

Casc Publication Handbook

CWE Market Coupling

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1 Pre-coupling operational data (D-1)

1.1. Graphical views

1.1.1. Market View

Please note that all data presented in this document is available through one single platform which is the CASC Utility Tool. In the last section you will find information on how to get access through the web service.

Publication day or time is also indicated for each item: please consider that “D” stands for the delivery day; therefore, “D-1” stands for the Day-Ahead on which most of the data is provided as part of the market coupling process and finally “D+2”

Reference time:	1) Check volume (interactive module)			2) Max volume (information module)			
date: 2015-11-01	Here you can check the simultaneous execution of trading volumes of the markets involved in the CWE Market Coupling			Here you can find the maximal trade volumes (MWh/h) which can be physically transported between two Hubs under the condition that no other trade is executed between other Hubs.			
hour: 1							
HUB TO HUB EXCHANGES	Hub-to-Hub trade in MWh/h (please insert values)		Test 1: hub to hub inside FB space	direction →		direction ←	
	DE/AT=>BE	0	Trades feasible	DE/AT=>BE	2857	3009	
	DE/AT=>NL	0		DE/AT=>NL	3330	3884	
	DE/AT=>FR	0		DE/AT=>FR	4345	3742	
	NL=>BE	0		NL=>BE	1817	3041	
	NL=>FR	0		NL=>FR	2090	4150	
BE=>FR	0	BE=>FR		2566	3919		
HUB POSITION	Hub Positions trade in MWh/h (please insert values)		Test 1: sum hub positions = 0	Test 2: hub positions inside FB space	export		import
	DE/AT	0	OK	Trades feasible	DE/AT	6542	-6125
	BE	0			BE	3468	-3919
	FR	0			FR	4545	-5712
	NL	0			NL	4350	-4150

Figure 1: Screenshot of the “Market View” tab

The “Market View” tab is split into 2 sections:

- Check volume: the user can insert volumes of commercial trades (in terms of hub-to-hub exchanges or hub net export positions) in order to test their feasibilities. Please note that those feasibility checks are performed on all 24 hours. This implies that if Test 2 indicates ‘Constrained Transmission System’, at least in one of the 24 hours a constraint was violated.
- Max volume: this section gathers the information of the tabs “Max net pos” and “Max exchanges (Max-bex)”.

Please note that if one changes the value of the date picker, it will update the figures of all the tabs of the excel file according to the chosen date.

Publication time: 10.30 am (D-1)

1.1.2. Market graphs

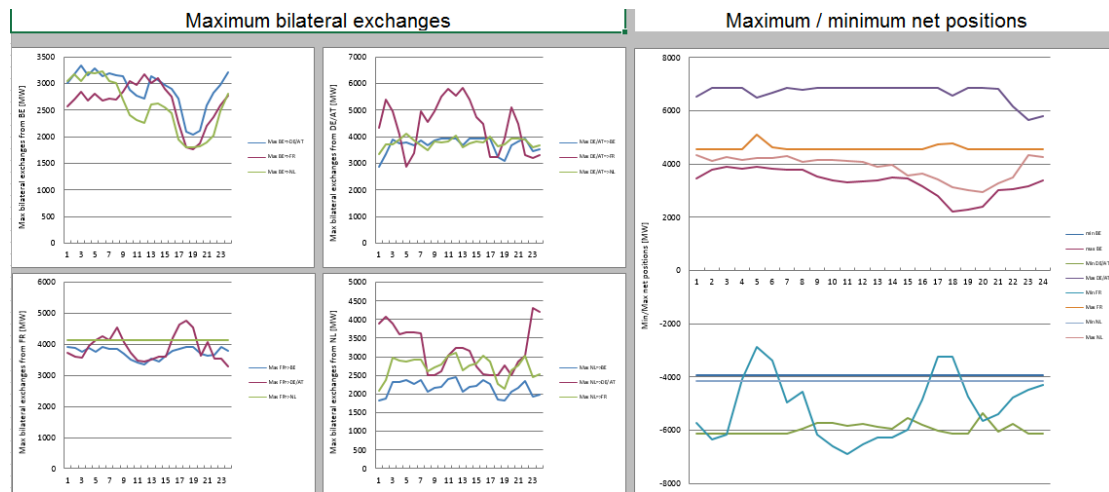


Figure 2: Screenshot of the “Market graphs” tab

The “Market graphs” tab gathers the graphs representing the Flow-Based indicators of the tabs “Max net pos” and “Max exchanges (Maxbex)” for the 24 hours of the selected day.

Publication time: 10.30 am (D-1)

1.1.3. CWE map

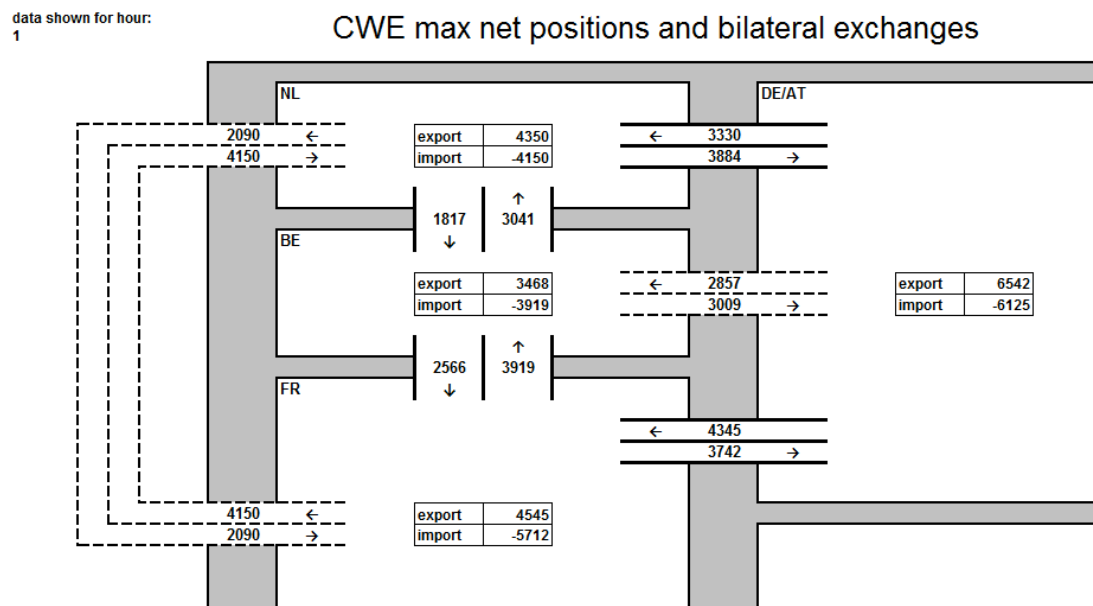


Figure 3: Screenshot of the “CWE map” tab

The “CWE map” tab displays the indicators of the final Flow-Based matrix in a different manner: it shows the maximum bilateral exchanges of each border and the min/max net positions of each hub on a map representing the CWE configuration.

Publication time: 10.30 am (D-1)

1.1.4. Border Data Overview

Hour	ATC (MW)	BEC (MW)	Price Spread (€/MWh)	Congestion Income (€)	LTN (MW)	Shadow Auction ATC (MW)	Intraday ATC (MW)
1	#N/A	0	-14.69	#N/A	0	1484	231
2	#N/A	0	-12.98	#N/A	0	1493	1068
3	#N/A	0	0	#N/A	0	1768	2053
4	#N/A	0	0	#N/A	0	1715	2951
5	#N/A	0	-2.19	#N/A	0	1750	3444
6	#N/A	0	-1.76	#N/A	0	1719	3290
7	#N/A	0	-4.91	#N/A	0	1734	3460
8	#N/A	0	-4.28	#N/A	0	1487	3192
9	#N/A	0	0	#N/A	0	1486	3904
10	#N/A	0	0	#N/A	0	1515	4376
11	#N/A	0	-2.47	#N/A	0	1693	5046
12	#N/A	0	-0.51	#N/A	0	1760	5229
13	#N/A	0	-6.99	#N/A	0	1614	3429
14	#N/A	0	-2.86	#N/A	0	1662	4446
15	#N/A	0	-0.04	#N/A	0	1553	4874
16	#N/A	0	-2.4	#N/A	0	1488	4584
17	#N/A	0	-0.07	#N/A	0	1486	3984
18	#N/A	0	0	#N/A	0	1484	2482
19	#N/A	0	0	#N/A	0	1485	2159
20	#N/A	0	0	#N/A	0	1547	1924
21	#N/A	0	0	#N/A	0	1683	1498
22	#N/A	0	0	#N/A	0	1781	1477
23	#N/A	0	0	#N/A	0	1518	811
24	#N/A	0	0	#N/A	0	1569	483

Figure 4: Screenshot of the "Border Data Overview" tab with a CWE border

This tab gathers the general pieces of information for a selected border for each hour of a market coupling date:

- The ATC in MW offered for the Day-ahead market coupling (for the non-CWE borders);
- The allocated capacity (or BEC¹) in MW after market coupling;
- The Price Spread in €/MWh;
- The Congestion Income in €;
- The nominated volume of the long term allocated product (LTN) in MW;
- The Shadow Auction ATC, being the ATC that would be provided to a shadow auction mechanism, in MW;
- The Intraday ATC, being the left-over capacity after the FBMC expressed as **initial** ATC, in MW.

Please note that for the CWE internal borders, the ATCs and Congestion Income are not available on a border basis (see Figure 4) and for the other borders, the long term nominations, the Shadow Auction ATCs and the intraday ATCs will not be available (see Figure 5).

¹ Bilateral Exchange Computation

Hour	ATC (MW)	BEC (MW)	Price Spread (€/MWh)	Congestion Income (€)	LTN (MW)	Shadow Auction ATC (MW)	Intraday ATC (MW)
1	119	119	15.29	1819.51	#N/A	#N/A	#N/A
2	119	119	14.5	1725.5	#N/A	#N/A	#N/A
3	119	119	7.7	916.3	#N/A	#N/A	#N/A
4	119	119	10.22	1216.18	#N/A	#N/A	#N/A
5	119	119	6.58	783.02	#N/A	#N/A	#N/A
6	119	119	6.15	731.85	#N/A	#N/A	#N/A
7	119	119	6.14	730.66	#N/A	#N/A	#N/A
8	119	119	1.42	168.98	#N/A	#N/A	#N/A
9	119	119	0	0	#N/A	#N/A	#N/A
10	119	119	0	0	#N/A	#N/A	#N/A
11	82	82	0.49	40.18	#N/A	#N/A	#N/A
12	82	82	0.18	14.76	#N/A	#N/A	#N/A
13	82	82	2.43	199.26	#N/A	#N/A	#N/A
14	82	82	0.55	45.1	#N/A	#N/A	#N/A
15	82	82	0.01	0.82	#N/A	#N/A	#N/A
16	82	82	4.53	371.46	#N/A	#N/A	#N/A
17	82	82	6.67	546.94	#N/A	#N/A	#N/A
18	142	142	2.36	335.12	#N/A	#N/A	#N/A
19	202	0	-1.54	0	#N/A	#N/A	#N/A
20	262	262	0	0	#N/A	#N/A	#N/A
21	265	265	0	0	#N/A	#N/A	#N/A
22	265	265	1.81	479.65	#N/A	#N/A	#N/A
23	239	239	4.1	979.9	#N/A	#N/A	#N/A
24	179	179	4.36	780.44	#N/A	#N/A	#N/A

Figure 5: Screenshot of the "Border Data Overview" tab with a non-CWE border

Publication time: As soon as data is available (D-1)

1.2. Raw network data

1.2.1. PTDFs (Early Publication)

	BE-hub (MW)	DE/AT-hub (MW)	FR-hub (MW)	NL-hub (MW)	Sum			
Test Hub to Hub	0	0	0	0	0			
Test Hub Positions	0	0	0	0	0			
ID	BE-hub	DE/AT-hub	FR-hub	NL-hub	RAM (MW)	Test Hub to Hub	# of constraints violated	Test Hub positions
hour 1	7	-0.21041	-0.23574	-0.36332	-0.1658	585	0	0
	27	0.05567	-0.04936	-0.06749	-0.0217	242	0	0
	60	0.15028	-0.12838	-0.01786	-0.17978	993	0	0
	84	-0.31693	-0.13964	-0.24401	0	621	0	0
	94	-0.31868	-0.11603	-0.23085	0	621	0	0
	105	0.01261	0.19006	0.08618	-0.10605	1061	0	0
	106	-0.0017	0.02968	-0.03272	0.01932	299	0	0
	195	0	0	1	0	5101	0	0
	240	0.14158	-0.17667	-0.08911	-0.21013	1010	0	0
	272	-0.32128	-0.14887	-0.26079	0	621	0	0
	279	0.23561	0.18414	0.1724	0.16129	192	0	0
	307	0.02063	0.12049	0.05709	0.37601	1064	0	0
	316	-0.33033	-0.15681	-0.28752	0	621	0	0
	321	-0.31272	-0.1248	-0.22344	0	621	0	0
	371	0.02456	-0.16266	0.08001	-0.10744	929	0	0
	383	-0.30928	-0.11181	-0.20604	0	621	0	0
	405	0.01468	-0.01691	-0.10106	-0.00544	455	0	0
	419	-1	0	0	0	4500	0	0
	436	-0.05567	0.04936	0.06749	0.0217	568	0	0
	439	0.01604	0.2682	0.16741	-0.02249	1279	0	0
	473	0	0	0	1	4250	0	0
	496	0	0	0	-1	4250	0	0

Figure 6: Screenshot of the "PTDFs Early Implementation" tab

Description:

This tab contains the presolved Flow-Based matrices of the selected day **before long term nominations** (24 FB matrices). In each FB matrix, one can find:

- one line per presolved CBCO² with an anonymous ID
- one column per hub with the PTDF³_{hub} value per CBCO
- one column with the Remaining Available Margin (RAM) per CBCO

² Critical Branch Critical Outage

³ Power Transfer Distribution Factor

These **FB matrices are not the final values** used as input network data for the market coupling process.

In addition, the two columns “Test Hub to Hub” and “Test Hub positions” indicate whether a CBCO is constrained with the respective set of “Hub to Hub exchanges” or ”Hub positions” (0 means no violation and 1 means violation).

Publication time: 08.00 am (D-1)

1.2.2. Long Term Nominations (LTN)

Date:		2015-11-01							
Hour	LT Nominations (in MW)								
	BE-NL	NL-BE	DE/AT-NL	NL-DE/AT	BE-FR	FR-BE	FR-DE/AT	DE/AT-FR	
1	0	20	120	0	0	561	0	5	
2	0	20	120	0	0	561	0	5	
3	0	20	120	0	0	561	0	5	
4	0	20	120	0	0	561	0	5	
5	0	20	120	0	0	561	0	5	
6	0	20	120	0	0	561	0	5	
7	0	20	120	0	0	561	0	5	
8	0	20	120	0	0	561	0	5	
9	0	20	120	0	0	561	0	5	
10	0	20	120	0	0	561	0	5	
11	0	20	120	0	0	561	0	5	
12	0	20	120	0	0	561	0	5	
13	0	20	120	0	0	561	0	5	
14	0	20	120	0	0	561	0	5	
15	0	20	120	0	0	561	0	5	
16	0	20	120	0	0	561	0	5	
17	0	20	120	0	0	561	0	5	
18	0	20	120	0	0	561	0	5	
19	0	20	120	0	0	561	0	5	
20	0	20	120	0	0	561	0	5	
21	0	20	120	0	0	561	0	5	
22	0	20	120	0	0	561	0	5	
23	0	20	120	0	0	561	0	5	
24	0	20	120	0	0	561	0	5	

Figure 7: Screenshot of the “LTN” tab

Description:

The first column indicates the hour of the nomination (24 lines overall). The next eight columns represent the nominated capacity in MW per border in the two directions.

Publication time: 10.30 am (D-1)

1.2.3. PTDFs

	BE-hub (MW)	DE/AT-hub (M	FR-hub (MW)	NL-hub (MW)	Sum			
Test Hub to Hub	0	0	0	0	0			
Test Hub Positions	0	0	0	0	0			
ID	BE-hub	DE/AT-hub	FR-hub	NL-hub	RAM (MW)	Test Hub to Hub	# of constraints violated	Test Hub positions
						0		0
hour 1	17	-0.27727	-0.10024	-0.18471	0	511	0	0
	21	0	0	1	0	4545	0	0
	35	0.02063	0.12049	0.05709	0.37601	1067	0	0
	51	0	-1	0	0	6125	0	0
	58	-0.05567	0.04936	0.06749	0.0217	494	0	0
	73	0.01468	-0.01691	-0.10106	-0.00544	521	0	0
	96	-0.29909	-0.13532	-0.26075	0	545	0	0
	117	0.15028	-0.12838	-0.01786	-0.17978	1088	0	0
	118	0	0	0	1	4350	0	0
	121	0.01261	0.19006	0.08618	-0.10605	986	0	0
	136	-1	0	0	0	3919	0	0
	144	0.23561	0.18414	0.1724	0.16129	226	0	0
	160	-0.28035	-0.11188	-0.20032	0	519	0	0
	162	0.14158	-0.17667	-0.08911	-0.21013	1143	0	0
	185	0.05567	-0.04936	-0.06749	-0.0217	316	0	0
	200	0	0	0	-1	4150	0	0
	227	-0.31693	-0.13964	-0.24401	0	590	0	0
	237	-0.0017	0.02968	-0.03272	0.01932	314	0	0
	238	0.01604	0.2682	0.16741	-0.02249	1159	0	0
	262	-0.2857	-0.10402	-0.20696	0	519	0	0
	325	0.02456	-0.16266	0.08001	-0.10744	908	0	0
	356	-0.21041	-0.23574	-0.36332	-0.1658	678	0	0
	380	-0.30928	-0.11181	-0.20604	0	570	0	0
	424	-0.28803	-0.13347	-0.2338	0	536	0	0

Figure 8: Screenshot of the "PTDFs" tab

Description:

This tab contains the presolved Flow-Based matrices of the selected day **following long term nominations** (24 FB matrices). In each FB matrix, one can find:

- one line per presolved CBCO with an anonymous ID (this ID will be updated two days after the delivery date with the fixed ID label – see chapter 2.15)
- one column per hub with the $PTDF_{hub}$ value per CBCO
- one column with the Remaining Available Margin (RAM) per CBCO

These **FB matrices are the final values** used as input network data for the market coupling process.

In addition, the two columns "Test Hub to Hub" and "Test Hub positions" indicate whether a CBCO is constrained with the respective set of "Hub to Hub exchanges" or "Hub positions" (0 means no violation and 1 means violation).

Publication time: 10.30 am (D-1)

1.2.4. ATCs

Date:	2015-11-01									
Hour	ATC (in MW)									
	FR-ES	ES-FR	DK1-DE/AT	DE/AT-DK1	FR-IT	IT-FR	DE/AT-IT	IT-DE/AT	SI-IT	IT-SI
1	2000	1900	0	1150	1265	1389	119	175		
2	2700	2250	0	1150	1265	1389	119	175		
3	2700	2250	0	1150	1265	1389	119	175		
4	2700	2250	0	1150	1265	1389	119	175		
5	2700	2250	0	1150	1265	1389	119	175		
6	2700	2250	200	850	1265	1389	119	175		
7	2700	2250	200	850	1265	1389	119	175		
8	2700	2250	200	850	1265	1389	119	175		
9	2700	2250	200	850	1265	1389	119	175		
10	2700	2250	200	850	1265	1389	119	175		
11	2700	2250	500	550	891	1389	82	175		
12	2700	2250	500	550	891	1389	82	175		
13	2700	2250	500	550	891	1389	82	175		
14	2700	2250	500	550	891	1389	82	175		
15	2700	2250	500	550	891	1389	82	175		
16	2700	2250	500	550	891	1389	82	175		
17	2700	2250	500	550	891	1389	82	175		
18	2700	2250	500	550	1451	1389	142	175		
19	2000	1900	500	550	2011	1389	202	175		
20	2000	1900	500	550	2571	1389	262	175		
21	2000	1900	500	550	2766	1389	265	175		
22	2000	1900	500	550	2766	1389	265	175		
23	2000	1900	500	550	2385	1389	239	175		
24	2000	1900	500	550	1825	1389	179	175		

Figure 9: Screenshot of the "ATCs" tab

Description:

Each row represents one market coupling hour (24 rows). After the first column "hour", the next ten columns gather the ATC values in MW for the two directions of the following borders made available for the day-ahead market coupling:

- FR-ES
- DK1-DE/AT
- FR-IT
- DE/AT-IT
- SI-IT

Publication time: 10.30 am (D-1)

1.2.5. Max net pos

Prog	BE	DE/AT	FR	NL	hour	min BE	max BE	Min DE/AT	Max DE/AT	Min FR	Max FR	Min NL	Max NL	
hour 1	MinBE	-3919			1	-3919	3468	-6125	6542	-5712	4545	-4150	4350	
	MaxBE	3468			2	-3919	3792	-6125	6875	-6327	4545	-4150	4102	
	MinDE/AT		-6125		3	-3919	3883	-6125	6875	-6150	4545	-4150	4245	
	MaxDE/AT		6542		4	-3919	3810	-6125	6840	-4070	4545	-4150	4159	
	MinFR			-5712		5	-3919	3878	-6125	6504	-2882	5118	-4150	4232
	MaxFR			4545		6	-3919	3810	-6125	6691	-3389	4611	-4150	4232
	MinNL				-4150	7	-3919	3786	-6125	6875	-4967	4545	-4150	4286
	MaxNL				4350	8	-3919	3777	-5953	6800	-4540	4545	-4150	4083
hour 2	MinBE	-3919			9	-3919	3529	-5733	6875	-6158	4545	-4150	4162	
	MaxBE	3792			10	-3919	3389	-5710	6875	-6594	4545	-4150	4155	
	MinDE/AT		-6125		11	-3919	3318	-5817	6875	-6887	4545	-4150	4124	
	MaxDE/AT		6875		12	-3919	3361	-5761	6875	-6532	4545	-4150	4072	
	MinFR			-6327		13	-3919	3396	-5849	6875	-6252	4545	-4150	3896
	MaxFR			4545		14	-3919	3492	-5923	6875	-6266	4545	-4150	3981
	MinNL				-4150	15	-3919	3439	-5540	6875	-5990	4545	-4150	3558
	MaxNL				4102	16	-3919	3174	-5804	6875	-4853	4545	-4150	3655
hour 3	MinBE	-3919			17	-3919	2788	-6019	6875	-3248	4752	-4150	3406	
	MaxBE	3883			18	-3919	2199	-6119	6552	-3229	4771	-4150	3122	
	MinDE/AT		-6125		19	-3919	2295	-6125	6875	-4716	4545	-4150	3026	
	MaxDE/AT		6875		20	-3919	2400	-5358	6875	-5663	4545	-4150	2937	
	MinFR			-6150		21	-3919	3023	-6045	6805	-5377	4545	-4150	3280
	MaxFR			4545		22	-3919	3069	-5753	6177	-4757	4545	-4150	3484
	MinNL				-4150	23	-3919	3148	-6125	5664	-4461	4545	-4150	4344
	MaxNL				4245	24	-3919	3397	-6125	5808	-4285	4545	-4150	4244

Figure 10: Screenshot of the "Max net pos" tab

Description:

These tables describe the minimum and maximum CWE net positions in MW of each hub for each hour of the day. These indicators are extracted from the vertices of the final Flow-Based domain given for market coupling. Please note that these min/max net positions depend on the net positions of the other hubs i.e. they are not simultaneously feasible.

Publication time: 10.30 am (D-1)

1.2.6. Max exchanges (Maxbex)

hour	Max BE->DE/AT	Max BE->FR	Max BE->NL	Max DE/AT->BE	Max DE/AT->FR	Max DE/AT->NL	Max FR->BE	Max FR->DE/AT	Max FR->NL	Max NL->BE	Max NL->DE/AT	Max NL->FR
1	3009	2666	3041	2857	4345	3330	3919	3742	4150	1817	3884	2090
2	3168	2705	3165	3327	5387	3707	3883	3599	4150	1867	4084	2377
3	3329	2843	3052	3880	4969	3717	3745	3562	4150	2315	3902	2976
4	3148	2685	3208	3734	4070	3880	3894	3954	4150	2333	3616	2896
5	3291	2808	3183	3771	2882	4110	3774	4150	4150	2383	3658	2882
6	3139	2678	3236	3659	3389	3872	3904	4248	4150	2274	3657	2927
7	3187	2720	3052	3861	4967	3667	3865	4152	4150	2377	3636	2924
8	3145	2697	3012	3668	4540	3494	3851	4545	4150	2057	2503	2603
9	3140	2850	2691	3846	4963	3824	3698	4082	4150	2154	2499	2725
10	2877	3043	2402	3919	5520	3777	3495	3740	4150	2202	2607	2786
11	2778	2967	2317	3919	5792	3826	3407	3472	4150	2397	3029	3031
12	2709	3173	2255	3919	5541	4043	3367	3442	4150	2458	3251	3116
13	3127	3002	2597	3674	5845	3619	3535	3616	4150	2073	3237	2529
14	3067	3108	2626	3914	5380	3737	3439	3601	4150	2186	3163	2764
15	2972	2890	2549	3919	4744	3822	3649	3611	4150	2226	2733	2816
16	2893	2745	2447	3919	4484	3782	3787	4208	4150	2382	2520	3027
17	2710	2258	1947	3919	3248	3999	3867	4654	4150	2264	2512	2871
18	2096	1797	1803	3228	3229	3640	3919	4771	4150	1853	2509	2277
19	2042	1763	1801	3083	3931	3706	3919	4545	4150	1840	2768	2145
20	2119	1868	1813	3689	5087	3943	3697	3648	4150	2058	2511	2643
21	2581	2202	1886	3831	4492	3916	3639	4061	4150	2162	2872	2780
22	2823	2370	2021	3919	3308	3910	3657	3552	4150	2351	3018	3018
23	2975	2585	2479	3459	3193	3583	3919	3540	4150	1919	4310	2452
24	3200	2772	2799	3526	3297	3663	3804	3283	4150	1995	4218	2545

Figure 11: Screenshot of the "Max exchanges (Maxbex)" tab

Description:

Each row represents one market coupling hour (24 rows). After the first column "hour", the next twelve columns gather the maximum bilateral exchanges between two CWE hubs in MW with the assumption that the other net positions are null. These indicators are calculated from the final Flow-Based domain given to the day-ahead market coupling.

For instance: Max BE=> DE/AT is the maximum exchange feasible from BE to DE/AT within the Flow-Based domain given to the power exchanges, with $NP_{FR} = NP_{NL} = 0MW$.

Publication time: 10.30 am (D-1)

1.2.7. Shadow Auction ATC

Date:	2015-11-01									
Hour	Shadow Auction ATC (in MW)									
	BE-NL	NL-BE	DE/AT-NL	NL-DE/AT	BE-FR	FR-BE	FR-DE/AT	DE/AT-FR		
1	1226	760	2007	1484	1296	1088	2487	594		
2	1404	764	2359	1493	1365	1107	2080	605		
3	1323	888	2220	1768	1417	1552	1968	951		
4	1351	900	2543	1715	1305	1624	2417	984		
5	1359	924	2413	1750	1365	1646	2290	1003		
6	1352	876	2502	1719	1307	1582	2599	915		
7	1282	915	2125	1734	1321	1637	2279	1029		
8	1574	774	2076	1487	965	1545	1368	868		
9	1337	769	2472	1486	963	1791	1364	1013		
10	1016	860	2254	1515	1016	1629	1493	953		
11	905	940	1600	1693	1092	1636	1796	1051		
12	878	951	1717	1760	1117	1599	1592	1136		
13	954	816	1740	1614	1141	1357	2328	754		
14	1042	849	1890	1662	1264	1461	1912	849		
15	1075	878	2340	1553	1078	1604	1650	932		
16	993	785	1869	1488	967	2316	1374	1295		
17	804	772	1259	1486	963	2775	1363	619		
18	801	760	1251	1484	961	1088	1382	594		
19	802	760	1253	1485	963	1090	1366	596		
20	802	844	1252	1547	962	1479	1408	601		
21	801	870	1251	1683	961	1584	2523	599		
22	800	962	1248	1781	960	1843	2312	596		
23	923	775	1633	1518	1106	1158	2437	639		
24	1113	796	1974	1569	1302	1259	2028	699		

Figure 12: Screenshot of the "Shadow Auction ATC" tab

Description:

Each row represents one market coupling hour (24 rows overall). The eight next columns represent the ATC for Shadow Auctions in MW per border in the two directions. These ATCs are calculated from the Final Flow-Based domain and may be used as fallback in case of a market decoupling situation.

Publication time: 10.30 am (D-1)

2 Post-coupling operational data (D-1)

2.1. Net Position

Date: 2015-11-01						
Hour	Internal CWE Net Position (in MW)				Import (-)	Export (+)
	BE	DE/AT	FR	NL		
1	-1476.8	6049	-3277	-1295.2		
2	-1197	6269.1	-3161.6	-1910.6		
3	-1192.9	6027.4	-2378.2	-2456.3		
4	-1502.7	4723.7	-422.2	-2798.8		
5	-1647.2	4151.4	455.1	-2959.4		
6	-1625.4	4364.7	258.9	-2998.2		
7	-2012.3	4032.9	849.5	-2870.1		
8	-2073.5	3748.6	1202.8	-2877.8		
9	-1375.1	3334.6	1453.6	-3413.5		
10	-1456.2	3485.6	1402.9	-3432.8		
11	-1525.1	3992	1066.9	-3534.2		
12	-1301.9	4244.8	769.8	-3712.7		
13	-1288.6	3927.9	523.4	-3162.5		
14	-1315.7	3748.2	1089.6	-3522		
15	-1986.3	2145.9	3740.5	-3899.8		
16	-2194.5	1416.5	3985.3	-3207.3		
17	-1809.6	-719.8	4752	-2222.6		
18	-1672.6	-1161.3	4771	-1937.1		
19	-2054.4	-829.5	4545	-1661.1		
20	-1956	70.8	3210.5	-1325.4		
21	-1704.2	1172.5	1567.2	-1036		
22	-1992.2	1573.9	1136.5	-718.3		
23	-2235.7	2284.1	583.4	-631.8		
24	-2204.2	3656.3	-875.2	-576.9		

Figure 13: Screenshot of the "Net Position" tab

Description:

Each row represents one market coupling hour. After the first column "hour", the next four columns indicate the CWE net positions in MW which were computed by the market coupling algorithm. In other words: the CWE net positions respecting the FB domain.

Publication time: 1.00 pm (D-1)

2.2. Allocated Capacities

Date: 2015-11-01																			
Hour	Bilateral Exchanges (in MW)																		
	FR-ES	ES-FR	DK1-DE/AT	DE/AT-DK1	BE-NL	NL-BE	DE/AT-NL	NL-DE/AT	BE-FR	FR-BE	FR-DE/AT	DE/AT-FR	FR-IT	IT-FR	DE/AT-IT	IT-DE/AT	SI-HT	IT-SI	
1	2000	0	0	0	0	0	1295.2	0	0	1476.8	0	4753.8	1265	0	119	0	346	0	
2	2700	0	0	0	0	0	1910.6	0	0	1197	0	4358.6	1265	0	119	0	346	0	
3	2700	0	0	0	0	0	576.9	3033.2	0	0	616	0	2994.2	1265	0	119	0	346	0
4	2700	0	0	0	0	0	157.2	2956	0	0	1345.5	0	1767.7	1265	0	119	0	346	0
5	2516.7	0	0	0	30	0	2929.4	0	0	1677.2	0	1222.1	1265	0	119	0	346	0	
6	2102.8	0	200	0	1.6	0	2996.6	0	0	1627	0	1368.1	1265	0	119	0	346	0	
7	1397	0	200	0	0	0	2870.1	0	0	2012.3	0	1162.9	1265	0	119	0	346	0	
8	1328.8	0	200	0	0	0	2877.8	0	0	2073.5	0	870.7	1194	0	119	0	197	0	
9	1213.7	0	200	0	529.3	0	2884	0	0	1904.2	0	450.6	646	0	119	0	109	0	
10	1358	0	200	0	480.9	0	2951.7	0	0	1936.9	0	534	488	0	119	0	123	0	
11	2104.6	0	500	0	387.8	0	3146.2	0	0	1912.7	0	845.8	0	132	82	0	42	0	
12	1593.6	0	500	0	489.7	0	3243	0	0	1771.6	0	1001.8	522	0	82	0	124	0	
13	707.5	0	500	0	277.2	0	2885.3	0	0	1565.8	0	1042.4	115	0	82	0	260	0	
14	1049.8	0	500	0	495	0	3027	0	0	1810.7	0	721.2	68	0	82	0	170	0	
15	826.5	0	500	0	1754	0	2145.8	0	0	3740.3	0	0	761	0	82	0	260	0	
16	871.1	0	500	0	0	0	3207.3	0	0	2194.5	1790.8	0	891	0	82	0	260	0	
17	0	43	500	0	0	0	2222.6	0	0	1809.6	2942.4	0	891	0	82	0	194	0	
18	0	1893	500	0	840.7	0	1096.4	0	0	2513.3	2257.7	0	1451	0	142	0	6	0	
19	0	1900	500	0	524.3	0	1136.8	0	0	2578.7	1966.3	0	2011	0	0	175	63	0	
20	0	303.1	500	0	156	0	1169.3	0	0	2111.9	1098.6	0	1645	0	262	0	82	0	
21	78.8	0	500	0	0	201.3	1237.1	0	0	1502.8	64.5	0	2494	0	265	0	173	0	
22	558.9	0	500	0	0	532.4	1250.7	0	0	1459.8	0	323.3	2766	0	265	0	201	0	
23	0	942.8	500	0	0	814.1	1445.9	0	0	1421.7	0	838.3	2385	0	239	0	83	0	
24	0	274.4	500	0	0	1176.7	1753.6	0	0	1027.5	0	1902.7	1825	0	179	0	311	0	

Figure 14: Screenshot of the "Allocated Capacities" tab

Description:

Each row represents one market coupling hour. After the first column “hour”, the next eighteen columns indicate the capacity allocated by the market coupling algorithm in MW in the two directions for the following borders:

- FR-ES
- DK1-DE/AT
- BE-NL
- DE/AT-NL
- BE-FR
- FR-DE/AT
- FR-IT
- DE/AT-IT
- SI-IT

For the exchanges in the CWE region, those allocated capacities are computed from the CWE net positions with the so-called ‘bilateral exchange computation’(BEC) under the constraint of remaining intuitive. For the other borders, they come from the post-processing of the Euphemia algorithm (flow calculation).

Publication time: 1.00 pm (D-1)

2.3. Price Spread

Date:		2015-11-01																	
		Price Spread (in €/MWh)																	
Hour	FR-ES	ES-FR	DK1-DE/AT	DE/AT-DK1	BE-NL	NL-BE	DE/AT-NL	NL-DE/AT	BE-FR	FR-BE	FR-DE/AT	DE/AT-FR	FR-IT	IT-FR	DE/AT-IT	IT-DE/AT	SI-IT	IT-SI	
1	22.35	-22.35	2.15	-2.15	5.89	-5.89	14.69	-14.69	-3.65	3.65	-5.15	5.15	10.14	-10.14	15.29	-15.29	9.12	-9.12	
2	7.17	-7.17	1.13	-1.13	5.31	-5.31	12.98	-12.98	-3.2	3.2	-4.47	4.47	10.03	-10.03	14.5	-14.5	8.32	-8.32	
3	6.7	-6.7	4.04	-4.04	0	0	0	0	0	0	0	0	7.7	-7.7	7.7	-7.7	5.01	-5.01	
4	6.52	-6.52	1.26	-1.26	0	0	0	0	0	0	0	0	10.22	-10.22	10.22	-10.22	4.7	-4.7	
5	0	0	1.16	-1.16	0.33	-0.33	2.19	-2.19	-1.11	1.11	-0.75	0.75	5.83	-5.83	6.58	-6.58	1.47	-1.47	
6	0	0	1.31	-1.31	0.72	-0.72	1.76	-1.76	-0.43	0.43	-0.61	0.61	5.54	-5.54	6.15	-6.15	2.16	-2.16	
7	0	0	1.09	-1.09	2	-2	4.91	-4.91	-1.21	1.21	-1.7	1.7	4.44	-4.44	6.14	-6.14	4.31	-4.31	
8	0	0	0.91	-0.91	1.76	-1.76	4.28	-4.28	-1.1	1.1	-1.42	1.42	0	0	1.42	-1.42	0	0	
9	0	0	1.91	-1.91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	0	0	2.55	-2.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	0	0	1.73	-1.73	1.65	-1.65	2.47	-2.47	-0.33	0.33	-0.49	0.49	0	0	0.49	-0.49	0	0	
12	0	0	2.45	-2.45	0.2	-0.2	0.51	-0.51	-0.13	0.13	-0.16	0.16	-0.01	0.01	0.16	-0.16	0	0	
13	0	0	0.62	-0.62	2.69	-2.69	6.99	-6.99	-1.87	1.87	-2.43	2.43	0	0	2.43	-2.43	1.96	-1.96	
14	0	0	1.85	-1.85	1.93	-1.93	2.86	-2.86	-0.38	0.38	-0.55	0.55	0	0	0.55	-0.55	0	0	
15	0	0	2.18	-2.18	0.03	-0.03	0.04	-0.04	0	0	-0.01	0.01	0	0	0.01	-0.01	0.88	-0.88	
16	0	0	3.96	-3.96	-1.57	1.57	2.4	-2.4	-8.39	8.39	4.42	-4.42	8.95	-8.95	4.53	-4.53	5.49	-5.49	
17	0	0	7.51	-7.51	-0.04	0.04	0.07	-0.07	-9.51	9.51	9.4	-9.4	16.07	-16.07	6.67	-6.67	0	0	
18	0	0	15.33	-15.33	0	0	0	0	-16.98	16.98	16.98	-16.98	19.34	-19.34	2.36	-2.36	0	0	
19	-3.53	3.53	17.9	-17.9	0	0	0	0	-6.31	6.31	6.31	-6.31	4.77	-4.77	-1.54	1.54	0	0	
20	0	0	18.96	-18.96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21	0	0	19.77	-19.77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
22	0	0	14.86	-14.86	0	0	0	0	0	0	0	0	1.81	-1.81	1.81	-1.81	0	0	
23	0	0	12.05	-12.05	0	0	0	0	0	0	0	0	4.1	-4.1	4.1	-4.1	0	0	
24	0	0	8.3	-8.3	0	0	0	0	0	0	0	0	4.36	-4.36	4.36	-4.36	0	0	

Figure 15: Screenshot of the “Price Spread” tab

Description:

Each row represents one market coupling hour. After the first column “hour”, the next eighteen columns indicate the market price spread in €/MWh for the two directions of the following borders:

- FR-ES
- DK1-DE/AT
- BE-NL
- DE/AT-NL
- BE-FR
- FR-DE/AT
- FR-IT
- DE/AT-IT
- SI-IT

Publication time: 1.00 pm (D-1)

2.4. Intraday ATC

Date:	2015-11-01								
Hour	Intraday ATC (in MW)								
	BE-NL	NL-BE	DE/AT-NL	NL-DE/AT	BE-FR	FR-BE	FR-DE/AT	DE/AT-FR	
1	0	84	0	231	1546	0	7821	0	
2	0	469	0	1068	2520	0	7706	0	
3	110	854	52	2053	2279	103	6819	155	
4	155	1175	44	2951	3517	86	4880	129	
5	0	1386	0	3444	3337	0	4662	0	
6	0	1293	0	3290	3647	0	4352	0	
7	0	1268	0	3460	4426	0	3695	0	
8	0	1177	0	3192	4533	0	3330	0	
9	50	1575	20	3904	3281	81	2584	62	
10	47	1063	30	4376	3052	211	2441	140	
11	0	1139	0	5046	2822	0	2828	0	
12	0	1322	0	5229	2840	0	3102	0	
13	0	1414	0	3429	3025	0	3938	0	
14	0	1423	0	4446	3318	0	3083	0	
15	0	584	0	4874	3980	0	284	0	
16	487	0	0	4584	3416	0	0	1614	
17	962	0	0	3984	1895	0	0	5027	
18	834	1196	903	2482	1423	0	0	3108	
19	944	944	1015	2159	1667	0	0	2774	
20	1031	740	1000	1924	1622	476	676	2781	
21	1222	748	1018	1498	1534	696	2280	1845	
22	1410	674	1160	1477	1677	646	2020	1366	
23	1554	361	710	811	2347	681	3279	847	
24	1462	209	598	483	1274	598	4821	410	

Figure 16: Screenshot of the "Intraday ATC" tab

Description:

Each row represents one market coupling hour. After the first column "hour", the next eight columns indicate the remaining capacity left after the day-ahead capacity allocation, expressed as **initial** ID ATCs in MW for the two directions of the CWE borders. Please note that these values are not the final values for the intraday market and therefore will not be updated throughout the day.

Publication time: 1.00 pm (D-1)

2.5. Congestion Income

Date:	2015-11-01																			
Hour	Congestion Income (in €)																			
	Net Congestion Income Per Hub				Net Congestion Income per TSO							Gross Congestion Income per Border								
	BE	DE/AT	FR	NL	Amprion	E.ON	RTE	Tennet BV	enneT GmbH	Transnet	DE/AT-DK1	DK1-DE/AT	FR-ES	ES-FR	FR-IT	IT-FR	DE/AT-IT	IT-DE/AT	SI-IT	IT-SI
1	1096.851	8627.725	2875.342	6355.879	5177.343	1096.851	2875.342	6355.879	2254.222	1196.16	0	0	44700	0	12827.1	0	1819.51	0	3155.52	0
2	693.188	10366.738	2774.611	7815.981	6267.619	693.188	2774.611	7815.981	2946.103	1153.016	0	0	19359	0	12687.95	0	1725.5	0	2878.72	0
3	0	0	0	0	0	0	0	0	0	0	0	0	18090	0	9740.5	0	916.3	0	1733.48	0
4	0	0	0	0	0	0	0	0	0	0	0	0	17604	0	12928.3	0	1216.18	0	1626.2	0
5	145.369	2121.979	335.955	1961.149	1317.684	145.369	335.955	1961.149	775.371	28.924	0	0	7374.95	0	783.92	0	508.62	0	508.62	0
6	20.142	1605.218	129.317	1468.092	996.124	20.142	129.317	1468.092	582.738	26.356	0	262	0	7008.1	0	731.85	0	747.36	0	0
7	185.064	4091.745	411.905	3796.176	2543.968	185.064	411.905	3796.176	1512.945	34.832	0	218	0	5616.6	0	730.66	0	1491.26	0	0
8	257.804	3325.84	382.188	3115.711	2071.526	257.804	382.188	3115.711	1251.143	3.171	0	182	0	0	0	168.98	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	382	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	510	0	0	0	0	0	0	0
11	66.494	2196.133	98.449	2089.769	1368.191	66.494	98.449	2089.769	827.942	0	0	885	0	0	0	40.18	0	0	0	0
12	22.608	541.667	41.189	512.808	337.099	22.608	41.189	512.808	202.473	1.995	0	1225	0	0	0	14.76	0	0	0	0
13	151.497	5949.781	424.996	5550.829	3701.47	151.497	424.996	5550.829	2213.115	35.196	0	310	0	0	0	199.26	0	509.6	0	0
14	62.819	2421.887	99.957	2297.917	1508.836	62.819	99.957	2297.917	913.051	0	0	925	0	0	0	45.1	0	0	0	0
15	0.288	28.7	3.189	24.814	17.745	0.288	3.189	24.814	10.092	0.853	0	1090	0	0	0	0.82	0	228.9	0	0
16	5169.518	1954.911	6033.581	1585.354	1152.737	5169.518	6033.581	1585.354	647.986	114.308	0	1680	0	0	7974.45	0	371.46	0	1427.4	0
17	6910.841	3755.447	10769.595	432.984	2081.966	6910.841	10769.595	432.984	217.781	1475.7	0	3755	0	0	14318.37	0	546.94	0	0	0
18	11333.692	7988.875	19541.382	750.619	4383.448	11333.692	19541.382	750.619	387.101	3218.326	0	7685	0	0	28062.34	0	335.12	0	0	0
19	4263.500	2197.545	6613.671	220.402	1203.313	4263.500	6613.671	220.402	131.12	963.112	0	8950	0	6707	9592.47	0	269.5	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	9480	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	9885	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	7430	0	0	5006.46	0	479.65	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	6025	0	0	9778.5	0	979.9	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	4150	0	0	7957	0	780.44	0	0	0

Description:

This tab gathers the net congestion income per hub and per TSO for the CWE region, and the gross congestion income (without UIOSI taken into account) for the non-CWE borders.

Publication time: 7.00 pm (D-1)

3 Additional data publication (D+2)

3.1. Aggregated D2CF data

Date:	2015-11-29 The data for 2015-11-29 has been retrieved successfully.											
TimeStamps	D2CF (in MW)											
	Vertical load				Generation				Best Forecast Net Positions			
	BE	DE/AT	FR	NL	BE	DE/AT	FR	NL	BE	DE/AT	FR	NL
1	7773	10069	49909	7147	5952	29562	54112	6095	-1966	16541	2497	-1257
2	7156	8725	47540	6782	5446	29067	49844	5444	-1853	17152	588	-1545
3	7532	8454	45455	6527	5743	28473	48294	4991	-1922	16841	1254	-1738
4	6770	8077	42265	6560	4542	27700	46375	4898	-2337	16789	2776	-1853
5	6778	8957	41109	6545	4290	27913	45518	4935	-2593	16188	3209	-1794
6	6923	9444	41205	6640	4377	28247	45278	4980	-2654	16137	2909	-1848
7	6547	10001	43065	6778	4919	28266	46753	5444	-1738	15582	2439	-1510
8	7335	11568	44667	6743	5733	30051	48006	5847	-1735	15677	2075	-1077
9	7138	13999	43729	7203	5757	30174	48432	6063	-1477	13713	3634	-1298
10	7651	16288	44443	7660	6091	33695	50150	6979	-1675	14717	4567	-864
11	7992	17113	45113	8090	6332	34174	50423	8000	-1794	14155	4194	-297
12	7827	18829	45185	8386	6092	35718	50643	8355	-1867	14084	4385	-241
13	7859	19641	45604	8386	6138	36131	50877	8398	-1858	13632	4193	-200
14	7798	18080	44225	8227	6238	33669	49815	8430	-1692	12875	4557	3
15	7830	17012	41864	8223	6090	31998	49411	8219	-1850	12381	6573	-189
16	7841	15752	40371	8371	6128	31916	47652	8101	-1825	13404	6248	-464
17	7867	15313	40606	8673	6162	33280	47328	8073	-1823	14802	5684	-823
18	9075	16710	45162	9048	6985	34825	50446	8096	-2250	14667	4246	-1198
19	9019	15808	48205	8791	7256	33399	52423	8283	-1940	14118	3027	-755
20	9099	14838	49314	8933	7373	32066	54074	8173	-1899	13751	3571	-1006
21	8658	12663	47791	8596	6903	31173	52970	7973	-1930	14661	4016	-879
22	8017	11576	46330	7773	6473	30070	51073	7911	-1713	14611	3504	-100
23	7973	11426	46885	7554	6475	29477	51032	7611	-1671	14505	2906	-166
24	8061	10150	48396	7017	6841	28018	50480	7186	-1403	14392	959	-45

Figure 17: Screenshot of the "D2CF" tab

Description:

For capacity calculation purposes, each CWE TSO generates one individual grid model per hour. This tab publishes the aggregated assumptions that are taken in individual grid models for each market coupling hour:

- "Vertical load" is the load as seen from the transmission grid in MW in the Individual Grid Model (this may be different from national consumption as RES infeeds are included in the vertical load);
- "Generation" is the generation in MW in the Individual Grid Model (Generation units connected to the TSO grid thus RES infeeds are mostly not included in these figures);
- "Best forecast net position" is the forecast of the overall balance of the countries in MW in the Individual Grid Models (please note that DE/AT contains the information of Germany, Austria, Denmark West "DK1" and Luxembourg) before merging into the Common Grid Model.

Please note that we have the following relationship between the figures:

$$\text{Generation} = \text{Vertical Load} + \text{Net Positions} + \text{Losses}$$

Publication time: D+2 (ex-post)

3.2. Refprog

Date:	2015-11-29 The data for 2015-11-29 has been retrieved successfully.											
Hour	Refprog Bilateral Exchanges (in MW)											
	BE-NL	DE-NL	FR-BE	FR-DE	FR-ES	FR-IT	CH-DE	CH-FR	DE-CZ	DE-PL	APG-CZ	
1	-2004	3751	243	-5513	2021	2745	-604	-3084	-1707	0		Notes for extra borders:
2	-1990	4098	312	-5775	1110	1625	-603	-3200	-1820	0		
3	-1834	4073	477	-5428	754	2276	-604	-3039	-1555	0		WPS: part of Ukraine
4	-1762	4498	1119	-5141	273	2796	-603	-3200	-1358	0		Zone ES+ includes ES and MA
5	-1585	4378	1484	-4478	62	2439	-603	-3200	-1242	0		Zone DE+ includes DE, DKw, parts of Austria and Luxembourg
6	-1721	4217	1304	-4634	197	2545	-603	-3200	-1299	0		Zone SHB includes SI, HR and BA
7	-1588	3507	422	-4672	699	2995	-604	-3200	-1221	0		Zone SMM includes ME, RS and MK
8	-1753	3277	206	-4823	1356	2239	-604	-3199	-1281	0		
9	-997	2520	634	-2885	613	2264	-603	-3200	-923	0		
10	-1260	2197	246	-3212	1933	2645	-603	-3200	-460	0		
11	-50	444	1601	-6552	2400	2935	-604	-3200	-304	0		
12	-1414	1764	315	-5136	2400	2995	-604	-3200	-167	0		
13	-1431	1713	315	-5273	2400	2665	-604	-3197	-166	0		
14	-1288	1486	315	-5274	2400	2814	-604	-3200	-377	0		
15	-1355	1619	344	-2703	2400	2995	-604	-3200	-642	0		
16	-1317	1791	315	-2593	2400	2995	-603	-3200	-664	0		
17	-1225	2043	404	-2936	2187	2995	-604	-3200	-103	0		
18	-50	902	1988	-5337	1574	2995	-604	-3160	-459	0		
19	-50	847	1692	-6149	2200	2995	-604	-2230	-717	0		
20	-1392	2440	312	-3592	2055	2995	-604	-1811	-665	0		
21	-1658	2599	100	-4229	2200	2995	-604	-2613	-573	0		
22	-2020	2216	471	-4780	2200	2995	-604	-3156	-889	0		
23	-1164	1410	315	-5416	2200	2995	-604	-2588	-805	0		
24	-906	1067	315	-5929	382	2995	-604	-2676	-1012	0		

Figure 18: Screenshot of the "Refprog" tab

Description:

- ▶ Refprog refers to AC market exchanges per border. Sum of AC market exchanges for all border of one country is equal to the AC export or AC import of this country;
- ▶ Refprog are used during merging of D2CF files with DACF files to ensure the whole continent is balanced, by respecting AC net positions of all continental countries, for D2CF and DACF files. During this process D2CF best forecasts may not match with the reference day Net Positions (extracted from one realized market coupling day in the past). D2CF are adapted by using GSK, in order not to alterate the FB results and to reach reference day AC Net Positions. This allows CWE TSOs to provide their best assumptions, and to merge with the whole continent.

Publication time: D+2 (ex-post)

3.3. All CBCO Fixed Label

Date: 2015-11-29 The data for 2015-11-29 has been retrieved successfully.

FileId	DeliveryDate	Period	Row	Presolved	RemainingAvailableMargin	BiddingArea_Shortname	Factor (MW)	BiddingArea_Shortname	Factor (MW)	BiddingArea_Shortname	Factor (MW)	BiddingArea_Shortname	Factor (MW)
333	20151129	1	17552702000	FALSE	1651 BE		0.00515 DEAT		0.01758 FR		-0.04157 NL		0.01292
333	20151129	1	17552701000	FALSE	1365 BE		0.00515 DEAT		0.01758 FR		-0.04157 NL		0.01292
333	20151129	1	17552700000	FALSE	1090 BE		0.00515 DEAT		0.01758 FR		-0.04157 NL		0.01292
333	20151129	1	18482142000	FALSE	1922 BE		-0.07794 DEAT		0.07653 FR		0.15512 NL		0.02593
333	20151129	1	18482141000	FALSE	1922 BE		-0.07794 DEAT		0.07653 FR		0.15512 NL		0.02593
333	20151129	1	18482140000	FALSE	1812 BE		-0.07794 DEAT		0.07653 FR		0.15512 NL		0.02593
333	20151129	1	17012942000	FALSE	1143 BE		0.01191 DEAT		-0.03641 FR		-0.09364 NL		-0.01758
333	20151129	1	17012941000	FALSE	1347 BE		0.02131 DEAT		-0.05403 FR		-0.10315 NL		-0.02588
333	20151129	1	17012940000	FALSE	1100 BE		0.02131 DEAT		-0.05403 FR		-0.10315 NL		-0.02588
333	20151129	1	18913950000	FALSE	2274 BE		0.06499 DEAT		0.17182 FR		0.27658 NL		0.11397
333	20151129	1	18913950000	FALSE	1914 BE		0.06499 DEAT		0.17182 FR		0.27658 NL		0.11397
333	20151129	1	17981342000	FALSE	1139 BE		-0.00025 DEAT		-0.02643 FR		0.04013 NL		-0.01385
333	20151129	1	17981341000	FALSE	1541 BE		-0.00025 DEAT		-0.02643 FR		0.04013 NL		-0.01385
333	20151129	1	17981340000	FALSE	1421 BE		-0.00024 DEAT		-0.02539 FR		0.03837 NL		-0.01331
333	20151129	1	17794022000	FALSE	1196 BE		-0.01281 DEAT		-0.07032 FR		-0.15683 NL		-0.04298
333	20151129	1	17794021000	FALSE	1196 BE		-0.01281 DEAT		-0.07032 FR		-0.15683 NL		-0.04298
333	20151129	1	17794020000	FALSE	975 BE		-0.01049 DEAT		-0.05801 FR		-0.13117 NL		-0.03543
333	20151129	1	17870832000	FALSE	1237 BE		-0.01325 DEAT		-0.07189 FR		-0.15380 NL		-0.04411
333	20151129	1	17870831000	FALSE	1237 BE		-0.01325 DEAT		-0.07189 FR		-0.15380 NL		-0.04411
333	20151129	1	17870830000	FALSE	949 BE		-0.01325 DEAT		-0.07189 FR		-0.15380 NL		-0.04411
333	20151129	1	18447132000	FALSE	2322 BE		0.04753 DEAT		0.18895 FR		0.31131 NL		0.11977
333	20151129	1	18447131000	FALSE	2322 BE		0.04753 DEAT		0.18895 FR		0.31131 NL		0.11977
333	20151129	1	18447130000	FALSE	1876 BE		0.02972 DEAT		0.12253 FR		0.21722 NL		0.07734
333	20151129	1	17098182000	FALSE	1075 BE		-0.01126 DEAT		-0.07921 FR		-0.16969 NL		-0.04780
333	20151129	1	17098181000	FALSE	1075 BE		-0.01126 DEAT		-0.07921 FR		-0.16969 NL		-0.04780
333	20151129	1	17098180000	FALSE	877 BE		-0.00828 DEAT		-0.06530 FR		-0.14173 NL		-0.03839
333	20151129	1	17434712000	FALSE	1236 BE		0.01090 DEAT		-0.03997 FR		-0.08676 NL		-0.02015

Figure 19: Screenshot of the "All CBCO Fixed Label" tab

Description:

This tab shows all the information about the CBCOs used for a particular date ("DeliveryDate") with a fixed label ("Row"). Each row gathers the features of one CBCO per hour:

- FileId: the identity number of the file;
- DeliveryDate: the corresponding Business Day;
- Period: the corresponding hour;
- Row: the fixed label of the CBCO;
- Presolved: if the value is TRUE then the corresponding CBCO constrains the FB domain (see PTDFs tab);
- RemainingAvailableMargin: the remaining available margin of the corresponding CBCO in MW;
- BiddingArea_Shortname: the bidding area of the following ptdf (Factor);
- Factor: the ptdf of the previous hub (BiddingArea_Shortname).



Explanation regarding labeling of fixed presolved anonymized CBCOs:

FileId	DeliveryDate	Period	Row	RemainingAvailableMargin	BiddingArea_Shortname	Factor
255,20140912,1,18612210000				394.0	BE	0.05748
255,20140912,1,18612210000				394.0	DE	-0.05132
255,20140912,1,18612210000				394.0	FR	-0.05882
255,20140912,1,18612210000				394.0	NL	-0.03241

HUB Translation

- 11 = BE
- 12 = BE-NL
- 13 = NL
- 14 = NL-DE
- 15 = DE
- 16 = DE-FR
- 17 = FR
- 18 = FR-BE

Explanation regarding labeling of fixed all anonymized CBCOs:

FileId	DeliveryDate	Period	Row	Presolved	RemainingAvailableMargin	BiddingArea_Shortname	Factor	BiddingArea_Shortname	Factor	BiddingArea_Shortname	Factor		
255,20140912,1,16471842000				false	1479.0	BE	0.05088	DE	-0.15591	FR	0.07400	NL	-0.12173
255,20140912,1,18612210000				true	394.0	BE	0.05748	DE	-0.05132	FR	-0.05882	NL	-0.03241

- ▶ *Fixed ID for CBCO* can be found as the element 'Row' in the csv. (i.e. Row = Fixed Anonymous ID for CBCO)
- ▶ *Presolved tag* can be found as the element 'Presolved' in the csv (**False** = not presolved / **True** = presolved). Presolved CBCOs are published in both files.

1



Elements ID explained:

- ▶ There are 11 characters in total, different characters represent various elements
 - **XX – XXXXX – X – XXX** (Hub – CBCO – Fmax / Spanning / Fallback – Enlarged and Virtual CBs)
 - **14439660000** (14 = Hub, 43966 = CBCO, 0 = Fmax / Fallback / Spanning & 000 = Virtual CBs)
 - More details on the 8th character
 - Fmax = 0-6 (this value is > 0 when the algorithm finds several times the same CBCO name)
 - Fallback = 7 (Default FB parameters)
 - Spanned before = 8 (Spanning is applied and the CBCO comes from the previous hour)
 - Spanned after = 9 (Spanning is applied and the CBCO comes from the next hour)

Publication time: D+2 (ex-post)

4 CASC Utility Tool Web Service

The web service can be accessed by 2 different URLs, each one with a different technology. The same methods with the same results can be called on each URL. The next section will explain each URL further.

4.1. ASMX Service

URL: <http://utilitytool.casc.eu/CascUtilityWebService.asmx>

WSDL: <http://utilitytool.casc.eu/CascUtilityWebService.asmx?WSDL>

This web service can be accessed by the following protocols: SOAP 1.1, SOAP 1.2, HTTP GET and HTTP POST.

For more information on using the ASMX, please visit the URL. This URL can also be used to query the data with a web browser for testing purposes.

4.2. SVC Service

URL: <http://utilitytool.casc.eu/CascUtilityWCF.svc>

WSDL: <http://utilitytool.casc.eu/CascUtilityWCF.svc?singlewsdl>

This web service can be accessed by the following protocols: SOAP 1.1 and SOAP 1.2.