak

Special topologies

Sensitivity coefficients for the Pentalateral instruction

Constraints on APG, Eles, RTE (South), Swissgrid and Terna 400kV grids and tie-lines Final PSTs settings

Conclusion



Key overall conditions

Load & Generatio	n margin	forecast		Main generating ur	nits connec	ted to the gri	d in DA	CF
				5 1		1000	1	4000
"	.IA			Doel		450	2	1900
Dealthand [NANA/]	9600	10:00	Elia	Tibonos	Pmax	1000	2	2900
Peak load [MW]	9600	10:00	Elld	Tihange	(MW)	450	2	2900
Generation Margin	Suffi	cient		Coo		230	3	1170
Generation Margin	Sum	cient		COO		160	3	1170
				Rostock		530	1	530
				Janschwalde		500	6	3000
			50HzT	Boxberg	Pmax	500	2	1900
			30021	boxberg	(MW)	900	1	1900
				Schw. Pumpe		800	2	1600
				Lippendorf		920	2	1840
R	TE			Gravelines		900	5	4500
Peak load [MW]	69800	19:00		Chooz		1500	1	1500
Generation Margin	Suffi	cient		Cattenom		1300	4	5200
				Fessenheim		900	1	900
NATIONAL G	RID (UK ti	me)		Penly	Pmax	1300	2	2600
Peak load [MW]	46 600	17:30	RTE	Paluel	(MW)	1300	3	3900
Generation Margin	Suffi	cient		Nogent s/ Seine	(,	1300	2	2600
				Bugey		900	4	3600
TEF	RNA			St Alban		1300	2	2600
Peak load [MW]	41200	18:00		Cruas		900	3	2700
Generation Margin	Suffi	cient		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:

RTE: Chooz 2 and Cattenom 4 should be back on service tomorrow.

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RTE: Tricastin 2 will be back on service on 2nd January.

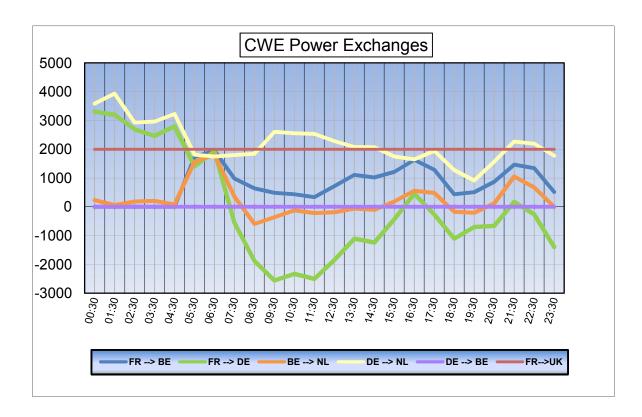


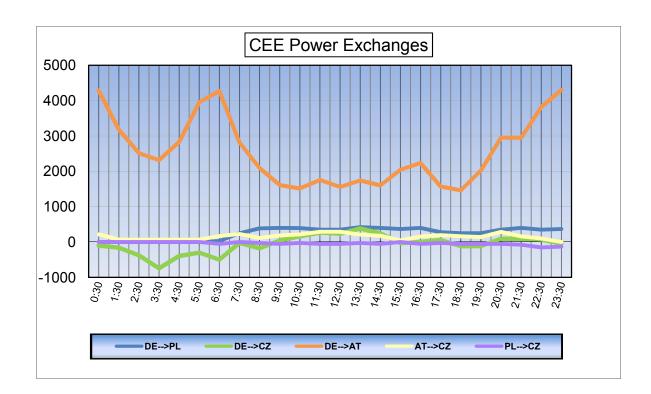
Outages table

		OUTAGES			
Owner	Type of element	Line name	start	end	Comments
50HzT	Fossil.Gen	BOXBERG _ UNIT R 400 kV	24/12/2017	04/01/2018	630 MW
50HzT	Fossil.Gen	BOXBERG _ Unit N 400 kV	24/12/2017	02/01/2018	290 MW (reduced)
50HzT	Fossil.Gen	JANSCHWALDE _ Unit D 400 kV	23/12/2017	01/01/2018	500 MW
50HzT	Fossil.Gen	Moorburg _ Unit B 400 kV	22/12/2017	02/01/2018	800MW
50HzT	Hydro.Gen	MARKERSBACH _ Unit D 400 kV	28/09/2017	27/04/2018	160 MW
50HzT	Line	WOLMIRSTEDT _ WUSTERMARK 494 400 kV	24/12/2017	07/01/2018	
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
APG	Line	TAUERN _ PST 220 kV	14/12/2017	15/01/2018	
CEPS	Generation	MELNIK _ UNIT 400 kV	04/11/2017	31/01/2018	
ELIA	Line	GEZELLE _ STEVIN 111 400 kV	19/09/2017	26/01/2018	
ELIA	Line	GEZELLE _ STEVIN 112 400 kV	19/09/2017	26/01/2018	
ELIA	Nuc.Gen	DOEL _ Unit 3 (1000MW) 400 kV	23/09/2017	16/04/2018	Forced outage
PSE	Fossil.Gen	TUROW _ Unit 2 225 kV	01/03/2017	12/01/2018	
RTE	Line	BARNABOS _ TERRIER 1 400 kV	18/12/2017	05/01/2018	
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	LIMMERN _ TIERFEHD 1 400 kV	28/01/2017	31/07/2018	
S.GRID	Nuc.Gen	BEZNAU _ BEZNAU G11 220 kV	13/03/2017	28/02/2018	182 MW
S.GRID	Nuc.Gen	BEZNAU _ BEZNAU G12 220 kV	13/03/2015	28/02/2018	182 MW

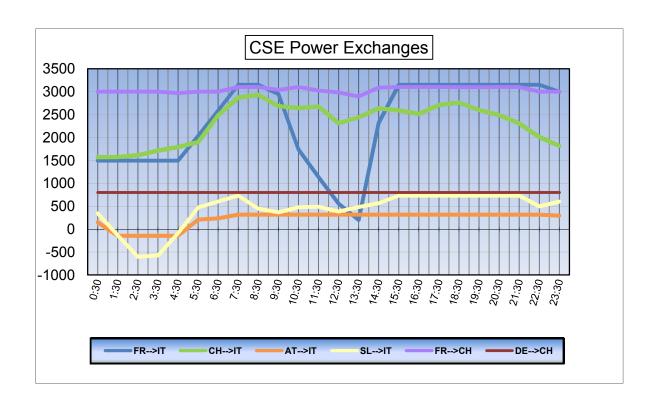


Exchange program forecasts











ELIA expected flows & PSTs tap position

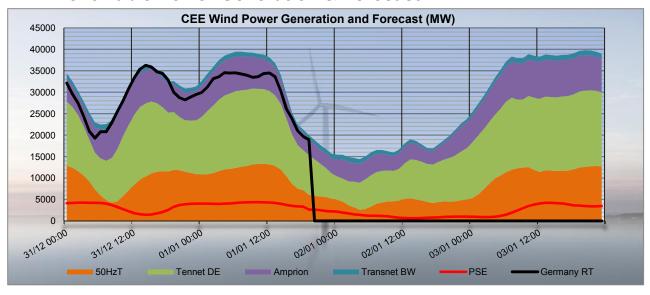
		Node 1	Node 2	Order	00:30	03:30	04:30	07:30	10:30	11:30	12:30	15:30	17:30	19:30	22:30	23:30
BE	FR	ACHENE	LONNY	380.19	-175	-291	-225	82	312	368	216	-52	-64	114	-30	191
BE	FR	AUBANGE	MONT ST MARTIN	220.51	-162	-235	-231	-68	38	69	-10	-64	-19	-22	-69	-34
BE	FR	AUBANGE	MOULAINE	220.51	-150	-219	-213	-64	32	52	-21	-66	-22	-25	-68	-30
BE	FR	AVELGEM	AVELIN	380.80	-767	-717	-699	-395	-35	6	-49	-502	-599	-85	-491	-238
BE	FR	AVELGEM	MASTAING	380.79	-449	-381	-360	-294	-266	-234	-257	-358	-470	-230	-335	-188
BE	FR	MONCEAU	CHOOZ	220.48	-194	-161	-152	-155	-147	-134	-139	-152	-168	-124	-168	-121
BE	NL	VAN EYCK 1	MAASBRACHT	380.27	24	117	61	-293	-457	-478	-450	-260	-218	-314	-257	-347
BE	NL	VAN EYCK 2	MAASBRACHT	380.28	818	705	616	292	259	206	122	291	483	152	324	121
BE	NL	ZANDVLIET	BORSSELE	380.29	233	235	209	-82	-332	-375	-384	-246	-172	-403	-97	-206
BE	NL	ZANDVLIET	GEERTRUIDENBERG	380.30	850	880	824	303	108	61	63	271	370	95	375	166
BE	LU	BELVAL	SCHIFFLANGE	220.511	205	270	250	36	-72	-97	8	111	71	121	147	170
-																
BE	FR	TOTA	AL		-1897	-2004	-1880	-894	-66	127	-260	-1194	-1342	-372	-1161	-420
BE	NL	TOTA	AL		1925	1937	1710	220	-422	-586	-649	56	463	-470	345	-266
BE	LU	TOTA	AL		205	270	250	36	-72	-97	8	111	71	121	147	170
		TOTAL BELGIAN IMPOR	T/EXPORT		233	203	80	-638	-560	-556	-901	-1027	-808	-721	-669	-516
		ТОТ	AL		205	270	250	36	-72	-97	8	111	71	121		147

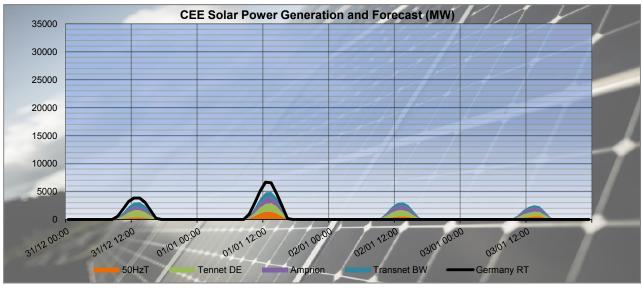
	Zandvliet 1	12	12	12	12	12	12	12	12	12	12	12	12
	Zandvliet 2	12	12	12	12	12	12	12	12	12	12	12	12
PST taps in DACF	Van Eyck 1	15	15	15	15	15	15	15	15	15	15	15	15
	Van Eyck 2	15	15	15	15	15	15	15	15	15	15	15	15
	Average	14	14	14	14	14	14	14	14	14	14	14	14
·													
CREOS PST in DACF	Schifflange	17	17	17	17	17	17	17	17	17	17	17	17

	Proposal for real time after D-1 studies																								
Time	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																									
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	12
Van Eyck PST 1	[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	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	15
Schifflange PST 1	[1;35]	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17



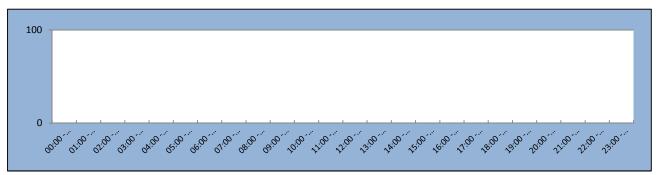
CEE Renewable Power Generation & Forecast





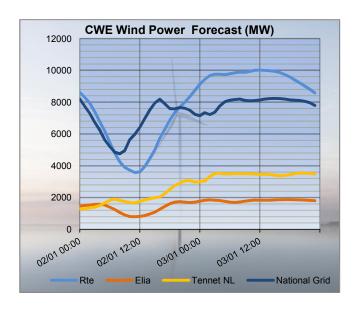
The charts above show the wind and solar generation forecasts for the TSOs in CEE (most significant) from D+1 until D-2 and the realised generation in Germany in real time. Source: Meteologica and 50HzT (RT)

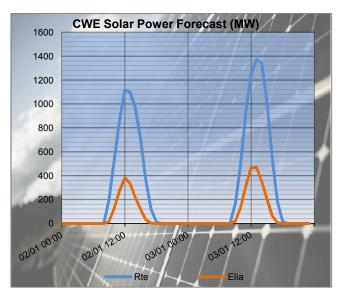
50HzT Preventive Redispatch

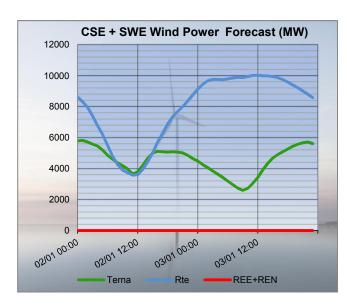


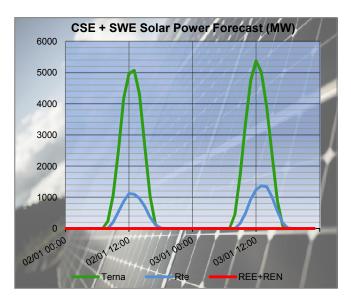


CWE and CSE Renewable Power Forecast (D-1 and D-2)









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	
	ſ	Node 1	Node 2	DACF	Merge	Delta	DACF	Merge	Delta	DACF	Merge	Delta	DACF	Merge	Delta
FR	BE	LONNY	ACHENE	411	291	-120	91	-82	-173	127	-312	-439	184	-216	-400
FR	BE	MONT ST MARTIN	AUBANGE	40	235	195	2	68	66	73	-38	-111	78	10	-68
FR	BE	MOULAINE	AUBANGE	33	219	186	2	64	62	74	-32	-106	86	21	-65
FR	BE	AVELIN	AVELGEM	809	717	-92	511	395	-116	222	35	-187	254	49	-205
FR	BE	MASTAING	AVELGEM	472	381	-91	389	294	-95	387	266	-121	395	257	-138
FR	BE	CHOOZ	MONCEAU	171	161	-10	181	155	-26	200	147	-53	232	139	-93
FR	DE	MUHLBACH	EICHSTETTEN	393	456	63	419	628	209	-148	300	448	-168	243	411
FR	DE	VOGELGRUN	EICHSTETTEN	83	133	50	31	134	103	-73	59	132	-68	55	123
FR	DE	ST AVOLD	ENSDORF	0	0	0	0	0	0	0	0	0	0	0	0
FR	DE	VIGY	ENSDORF 1	541	705	164	141	338	197	-170	118	288	-187	168	355
FR	DE	VIGY	ENSDORF 2	577	758	181	157	378	221	-157	145	302	-174	204	378
111	DL	VIGT	LN3DON 2	311	17:30	101	137	19:30	221	-137	23:30	302	-1/4	204	3/0
	ſ	Node 1	Node 2	DACF	Merge	Delta	DACF	Merge	Delta	DACF	Merge	Delta			
FR	BE	LONNY	ACHENE	269	64	-205	72	-114	-186	70	-191	- 261			
FR	BE	MONT ST MARTIN	AUBANGE	39	19	-203	72	22	15	5	34	29			
				41		-19	11		14	3		27			
FR	BE	MOULAINE	AUBANGE	846	22		372	25		_	30				
FR	BE	AVELIN	AVELGEM		599	-247	_	85	- 287	575	238	-337			
FR	BE	MASTAING	AVELGEM	648	470	-178	428	230	-198	414	188	-226			
FR	BE	CHOOZ	MONCEAU	240	168	-72	186	124	-62	170	121	-49			
FR	DE	MUHLBACH	EICHSTETTEN	377	715	338	417	682	265	324	561	237			
FR	DE	VOGELGRUN	EICHSTETTEN	0	129	129	-4	103	107	13	87	74			
FR	DE	ST AVOLD	ENSDORF	0	0	0	0	0	0	0	0	0			
FR	DE	VIGY	ENSDORF 1	254	459	205	237	462	225	107	266	159			
FR	DE	VIGY	ENSDORF 2	280	502	222	261	508	247	124	302	178			
					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	366	255	-111	438	328	-110	115	97	-18	56	48	-8
FR	CH	MAMBELIN	BASSECOURT	3	47	44	-82	-35	47	-368	-270	98	-378	-296	82
FR	CH	SIERENTZ	BASSECOURT	285	252	-33	323	342	19	356	378	22	380	354	-26
			D/ ISSECTION 1	203	232	33	9		-		3,0	22	360	554	-20
FR	CH	BOIS TOLLOT	ROMANEL	153	111	-42	174	187	13	-4	-4	0	-7	-32	-25
FR FR	CH CH	BOIS TOLLOT SIERENTZ													
			ROMANEL	153	111	-42	174	187	13	-4	-4	0	-7	-32	-25
FR	СН	SIERENTZ	ROMANEL LAUFENBURG	153 193	111 307	-42 114	174 351	187 311	13 -40	-4 114	-4 106	0 -8	-7 57	-32 44	-25 -13
FR FR	CH CH	SIERENTZ CORNIER	ROMANEL LAUFENBURG RIDDES	153 193 -18	111 307 34	-42 114 52	174 351 -9	187 311 69	13 -40 78	-4 114 -87	-4 106 -20	0 -8 67	-7 57 -91	-32 44 -40	-25 -13 51
FR FR FR	CH CH CH	SIERENTZ CORNIER CORNIER	ROMANEL LAUFENBURG RIDDES ST TRIPHON	153 193 -18 -2	111 307 34 45	-42 114 52 47	174 351 -9 -11	187 311 69 71	13 -40 78 82	-4 114 -87 -99	-4 106 -20 -22	0 -8 67 77	-7 57 -91 -80	-32 44 -40 -34	-25 -13 51 46
FR FR FR	CH CH CH	SIERENTZ CORNIER CORNIER PRESSY	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES	153 193 -18 -2 -115	111 307 34 45 -39	-42 114 52 47 76	174 351 -9 -11 -106	187 311 69 71 8	13 -40 78 82 114	-4 114 -87 -99 -209	-4 106 -20 -22 -107	0 -8 67 77 102	-7 57 -91 -80 -206	-32 44 -40 -34 -131	-25 -13 51 46 75
FR FR FR FR	CH CH CH CH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS	153 193 -18 -2 -115 173	111 307 34 45 -39 200	-42 114 52 47 76 27	174 351 -9 -11 -106 146	187 311 69 71 8 230	13 -40 78 82 114 84	-4 114 -87 -99 -209 111	-4 106 -20 -22 -107 188	0 -8 67 77 102	-7 57 -91 -80 -206 166	-32 44 -40 -34 -131 197	-25 -13 51 46 75 31
FR FR FR FR FR	CH CH CH CH CH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS	153 193 -18 -2 -115 173 191	111 307 34 45 -39 200 191	-42 114 52 47 76 27	174 351 -9 -11 -106 146 189	187 311 69 71 8 230 233	13 -40 78 82 114 84 44	-4 114 -87 -99 -209 111 127	-4 106 -20 -22 -107 188 164	0 -8 67 77 102 77 37	-7 57 -91 -80 -206 166 150	-32 44 -40 -34 -131 197 154	-25 -13 51 46 75 31
FR FR FR FR FR FR	CH CH CH CH CH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS	153 193 -18 -2 -115 173 191 191	111 307 34 45 -39 200 191 191	-42 114 52 47 76 27 0	174 351 -9 -11 -106 146 189 189	187 311 69 71 8 230 233 233	13 -40 78 82 114 84 44	-4 114 -87 -99 -209 111 127 127	-4 106 -20 -22 -107 188 164 164	0 -8 67 77 102 77 37	-7 57 -91 -80 -206 166 150	-32 44 -40 -34 -131 197 154	-25 -13 51 46 75 31 4
FR FR FR FR FR FR FR FR	CH CH CH CH CH CH TH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE	153 193 -18 -2 -115 173 191 191 651	111 307 34 45 -39 200 191 191 401 366	-42 114 52 47 76 27 0 0	174 351 -9 -11 -106 146 189 189	187 311 69 71 8 230 233 233 714 697	13 -40 78 82 114 84 44 44 -316	-4 114 -87 -99 -209 111 127 127 683	-4 106 -20 -22 -107 188 164 164 509	0 -8 67 77 102 77 37 37 -174	-7 57 -91 -80 -206 166 150 150 515	-32 44 -40 -34 -131 197 154 154 353 320	-25 -13 51 46 75 31 4 4 -162
FR FR FR FR FR FR FR FR	CH CH CH CH CH TH TH TH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO	153 193 -18 -2 -115 173 191 191 651 652 258	111 307 34 45 -39 200 191 191 401 366 209	-42 114 52 47 76 27 0 0 -250 -286 -49	174 351 -9 -11 -106 146 189 189 1030	187 311 69 71 8 230 233 233 714 697 203	13 -40 78 82 114 84 44 -316 -334 44	-4 114 -87 -99 -209 111 127 127 683 684	-4 106 -20 -22 -107 188 164 164 509 461	0 -8 67 77 102 77 37 37 -174	-7 57 -91 -80 -206 166 150 150	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
FR FR FR FR FR FR FR FR	CH CH CH CH CH CH TH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE	153 193 -18 -2 -115 173 191 191 651 652	111 307 34 45 -39 200 191 191 401 366 209 338	-42 114 52 47 76 27 0 0 -250	174 351 -9 -11 -106 146 189 189 1030 1031	187 311 69 71 8 230 233 233 714 697 203 722	13 -40 78 82 114 84 44 -316	-4 114 -87 -99 -209 111 127 127 683 684 156	-4 106 -20 -22 -107 188 164 164 509 461 197	0 -8 67 77 102 77 37 37 -174 -223 41	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320	-25 -13 51 46 75 31 4 -162 -195
FR FR FR FR FR FR FR FR	CH CH CH CH CH TH TH TH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS	153 193 -18 -2 -115 173 191 191 651 652 258 201	111 307 34 45 -39 200 191 191 401 366 209 338 17:30	-42 114 52 47 76 27 0 0 -250 -286 -49	174 351 -9 -11 -106 146 189 189 1030 1031 159 634	187 311 69 71 8 230 233 233 714 697 203 722 19:30	13 -40 78 82 114 84 44 44 -316 -334 44 88	-4 114 -87 -99 -209 111 127 127 683 684 156 439	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30	0 -8 67 77 102 77 37 37 -174 -223 41	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
FR FR FR FR FR FR FR FR	CH CH CH CH CH TH TH TT TT	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS	153 193 -18 -2 -115 173 191 191 651 652 258 201	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge	-42 114 52 47 76 27 0 0 -250 -286 -49 137	174 351 -9 -11 -106 146 189 189 1030 1031 159 634	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge	13 -40 78 82 114 84 44 44 -316 -334 44 88	-4 114 -87 -99 -209 111 127 127 683 684 156 439	-4 106 -20 -22 -107 188 164 164 164 197 428 23:30 Merge	0 -8 67 77 102 77 37 -174 -223 41 -11	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
FR FR FR FR FR FR FR FR FR	CH CH CH CH CH IT IT IT IT CH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN NODE 1 SIERENTZ	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD	153 193 -18 -2 -115 173 191 191 651 652 258 201 DACF 312	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge	-42 114 52 47 76 27 0 -250 -286 -49 137	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331	13 -40 78 82 114 84 44 -316 -334 44 88	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332	0 -8 67 77 102 77 37 -174 -223 41 -11	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
FR FR FR FR FR FR FR FR FR	CH CH CH CH CH IT IT IT IT CH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN NODE 1 SIERENTZ MAMBELIN	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT	153 193 -18 -2 -115 173 191 191 651 652 258 201 DACF 312 -187	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83	-42 114 52 47 76 27 0 -250 -286 -49 137 Delta 13	174 351 -9 -11 -106 146 189 189 1030 1031 159 634 DACF 357 -204	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99	0 -8 67 77 102 77 37 -174 -223 41 -11 Delta 21	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
FR FR FR FR FR FR FR FR FR FR	CH CH CH CH CH IT IT IT CH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN NODE 1 SIERENTZ MAMBELIN SIERENTZ	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT BASSECOURT	153 193 -18 -2 -115 173 191 191 651 652 258 201 DACF 312 -187	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83 382	-42 114 52 47 76 27 0 0 -250 -286 -49 137 Delta 13 104 33	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357 -204 399	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125 403	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79 4	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212 441	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489	0 -8 67 77 102 77 37 -174 -223 41 -11 Delta 21 113 48	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
FR FR FR FR FR FR FR FR FR FR FR FR	CH CH CH CH TT TT TT CH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN NODE 1 SIERENTZ MAMBELIN SIERENTZ BOIS TOLLOT	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT BASSECOURT ROMANEL	153 193 -18 -2 -115 173 191 191 651 652 258 201 DACF 312 -187 349	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83 382 137	-42 114 52 47 76 27 0 0 -250 -286 -49 137 Delta 13 104 33 -19	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357 -204 399 144	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125 403 91	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79 4	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212 441 130	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489 89	0 -8 67 77 102 77 37 -174 -223 41 -11 Delta 21 113 48 -41	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
FR FR FR FR FR FR FR FR FR FR FR FR	CH C	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN NODE 1 SIERENTZ MAMBELIN SIERENTZ BOIS TOLLOT SIERENTZ	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT BASSECOURT ROMANEL LAUFENBURG	153 193 -18 -2 -115 173 191 191 651 652 258 201 DACF 312 -187 349 156 295	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83 382 137 287	-42 114 52 47 76 27 0 0 -250 -286 -49 137 Delta 13 104 33 -19	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357 -204 399 144 260	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125 403 91 317	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79 4 -53 57	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212 441 130 247	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489 89 375	0 -8 67 77 102 77 37 37 -174 -223 41 -11 Delta 21 113 48 -41	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
FR FR FR FR FR FR FR FR FR FR FR FR FR F	CH CH CH CH CH CH TH TT TT CH CH CH CH CH CH CH CH CH CH CH CH CH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN NODE 1 SIERENTZ MAMBELIN SIERENTZ BOIS TOLLOT SIERENTZ CORNIER	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT BASSECOURT ROMANEL LAUFENBURG RIDDES	153 193 -18 -2 -115 173 191 191 651 652 258 201 DACF 312 -187 349 156 295 -36	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83 382 137 287	-42 114 52 47 76 27 0 0 -250 -286 -49 137 Delta 13 104 33 -19 -8 68	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357 -204 399 144 260 -34	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125 403 91 317	13 -40 78 82 114 84 44 44 -316 -334 44 88 Delta -26 79 4 -53 57 48	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212 441 130 247 -64	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489 89 375 -13	0 -8 67 77 102 77 37 -174 -223 41 -11 Delta 21 113 48 -41 128 51	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
	CH CH CH CH CH CH CH TH TH CH CH CH CH CH CH CH CH CH CH CH CH CH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN NODE 1 SIERENTZ MAMBELIN SIERENTZ BOIS TOLLOT SIERENTZ CORNIER CORNIER	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT BASSECOURT ROMANEL LAUFENBURG RIDDES ST TRIPHON	153 193 -18 -2 -115 173 191 191 651 652 258 201 DACF 312 -187 349 156 295 -36 -49	111 307 34 45 -39 200 191 401 366 209 338 17:30 Merge 325 -83 382 137 287 32 6	-42 114 52 47 76 27 0 0 -250 -286 -49 137 Delta 13 104 33 -19 -8 68 55	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357 -204 399 144 260 -34 -57	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125 403 91 317 14 -9	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79 4 -53 57 48	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212 441 130 247 -64 -61	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489 89 375 -13 -19	0 -8 67 77 102 77 37 37 -174 -223 41 -11 Delta 21 113 48 -41 128 51	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
	CH CH CH CH CH CH CH TT TT TT TT CH CH CH CH CH CH CH CH CH CH CH CH CH	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN NODE 1 SIERENTZ MAMBELIN SIERENTZ BOIS TOLLOT SIERENTZ CORNIER CORNIER PRESSY	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT BASSECOURT ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES	153 193 -18 -2 -115 173 191 651 652 258 201 DACF 312 -187 349 156 -295 -36 -49 -164	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83 382 137 287 32 6	-42 114 52 47 76 27 0 0 -250 -286 -49 137 Delta 13 104 33 -19 -8 68 55 96	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357 -204 399 144 260 -34 -57 -158	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125 403 91 317 14 -9 -86	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79 4 -53 57 48 48 72	-4 114 -87 -99 -209 111 127 683 684 156 439 DACF 311 -212 441 130 247 -64 -61 -191	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489 89 375 -13 -19 -122	0 -8 67 77 102 77 37 -174 -223 41 -11 Delta 21 113 48 -41 128 51 42 69	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
	CH C	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE MENTON VILLARODIN NODE 1 SIERENTZ MAMBELIN SIERENTZ BOIS TOLLOT SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT BASSECOURT ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS	153 193 -18 -2 -115 173 191 191 1651 652 258 201 DACF 312 -187 349 156 -49 -164	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83 382 137 287 32 6 -68 217	-42 114 52 47 76 27 0 0 -250 -286 -49 137 Delta 13 104 33 -19 -8 68 55 96 63	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357 -204 399 144 260 -34 -57 -158 156	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125 403 91 317 14 -9 -86 210	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79 4 -53 57 48 48 72 54	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212 441 130 247 -64 -61 -191 163	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489 89 375 -13 -19 -122 203	0 -8 67 77 102 77 37 -174 -223 41 -11 Delta 21 113 48 -41 128 51 42 69 40	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
	CH C	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE MENTON VILLARODIN Node 1 SIERENTZ MAMBELIN SIERENTZ BOIS TOLLOT SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS	153 193 -18 -2 -115 173 191 195 652 258 201 DACF 312 -187 349 156 295 -36 -49 -164 154	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83 382 137 287 32 6 -68 217 219	-42 114 52 47 76 27 0 0 -250 -286 -49 137 Delta 13 104 33 -19 -8 68 55 96 63 30	174 351 -9 -11 -106 146 189 189 1030 1031 159 634 DACF 357 -204 399 144 260 -34 -57 -158 156 184	187 311 69 71 8 230 233 734 697 203 722 19:30 Merge 331 -125 403 91 317 14 -9 -86 210 202	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79 4 -53 57 48 48 72	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212 441 130 247 -64 -61 -191 163 190	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489 89 375 -13 -19 -122 203 201	0 -8 67 77 102 77 37 -174 -223 41 -11 Delta 21 113 48 -41 128 51 42 69 40	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
	CH C	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE MENTON VILLARODIN NODE 1 SIERENTZ MAMBELIN SIERENTZ BOIS TOLLOT SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS	153 193 -18 -2 -115 173 191 195 652 258 201 DACF 312 -187 349 156 295 -36 -49 -164 154 189	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83 382 137 287 32 6 -68 217 219	-42 114 52 47 76 27 0 0 -250 -49 137 Delta 13 104 33 -19 -8 68 55 96 63 30 30	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357 -204 399 144 260 -34 -57 -158 156 184 184	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125 403 91 317 14 -9 -86 210 202 202	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79 4 -53 57 48 48 18	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212 441 130 247 -64 -61 -191 163 190 190	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489 89 375 -13 -19 -122 203 201 201	0 -8 67 77 102 77 37 -174 -223 41 -11 Delta 21 113 48 -41 128 51 42 69 40 11	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
	CH C	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN NOde 1 SIERENTZ MAMBELIN SIERENTZ BOIS TOLLOT SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT BASSECOURT ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS VERBOIS RONDISSONE	153 193 -18 -2 -115 173 191 191 651 652 258 201 DACF 312 -187 349 156 295 -36 -49 -164 154 189 189	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83 382 137 287 32 6 -68 217 219 791	-42 114 52 47 76 27 0 -250 -286 -49 137 Delta 13 104 33 -19 -8 68 55 96 63 30 -182	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357 -204 399 144 260 -34 -57 -158 156 184 184 902	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125 403 91 317 14 -9 -86 210 202 202 779	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79 4 -53 57 48 48 48 -21 -31 -31 -31 -31 -31 -31 -31 -3	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212 441 130 247 -64 -61 -191 163 190 190 714	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489 89 375 -13 -19 -122 203 201 201 634	0 -8 67 77 102 77 37 -174 -223 41 -11 Delta 21 113 48 -41 128 51 42 69 40 11 11 -80	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
	CH C	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN NOde 1 SIERENTZ MAMBELIN SIERENTZ BOIS TOLLOT SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT BASSECOURT ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE	153 193 -18 -2 -115 173 191 191 651 258 201 DACF 312 -187 349 156 295 -36 -49 -164 154 189 973 973	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83 382 137 287 32 6 6 -68 217 219 219 791	-42 114 52 47 76 27 0 -250 -286 -49 137 Delta 13 104 33 -19 -8 68 55 96 63 30 30 -182 -227	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357 -204 399 144 260 -34 -57 -158 156 184 184 902 902	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125 403 91 317 14 -9 -86 210 202 202 779 735	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79 4 -53 57 48 48 72 54 18 18 -123 -167	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212 441 130 247 -64 -61 -191 163 190 190 714 714	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489 89 375 -13 -19 -122 203 201 201 634 603	0 -8 67 77 102 77 37 -174 -223 41 -11 Delta 21 113 48 -41 128 51 42 69 40 11 11 -80 -111	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46
	CH C	SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE ALBERTVILLE MENTON VILLARODIN NOde 1 SIERENTZ MAMBELIN SIERENTZ BOIS TOLLOT SIERENTZ CORNIER CORNIER PRESSY BOIS TOLLOT GENISSIAT GENISSIAT ALBERTVILLE	ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS RONDISSONE RONDISSONE CAMPOROSSO VENAUS Node 2 ASPHARD BASSECOURT BASSECOURT ROMANEL LAUFENBURG RIDDES ST TRIPHON VALLORCINES VERBOIS VERBOIS VERBOIS VERBOIS RONDISSONE	153 193 -18 -2 -115 173 191 191 651 652 258 201 DACF 312 -187 349 156 295 -36 -49 -164 154 189 189	111 307 34 45 -39 200 191 191 401 366 209 338 17:30 Merge 325 -83 382 137 287 32 6 -68 217 219 791	-42 114 52 47 76 27 0 -250 -286 -49 137 Delta 13 104 33 -19 -8 68 55 96 63 30 -182	174 351 -9 -11 -106 146 189 1030 1031 159 634 DACF 357 -204 399 144 260 -34 -57 -158 156 184 184 902	187 311 69 71 8 230 233 233 714 697 203 722 19:30 Merge 331 -125 403 91 317 14 -9 -86 210 202 202 779	13 -40 78 82 114 84 44 -316 -334 44 88 Delta -26 79 4 -53 57 48 48 48 -21 -31 -31 -31 -31 -31 -31 -31 -3	-4 114 -87 -99 -209 111 127 127 683 684 156 439 DACF 311 -212 441 130 247 -64 -61 -191 163 190 190 714	-4 106 -20 -22 -107 188 164 164 509 461 197 428 23:30 Merge 332 -99 489 89 375 -13 -19 -122 203 201 201 634	0 -8 67 77 102 77 37 -174 -223 41 -11 Delta 21 113 48 -41 128 51 42 69 40 11 11 -80	-7 57 -91 -80 -206 166 150 150 515 515	-32 44 -40 -34 -131 197 154 154 353 320 199	-25 -13 51 46 75 31 4 -162 -195 46



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.

TCO	Line (200 la/)	10	:30	19	:30
TSO	Line (380 kV)	Imax (A)	% of Imax	Imax (A)	% of Imax
	Champion - Gramme (32)	2448	52	2448	37
	Doel - Mercator (51)	2239	24	2239	25
	Doel - Mercator (52)	2239	24	2239	25
FLIA	Doel - Mercator (54)	2448	24	2448	25
ELIA	Doel - Zandvliet (25)	2349	11	2349	8
	Mercator - Horta (73)	2569	22	2569	17
	Courcelles - Gramme (31)	2349	59	2349	42
	Mercator - Rodenhuize/Horta (74)	2349	25	2349	18
	Attaques - Warande 2	3780	53	3780	53
	Avelin - Gavrelle	2622	36	2622	31
	Avelin - Warande	3458	11	3458	16
RTE	Lonny - Seuil	4149	24	4149	20
KIE	Mandarins - Warande 1	3780	50	3780	51
	Muhlbach - Scheer	2598	23	2598	35
	Revigny - Vigy	2596	36	2596	25
	Warande - Weppes	3458	16	3458	21

X < 50 % of Imax	50 ≤ X < 75 % of Imax	X ≥ 75 % of Imax
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TCO	Voltago	Line (280 la))	10	:30	19	:30
TSO	Voltage	Line (380 kV)	Imax (A)	% of Imax	Imax (A)	% of Imax
		Eisenach - Mecklar (450-2)	2520	31	2520	18
		Hagenwerder - Mikulowa (567)	2520	24	2520	23
		Hagenwerder - Mikulowa (568)	2520	23	2520	23
		Remptendorf - Redwitz (413)	3440	44	3485	45
	380 kV	Remptendorf - Redwitz (414)	3440	44	3485	45
FO 11-T	300 KV	Röhrsdorf - Hradec (445)	2520	29	2520	28
50 HzT		Röhrsdorf - Hradec (446)	2520	29	2520	28
		Vieselbach - Mecklar (449-1)	2520	32	2520	19
		Wolmirstedt - Helmstedt (491-1)	2400	15	2400	3
		Wolmirstedt - Helmstedt (492-2)	2400	15	2400	3
	220 kV	Vierraden - Krajnik (507)	1343	0	1343	0
	220 KV	Vierraden - Krajnik (508)	1343	0	1343	0

X < 50 % of Imax $50 \le X < 75 \% \text{ of Imax}$ $X \ge 75 \% \text{ of Imax}$



Special topologies at 10:30 and 19:30

		Nodes in North area		
			10:30	19:30
	Elia	Doel	1	1
	Ella	Avelgem	1	1
		Warande	1	1
		Cergy	2	2
		Terrier	1	1
	Rte	Plessis Gassot	1	1
		Mery/Seine	2	2
380 kV		Muhlbach	1	1
		Vigy	1	1
	Transnet bw	Eichstetten	1	1
	Amprion	Uchtelfangen	1	1
	Tennet DE	Redwitz	1	1
	50 HzT	Remptendorf	2	2
	30 HZ1	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		Conti	ingency				Constrai	int		Timestamps of
130	validity	U (kV)	Substation 1	Substation 2	Code	Overload	U (kV)	Substation 1	Substation 2	Code	max
50Hertz	17:00 -	400	Hamburg Nord	Hamburg Ost	axis	103%	400	Hamburg Nord	Hamburg Ost	Remaining	19:30
Sunertz	20:00		Preventive action: Redispatching								

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

TSO	Validity		Cont	ingency				Constra	int		Timestamps of
130	validity	U (kV)	Substation 1	Substation 2	Code	Overload	U (kV)	Substation 1	Substation 2	Code	max
						No cons	traints d	etected.			

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

Contingency				Constraint					Comments	
U (kV)	Substation 1	Substation 2	Code	Overload	U (kV)	Comments				
	No constraints 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): 06:30
Peak period (07:00 – 23:00): 08:30

Adaptations made on merged DACFs:

Off-peak:

• SI → IT physical flow adapted to 800 MW

• Mendrisio-Cagno flow adapted to this schedule : 140 MW

• PST of Lienz adapted to 150 MW

• PST of Camporosso adapted to 200 MW

Peak:

• SI → IT physical flow adapted to 800 MW

• Mendrisio-Cagno flow adapted to this schedule : 140 MW

• PST of Lienz adapted to: 140 MW

• PST of Camporosso adapted to 200 MW

Special topologies

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

TCO	Valtaga	Line (200 lv/)	Off	Peak	Pe	ak
TSO	Voltage	Line (380 kV)	Imax (A)	% of Imax	Imax (A)	% of Imax
		Albertville - Rondissone 1	2370	49	2370	34
		Albertville - Rondissone 2	2370	48	2370	34
		Bulciago - Soazza	2300	24	2300	42
		Cagno - Mendrisio	855	24	855	28
	380 kV	Musignano - Lavorgo	2270	36	2270	51
		Redipuglia - Divaca	2700	35	2700	34
		Robbia - San Fiorano	2530	34	2530	59
_		Robbia - Gorlago	2530	22	2530	39
Terna		Venaus - Villarodin	2715	41	2715	42
		Airolo - Ponte	900	10	900	22
		Lienz - Soverzene	750	46	750	52
		Menton - Campo Rosso	1165	44	1165	43
	220 kV	Padriciano - Divaca	960	39	960	39
		Riddes - Avise	1010	21	1010	24
		Riddes - Valpelline	1010	22	1010	26
		Serra - Pallanzeno	900	28	900	33

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
	Initial physical flows on adapted base case	2513	2436	121	801
Off Peak	Compensation ratio (calculated from NTC)	37%	51%	3%	9%
	Pentalateral impact on physical flows	-26%	-58%	-2%	-14%
	Initial physical flows on adapted base case	2082	3805	157	788
Peak	Compensation ratio (calculated from NTC)	37%	50%	4%	9%
	Pentalateral impact on physical flows	-26%	-56%	-4%	-15%



OFF PEAK

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

	TSO	Contingency				Constraint				
	130	U (kV)	Substation 1	Substation 2	Code	Overload	U (kV)	Substation 1	Substation 2	Code
		380	Albertville	Grande Ile	N-2	109%	220	Albertville	Grande Ile	3
Off	RTE	<u>Curative actions:</u> 2 nodes in Grande IIe => 69% rem					9% remaining			
Peak	TERNA / RTE	380	Albertville	Rondissone	N-2	102%	380	La Praz	PST	
				Curative actions:	Increse 4 t	aps on La P	raz PST =	=> 97% remaining		

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

	TSO		Contingency			Constraint				
	130	U (kV)	Substation 1	Substation 2	Code	Overload	U (kV)	Substation 1	Substation 2	Code
	SWG	380	Filisur	Sils	N-1	101%	380	Robbia	La Punt	
Pea			Preventive actions: Increase the flow from Slovenia to Italy up to 950 MW => 98% remaining							
l ca	TERNA / ELES /	380	ATD Redipuglia	Planais	N-K	103%	380	Lienz	Soverzene	
	APG		Curative actions: Decrease 1 tap on Lienz PST => 97% remaining							

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				
FSI	Tap position	Physical flow to Italy (MW)			
La Praz (1/33)	1	747			
Rondissone 1 (1/33)	20	768			
Rondissone 2 (1/33)	21	784			
Camporosso (-32/32)	-3	207			
Lienz (-32/32)	6	143			
Padriciano (1/33)	11	145			
Divaca (-32/32 each)	11	658			

PST	Peak				
FSI	Tap position	Physical flow to Italy (MW)			
La Praz (1/33)	1	679			
Rondissone 1 (1/33)	14	561			
Rondissone 2 (1/33)	14	561			
Camporosso (-32/32)	-10	209			
Lienz (-32/32)	-14	167			
Padriciano (1/33)	24	151			
Divaca (-32/32 each)	-9	661			

Conclusion

CWE: No constraints detected.

CEE: No critical constraints detected.

CSE: No critical constraints detected, but coordination is needed in curative between TSOs.