

Annex II: The evaluation tool developed for the Report

The balancing evaluation tool has been developed to assess the national implementations of the Code through a standard and comprehensive assessment framework that covers the key requirements of the Code. The tool considers the key requirements of the Code and allows for a better understanding of the possible trade-offs that national implementations could be faced with. The tool, furthermore, offers the possibility of comparing the various balancing regimes, following European Union law. Six key features are covered by the evaluation tool, which are the followings:

- Short-term wholesale market enabling;
- TSO's use of the short-term balancing market;
- How a daily cash-out regime is delivered;
- How the TSO's neutrality is ensured;
- The way in which WDOs are applied;
- The use and execution of the interim regime.

Many of these areas are evaluated through an even broader set of criteria, which build up into an evaluation matrix.

The *Short-term wholesale market enabling* is evaluated via eight parameters, taking into account whether the following conditions are in place:

- VTP enables trade notifications;
- Trade notifications processed within x minutes;
- IP renominations enabled;
- Info requirements - system status;
- Info requirements - TSO balancing actions;
- Info requirements - network user portfolio;
- Trading Platform available and used by the TSO;
- STSPs defined and available on Trading Platform.

The *TSO's use of the short-term balancing market* is assessed using the following five parameters:

- TSO uses Trading Platform as first gas source;
- TSO uses title product as primary tool;
- TSO uses a Balancing Platform;
- TSO makes limited use of balancing services;
- TSO is transparent about balancing action costs.

The assessment of the *Daily cash-out regime* takes into account whether the following three indicators are fulfilled:

- Full daily cash-out is implemented;
- Cash-out prices are set using TP trades from the Trading Platform;
- Small adjustment delivers the marginal cash-out price.

In addition, the tool thoroughly evaluates whether *Neutrality* is fully implemented or not and whether and to what intensity WDOs *apply*.

Special attention was given to the evaluation of the *Interim* measures and the plans adopted in this framework, taking into account whether:

- The interim measures were agreed by the NRA.
- The series of steps within these interim measures were identified.
- There is any evidence that the first interim step was taken.
- There is evidence or process for the second step.

All these indicators were assembled in a single evaluation sheet (Table 15) - the tool that the Agency used during its assessment, in respect to the national implementations. The Table below contains also the scale applied and an explanatory field, which gives further insight into what has been considered by the Agency during the evaluation. Most evaluation scales are departing from a binary – yes / no – range, which, given the progressing implementations, was extended, in most cases, with an additional “envisaged” option. The simple scaling was meant to ensure that the tool is simple and easy to understood; however, for certain indicators the Agency applied a broader scale to be able to evaluate the different level of progress across the balancing zones of the Union (i.e. for instance, in case of the availability of a Trading Platform or interim measures).

All the parameters were analysed on Member State-by-Member State basis, using as much as possible the same coding.

Table 15: Balancing Network Code Country evaluation sheet

Key elements	Scale/ Coding	Explanation/discussion
Implementation date	2015,2016, interim	Articles 53, 52.1, 45.4. The Report uses 3 clusters: Cluster 2015 - should have implemented all enduring provisions; Cluster 2016 - obligation to deliver provisions from the Code by Oct 2016; Interim cluster – deliver most enduring provisions, except the ones addressed by interim measures.
Trade notification enabled	Yes, No Exceptionally, “Partial” is used for IT.	Article 5 and in particular paragraphs (2) and (8). VTP effectively enables Trade Notifications. Trade notification facility at least available to individual users from day-ahead to end of (gas) day, in respect to the gas day. The transaction should be delinked from any other transaction and should not be constrained in any way, e.g. physical nomination, requirement for the resulting “nominated imbalance”. Possible restrictions to be screened, including market closures, restrictions to access VTP. <u>Restrictions were rated lower</u> on a binary scale of 0 and 1.
Trade notifications processed within x minutes	30, 120	Article 5.3: limitations on timing. Checking whether any restrictions would be there. 30 minutes: is the minimum time for processing a transaction, once the second of the corresponding trading notifications is received. 120 minutes: should only be the standard, if it is not detrimental to the user. (There is little justification from an IT perspective, why 120 mins would be necessary to handle what is essentially an IT transaction).

Key elements	Scale/ Coding	Explanation/discussion
		<u>In a quantified assessment, 30 mins rated higher than 120 mins.</u> A binary scale of 0 and 1 was implemented.
IP renominations enabled (choice: renomination flexibility at the broader set of points)	Yes, No, Envisaged	<p>Articles 12 to 18, on nominations and renomination processes.</p> <p><u>'Yes'</u>, if conditions related to IP renominations and systems processes are in place, for both bundled and unbundled capacities.</p> <p><u>'No'</u>, if `access to system flexibility` is not properly enabled. Checking whether any restrictions are present. (Makes no reference to other points, such as production, storage, LNG points).</p> <p><u>'Envisaged'</u>: if the legal provisions and processes to enable IP renominations exist.</p> <p>A binary scale of 0 and 1 was implemented; for envisaged provisions a score of 0.5 was used.</p>
Info requirements - system status	Yes, No, Envisaged	<p>Article 32(1) and Annex I, Chapter 3 of Regulation 715/2009, Point 3.4.5.</p> <ul style="list-style-type: none"> end-of-day linepack with hourly projection frequency: applicable for daily balancing regimes, in particular the ones applying WDOs. aggregated imbalance position of users, used as a proxy to linepack. Frequency hourly, preferable hourly, once a day is considered as least effort. Acceptable for Variant 2 countries. <p><u>'Yes'</u>, if the specifications above are met.</p> <p><u>'No'</u>, if either frequency or the linepack conditions is not met.</p> <p><u>'Envisaged'</u>: existence of legal provisions and processes to enable information provision.</p> <p>A binary scale of 0 and 1 was implemented; for envisaged provisions a score of 0.5 was used.</p>
Info requirements - TSO balancing actions	Yes, No, Envisaged	<p>Article 32(2) and transparency obligation across Articles 6 to 11, including adequate frequency for the proposed obligations.</p> <p><u>'Yes'</u>, if the specifications of the Code are met, based on the submissions received.</p> <p><u>'No'</u>, if some of the requirements are missing.</p> <p><u>'Envisaged'</u>: existence of legal provisions and processes to enable information provision.</p> <p>A binary scale of 0 and 1 was implemented; for envisaged provisions a score of 0.5 was used.</p>
Info requirements - network user portfolio	Yes, No, Envisaged	<p>Article 32(3), in conjunction with the definition Articles 3(19), (20) and (21).</p> <p>Articles 33-42 on the detailed requirements and possible model applications.</p> <p><u>'Yes'</u>, if the specifications of the Code are met, based on the submissions received.</p> <p><u>'No'</u>, if missing specifications are found.</p> <p><u>'Envisaged'</u>: existence of legal provisions and processes to enable information provision.</p> <p>A binary scale of 0 and 1 was implemented; for envisaged provisions a score of 0.5 was used.</p>

Key elements	Scale/ Coding	Explanation/discussion
Trading Platform available and used by the TSO	No TP, Available, Available and used by the TSO Envisaged	<p>Article 10 on Trading Platforms. To the extent, Article 11 applies (incentives to kick off a market-based balancing regime).</p> <p><u>'Available and used'</u>, if the TP is available and the TSO is trading on it. Evidence might be obtained from the TSO's website or from the website of the Trading Platform Operator (TPO).</p> <p><u>'Available'</u>, if the Platform exists, but does not fulfil the criteria above, e.g. no trades take place on the Platform.</p> <p><u>'No TP'</u>, if the Platform has not been established.</p> <p><u>'Envisaged'</u>: existence of legal provisions and stakeholder processes to put the TP in place. Mainly, used to score the Member States opting for transitory measures, where these processes were ongoing and have not yet delivered clear results at the time of drafting of the Report.</p> <p>A scale of 0 and 2 was implemented, given the importance of this implementation step. <i>Envisaged</i> was scored at 0.5, while <i>Available Platforms</i> was scored at 1. The highest score was assigned to Platforms which were made available and were also used.</p>
STSPs defined and available on Trading Platform (TP)	Yes, No, Envisaged	<p>Article 7(1)-(6) and Article 9(1)-(3) STSPs to be defined based on the articles above and publicly available. Practical element: availability of short-term products on the TP.</p> <p><u>'Yes'</u> if STSPs are available on the TP according to the applicable rules.</p> <p><u>'No'</u>, if STSPs are not available on the TP.</p> <p><u>'Envisaged'</u>: existence of legal provisions and stakeholder processes to put the TP in place.</p> <p>A binary scale of 0 and 1 was implemented; for envisaged provisions a score of 0.5 was used.</p>
TSO uses Trading Platform as first gas source	Yes, No, Envisaged	<p>Real life application of Articles 10 and 9(1)-(3). Practical element: assessment based on the merit order file collecting Q4/2015 data. Where appropriate and provided by the NRA, the Agency collected more recent updates on the merit order to assess the progress of the balancing regimes in the past quarters.</p> <p><u>'Yes'</u>, if the TSO initially and primarily uses the Trading Platform, as its first source (rather than use balancing service "off-market" transactions).</p> <p><u>'No'</u>, if the Trading Platform plays secondary role compared to any other TSO action.</p> <p><u>'Envisaged'</u>, if the NRA provides evidence of prepared legislation, but the TSO is not using the TP. Mainly used to score Member States opting for transitory measures.</p> <p>A binary scale of 0 and 1 was implemented; for envisaged provisions, a score of 0.5 was used.</p>
TSO uses title product as primary tool	Yes, No, Envisaged	<p>Real life application of Articles 9 (1) and 7(3). Practical element: assessment based on the merit order file collecting Q4 2015 data and, where relevant, updates provided by the NRA.</p> <p><u>'Yes'</u>, if the TSO uses the title products as primary tool in its balancing actions.</p>

Key elements	Scale/ Coding	Explanation/discussion
		<p><u>'No'</u>, if the TSO says applies the merit order, but title products do not provide the desired certainty and, instead, locational or temporal actions are taken.</p> <p><u>'Envisaged'</u>: existence of legal provisions supplying the merit order and intentions to support the priority use of title products.</p> <p>A binary scale of 0 and 1 was implemented; for envisaged provisions a score of 0.5 was used.</p>
TSO uses Balancing Platform	Yes, No	<p>Article 47 and Article 3(6), providing the definition. Practical element: assessment based on the merit order file collecting Q4 2015 data and the information from the survey.</p> <p><u>For interim measures</u>: Balancing Platform was scored "1". Balancing Platforms could represent an important evolutionary step for the interim measures countries and their markets, where liquidity and confidence in the market is low.</p> <p><u>For other clusters</u> : In any other case, the Balancing Platform shouldn't be used and for this reason, the scoring of existing Balancing Platforms in the 2015 and 2016 cluster was scored "0".</p>
TSO makes limited use of balancing services	Yes, No Exceptionally, "Envisaged" is used for IT, PT.	<p>Article 8, in conjunction with Article 6(4). (For interim measures, Article 48 could apply, where subject to NRA approval, the terms and conditions, as well as the duration of the contract, could be specified).</p> <p>Practical element: assessment based on the merit order file, collecting Q4 2015 data and the information from the survey. Any future data source should be covering at least 3 months. A 50% thresholds was used.</p> <p><u>'Yes'</u>, if balancing services represented less than 50% of balancing actions.</p> <p><u>'No'</u>, if balancing services are more limited than the threshold.</p> <p>A binary scale of 0 and 1 was implemented; for envisaged provisions a score of 0.5 was used.</p> <p>Absent specific criteria the Swedish application of specific interim measures as provided by Article 45(2) was included here. The weekly trades, although would not constitute as balancing services, would not fit the provisions of Article 9 either.</p>
TSO transparency about balancing action costs	Yes, No, Envisaged Exceptionally, "Partial" is used for SK.	<p>Article 9(4) on the TSO transparency, Article 8(7) on the TSO transparency on the use of balancing services and Article 10(5) on the transparency provisions for the Trading Platform operator. Practical element: links to relevant websites and assessment of the content.</p> <p>Some TSOs might have not yet published, as required (on a yearly basis). Others, might be publishing on an ongoing basis. For example, Germany may be one of the best in class with all individual balancing actions classified against MOL ranking and published in a timely manner.</p> <p><u>'Yes'</u>, if data is made available. <u>'No'</u> otherwise.</p> <p><u>'Envisaged'</u>, if data is not yet available, but the legislation and the processes are already in place. Used for the transitory cluster alone.</p> <p>A binary scale of 0 and 1 was implemented; for envisaged provisions a score of 0.5 was used.</p>

Key elements	Scale/ Coding	Explanation/discussion
Full daily cash-out implemented	Yes, No, Envisaged	<p>Article 23 in correlation with Article 22(1) and (2). The thorough application of Chapter V is appreciated as well.</p> <p><u>'Yes'</u> if full daily cash-out that would involve that network users positions are set to zero and other additional measures (tolerances, etc.) would not distract its application.</p> <p><u>'No'</u> in case any tolerance or "linepack carry-over" into next day are utilised.</p> <p><u>'Envisaged'</u>: existence of legal provisions and processes to put the provision in place. Used for the transitory cluster alone.</p> <p>A binary scale of 0 and 1 was implemented; for envisaged provisions a score of 0.5 was used.</p>
Cash-out prices set using TP trades	Yes, No, Envisaged Exceptionally, "Partial" is used for NL.	<p>Article 22, under the understanding that "the related trades shall be made on the Trading Platform", requiring that beyond the application of the legal provisions real trades do take place and underpin the prices.</p> <p>Article 49(3) – for interim measures, which includes the option of a proxy for market price for imbalance.</p> <p>Practical element: links to methodology or a brief description of a methodology.</p> <p><u>'Yes'</u> if only "prices" feeding the cash-out calculation are derived from relevant TP trades and where the TP is used by the TSO.</p> <p><u>'No'</u> if other prices apply, which are purely administered, proxy prices from other sources, or balancing zones apply, or where prices are derived from non-Platform balancing services.</p> <p><u>'Envisaged'</u>: existence of published methodologies and processes that foresee their application. Used for the transitory cluster alone.</p> <p>A binary scale of 0 and 1 was implemented; for <i>envisaged</i> provisions a score of 0.5 was used. <i>Partial application</i> also scored 0.5.</p>
Small adjustment to deliver marginal cahoots price	Minimal, moderate, large Exceptionally, "None" is used for AT.	<p>Article 22(6) and (7), whereby the Code sets a maximum threshold at 10% of Weighted Average Price (WAP).</p> <p><u>'Large'</u> is considered to be more than 10%.</p> <p><u>'Moderate'</u> covers a range from 2.5% to 10%.</p> <p><u>'Minimal'</u> range less than 2.5%. Minimal should be sufficient to encourage trading to avoid imbalance exposure, provided network users have good quality information to feed their risk management, liquidity is high in the short-term market and trading transaction costs are low.</p> <p>Some countries have not set up a small adjustment or envisaged (transitory measures) setting this up.</p> <p>The scoring established a scale of '0 to 1.5'. '0' for non-application, '0.5' for large adjustment, '1' for moderate adjustment and '1.5' for minimal adjustments.</p>

Key elements	Scale/ Coding	Explanation/discussion
Neutrality fully implemented	Yes, No, Envisaged Exceptionally, "Envisaged/under review" is used for HR, SI.	<p>Articles 29 to 30, in particular, transparency on the methodology and the charging was reviewed. Further checks applied to the variant 2 countries, in conjunction with Article 30(5) and (6). Article 43(5) – neutrality for linepack service.</p> <p>Practical element: The neutrality methodology to be published (link). Neutrality costs and redistributions should be separated from transmission revenues.</p> <p><u>'Yes'</u>, if the elements above are observed.</p> <p><u>'No'</u>, if some of them are missed.</p> <p><u>'Envisaged'</u>: existence of published neutrality methodologies and processes that foresee their application.</p> <p>A binary scale of 0 and 1 was implemented; for <i>envisaged</i> provisions a score of 0.5 was used.</p>
Limited Within-day Obligations	None, Limited, Extensive	<p>Articles 25 to 28, with a particular focus on the effectiveness based on Article 26 (2) and (5).</p> <p>Practical consideration: Whilst WDOs may be necessary in some systems, they should not unduly limit the activities of the network users, nor should they create material costs of management within the network users. The criteria in the Code associated with introducing WDOs are challenging and structured to avoid WDO, unless justified. The debates on this topic were not fully conclusive and a verbal scoring has been maintained in the end.</p>
Interim measures agreed by the NRA	Yes, No	<p>Articles 46 for the Report, Articles 45(2), Articles 47 to 50 for the interim measures used. Process articles are Article 46(3) and 27(2). Practical consideration: whether NRAs assessed the reports submitted by the TSOs.</p> <p><u>'Yes'</u>, if the Report assessed whether 1) liquidity (either observed or envisaged) is / has been inadequate and 2) more time, and an orderly transition to full enduring provisions are necessary as well as 3) a fact based NRA decision.</p> <p><u>'No'</u> otherwise.</p> <p>A binary scale of 0 and 1 was implemented.</p>
Series of steps identified	Yes, No	<p>If Interim measures are necessary, then many changes are necessary, and a "big bang" single implementation is not credible. Thus, a series of steps are mandatory, including a migration plan. This plan is essential, although later steps might be contingent on assessment of the effects of earlier steps.</p> <p>Practically, the Agency checked whether the measures provided by Articles 45(2) and 47 to 50 are used and connected to a timeline for an orderly transition.</p> <p><u>'Yes'</u> (the transition is taking place), if at least one intermediate step between current state and full implementation of the enduring provisions is recognised.</p> <p><u>'No'</u> otherwise.</p> <p>A binary scale of 0 and 1 was implemented.</p>
Evidence of first step	Taken, Envisaged, None	<p>Practically, the Agency checked whether the first step foreseen was taken, envisaged or was not taken, for the foreseen interim measures above.</p> <p>A scale of 0, 0.5 and 1 was used to reflect the various stages.</p>

Key elements	Scale/ Coding	Explanation/discussion
Evidence or process for second step	Taken, In Process, Envisaged, Not Envisaged	<p>This element is designed to assess whether change has taken place and the next migratory step is imminent, from a process perspective.</p> <p>A scale of 0, 0.5, 0.75 and 1 was used to reflect the various stages of development.</p>

Annex III: Detailed Country assessment

	scaling approach	AT	BELUX	DE	DK	FR	HU	NL	SI	UK_GB	CZ	ES**	HR	IT	PT	BG	EL	IE	LT	NI	PL	RO	SE	SK	
Implementation date		2015	2015	2015	2015	2015	2015	2015	2015	2015	2016	2016	2016	2016	2016	2019	2019	2019	2019	2019	2019	2019	2019	2019	
Trade notification enabled	0.5 for partial and envisaged	1	1	1	1	1	1	1	1	1	1	1	1	0.5	1	0.5	0.5	1	1	1	1	0.5	1	1	
Trade notifications processed (mins)	0.5 for 120 min, IT got 1 although	1	1	1	0.5	1	0.5	1	0.5	1	1	1	0.5	1	0.5	0	0	1	1	1	0.5	0.5	1	0.5	
IP renominations enabled		1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.5	1	0	1	1	0.5	1	1	
Info requirements - system status	0.5 for envisaged	1	0	1	1	1	1	0	0	1	0	1	0.5	1	0	0	0	1	1	0	0	0	0	1	1
Info requirements - TSO balancing actions	0.5 for envisaged	0	1	1	1	1	1	1	1	1	1	1	0.5	1	0.5	0	1	0	0.5	1	1	1	1	0	0
Info requirements - network user portfolio	0.5 for envisaged, NI	1	1	1	1	1	1	1	1	1	0.5	1	0.5	0	0.5	0	1	1	1	1	1	1	0	0	1
Trading Platform available and used by the TSO	A+U=2; A=1, E=0.5, N=0	2	2	2	2	2	2	2	2	2	2	1.75	0.5	0.5	0.5	0	0	0	1	0	2	0	0	0	0
STSPs defined and available on Trading Platform	0.5 for envisaged, CZ got	1	1	1	1	1	1	1	1	1	0.5	1	0.5	1	0.5	0	0	1	1	0	1	0	0	0	1
TSO uses Trading Platform as first gas source	0.5 for envisaged	1	1	1	1	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0	0	0	0	0	0	1	0	0	0
TSO uses title product as primary tool	0.5 for envisaged	1	1	0	1	1	0	1	1	1	1	0.5	0.5	0.5	0.5	0	0	0	0	0	0	1	0	0	1
TSO uses Balancing Platform	Values are scored in relation	1	1	0	1	1	0	1	1	1	1	1	0	1	1	0	0	0	1	0	0	0	0	0	1
TSO makes limited use of balancing services	0.5 for envisaged	1	1	1	1	0.75	1	1	1	1	1	1	1	0.5	0.5	0	0	0	0	0	1	0	0	0	1
TSO transparency about balancing action costs	0.5 for envisaged,	0	1	1	1	1	1	1	0.5	1	0.5	0.5	0.5	0.5	0.5	0	1	0	0.5	0.5	1	1	1	1	0.5
Full daily cash-out implemented	0.5 for envisaged	0	1	1	1	1	0.5	0	1	1	0	1	0.5	0.5	0.5	0	0	0	0	0	0	0	0	0	0.5
Cash-out prices set using TP trades	0.5 for envisaged,	0	1	1	1	1	1	0.5	1	1	1	1	0.5	0.5	0.5	0	0	0	0	0	0	0	0	0	0
Small adjustment to deliver marginal cash-out	N=0, L=0.5; Mod=1; Min=1.5	0	1	1.5	1.5	1	1.5	1.5	0.5	1	1	1	0.5	1.5	1	0	0	1	0.5	0.5	0.5	0.5	0	0.5	
Neutrality fully implemented*	E=0.5	0*	1	1	0*	1	0*	0*	0*	1	0*	0.25	0.5	0.5	0*	0*	1	0*	0*	1	1	0*	0*	1	
Within-day Obligations***	EX,L,N	EX	L	EX	N	N	N	L	N	N	N	N	N	N	N	E	N	N	N	N	N	N	N	N	N
Interim measures agreed by the NRA				1												1	1	1	1	1	1	1	1	1	1
Series of steps identified				0												0	0	1	1	0	1	0	1	1	1
Evidence of first step	T=1, N=0, E=0.5			1												0	0	1	1	1	1	0	0.5	0	0
Evidence or process for second step	N=0, E, P=0.5, T=1			0.5												0	0	0.75	0.5	0.5	1	0	0	0	0
Totals		12	17	19	17	17.75	14.5	15	13.5	18	13	14.5	9.5	12	9.5	2	6	10.75	12	9.5	17	5	8.5	13	
%		64.86%	91.89%	84.44%	91.89%	95.95%	74.36%	81.08%	78.38%	97.30%	70.27%	83.78%	51.35%	64.86%	51.35%	8.89%	26.67%	47.78%	53.33%	42.22%	75.56%	22.22%	37.78%	57.78%	
		AT	BELUX	DE	DK	FR	HU	NL	SI	UK_GB	CZ	ES	HR	IT	PT	BG	EL	IE	LT	NI	PL	RO	SE	SK	

* The scoring of zero regarding the implementation of the neutrality principle does not mean that the approach followed is not neutral, but that the implementation is not fully satisfactory.

For specific reasons behind the scoring, refer to the relevant detailed country assessment.

** For Spain, Information on system status and TSO balancing actions is provided since 1 October 2016. The current assessment will need scrutiny over the coming year.

*** Within-day Obligations are not taken into account in the scoring. A further assessment of the situation will be conducted over the coming year.

Annex IV: Merit order

Comparison of Merit orders - Cluster 2015

Countries	Balancing product (e.g. within-day title products, within-day locational products, day-ahead title products, day- ahead locational products)	Monthly averaged volumes procured in Q4 2015 (MWh or link in English)	Monthly averaged weighted average price in Q 4 2015 (€/MWh or link in English)	Number of balancing actions in Q4 2015 (monthly averaged)
AT	Within-day title product - buy	81,576.00	18.35	18
AT	Within-day title product - sell	7,400.00	17.3	2
BE/LU - Belux H integrated area	Within-day title products - buy	29,436.00	17.74	26.33
BE/LU - Belux H integrated area	Within-day title products - sell	54,457.33	16.13	49
BE - Belgian L-area	Within-day title products - buy	21,175.00	18	30
BE - Belgian L-area	Within-day title products - sell	11,657.00	16	24
DK	Within-day title product - buy	53,232.00	18.57	19
DK	Within-day title product -sell	6,600.00	16.18	4
FR (GRTGAZ)	Within-day title products - buy	173,926.67	18.68	5
FR (GRTGAZ)	Within-day title products - sell	224,040.00	16.48	11.67
FR (GRTGAZ)	Locational within-day title products - buy	0.00	0	0
FR (GRTGAZ)	Locational within-day title products - sell	566.67	12	0.33
FR (GRTGAZ)	Balancing services	10,000.00	Expired in March 2016	6
FR (TIGF)	Within-day title products (TIGF) -buy	4,277.00	18.24	3
FR (TIGF)	Within-day title products (TIGF) -sell	-	-	-
FR (TIGF)	Balancing services	Data unclear		
HU (buy/sell not traceable, will be available as of October 2016)	Within-day title product (MGP) (TP)	26,520.00	20	33
HU (buy/sell not traceable, will be available as of October 2016)	Day-ahead title products (CEEGEX DA) (TP)	11,225.00	18	2
HU (buy/sell not traceable, will be available as of October 2016)	Within-day locational product (HEG) (TP)	171,285.00	20	65
HU (buy/sell not traceable, will be available as of October 2016)	D-1 to D+1 locational product on the Balancing Platform (HEGO)* (BP)	31,855.00	21	10

NL	TTF WD(WD Title product on ICE ENDEX Exchange) - buy	32,676.00	17	16
NL	TTF WD(WD Title product on ICE ENDEX Exchange) - sell	32,982.00	17	11
NL	TTF Next-hour (WD temporal product on ICE ENDEX Exchange) - buy	26,022.00	25	2
NL	TTF Next-hour (WD temporal product on ICE ENDEX Exchange) - sell	25,560.00	13	2
SI – Q4 2015	Within-day title products at TP - buy	177	18.26	2
SI – Q4 2015	Within-day title products at TP - sell	7,922.00	18.22	29
SI – Q4 2015	Day-ahead title products at TP - buy	0	0	0
SI – Q4 2015	Day-ahead title products at TP - sell	26,828	18	32
SI – Q4 2015	Balancing services	24,742.00	17.98	12.67
SI – Q1 2016	Within-day title products at TP - buy	153	13.78	1
SI – Q1 2016	Within-day title products at TP - sell	18,796.00	13.58	47
SI – Q1 2016	Day-ahead title products at TP - buy	1,000.00	13.75	2
SI – Q1 2016	Day-ahead title products at TP - sell	65,143.00	13.92	58
SI – Q1 2016	Balancing services	1,400.00	13.3	1
UK-GB	Daily title products - buy	190,369.20	13.18	82
UK-GB	Daily title products - sell	101,392.80	12.34	49
DE (NCG)	Title products (Day and Rest of Day) on the exchange (with delivery at the VTP NCG) - buy	547,476.33	18.34	16
DE (NCG)	Title products (Day and Rest of Day) on the exchange (with delivery at the VTP NCG) - sell	227,304.33	17.62	11.33
DE (NCG)	Locational products (Day and Rest of Day) on the exchange (title products with delivery in a defined gas quality) - buy	2,144,431.00	18.22	62.67
DE (NCG)	Locational products (Day and Rest of Day) on the exchange (title products with delivery in a defined gas quality) - sell	1,287,640.67	15.51	42
DE (NCG)	Locational products (Day and Rest of Day) on the exchange in adjacent market areas (currently title products with delivery at TTF in the Netherlands) - buy	203,393.67	18.08	15.33

DE (NCG)	Locational products (Day and Rest of Day) on the exchange in adjacent market areas (currently title products with delivery at TTF in the Netherlands) -sell	47,503.33	15.52	4
DE (NCG)	Locational Market Transactions on the Balancing Platform (Day and Rest-of-Day, in Q4 2015 only Rest-of-Day Products were bought/sold) buy <i>Transactions on the bilateral physical Balancing Platform of GPL (short-term products with delivery in a defined network zone or at defined network points)</i>	23,960.00	20.33	0.67
DE (NCG)	Locational Market Transactions on the Balancing Platform (Day and Rest-of-Day, in Q4 2015 only Rest-of-Day Products were bought/sold) - sell <i>Transactions on the bilateral physical Balancing Platform of GPL (short-term products, with delivery in a defined network zone or at defined network points)</i>	0	0	0
DE (NCG)	Balancing Services - Long Term Options	3,590 MW (contracted), 0 (used)	475,706.00 € (monthly averaged demand rate, paid at contracting) + 20,47 €/MWh (working price, not called)	0
DE (NCG)	Balancing Services - Intraday Flexibility	4,200 MW (contracted), used within the contracted range	6,455,248.33 € (monthly averaged demand rate)	0
DE (Gaspool)	Title products (Day and Rest-of-Day) on the exchange (title products with delivery at the VTP GPL) - buy	758,209.00	17.37	27.33
DE (Gaspool)	Title products (Day and Rest-of-Day) on the exchange (title products with delivery at the VTP GPL) - sell	93,843.00	15.88	3.33
DE (Gaspool)	Locational products (Day and Rest of Day) on the exchange (title products with delivery in a defined gas quality) - buy	236,163.33	17.76	33
DE (Gaspool)	Locational products (Day and Rest-of-Day) on the exchange	24,695.67	15.22	4.33

	(title products with delivery in a defined gas quality) - sell			
DE (Gaspool)	Locational products (Day and Rest-of-Day) on the exchange in adjacent market areas (currently title products with delivery at TTF in the Netherlands) - buy	163,286.33	17.57	25.33
DE (Gaspool)	Locational products (Day and Rest-of-Day) on the exchange in adjacent market areas (currently title products with delivery at TTF in the Netherlands) -sell	320	18.33	0.33
DE (Gaspool)	Locational Market Transactions on the Balancing Platform (Day and Rest-of-Day, in Q4 2015 only Rest-of-Day Products were bought/sold) - buy <i>Transactions on the bilateral physical Balancing Platform of GPL (short-term products with delivery in a defined network zone or at defined network points)</i>	480	21.28	1
DE (Gaspool)	Locational Market Transactions on the Balancing Platform (Day and Rest-of-Day, in Q4 2015 only Rest-of-Day Products were bought/sold) -sell <i>Transactions on the bilateral physical Balancing Platform of GPL (short-term products with delivery in a defined network zone or at defined network points)</i>	3,433.00	16.18	0.33
DE (Gaspool)	Balancing Services - Long Term Options	0	0	0
DE (Gaspool)	Balancing Services - Intraday Flexibility	5450 MW (contracted), used within the contracted range	1370177,8 (monthly averaged demand rate, paid at contracting) + 0,138 €/MWh (Monthly averaged weighted average working price, called)	12

Comparison of Merit orders - Cluster 2016*

Countries	Balancing product (e.g. within-day title products, within-day locational products, day- ahead title products, day- ahead locational products)	Monthly averaged volumes procured in Q4 2015 (MWh or link in English)	Monthly averaged weighted average price in Q 4 2015 (€/MWh or link in English)	Number of balancing actions in Q4 2015 (monthly averaged)
HR	Day-ahead locational product - buy	13,120.00	31	6
HR	Day-ahead locational product - sell	20,000.00	19	12
HR	Balancing services - buy	480	34.82	0.3
HR	Balancing services - sell	4,800.00	19,03	3
HR - prospect, expected as of Q4 2016	Title products	0	0	0
HR - prospect, expected as of Q4 2016	Locational products	0	0	0
HR - prospect, expected as of Q4 2016	Balancing services	0	0	0
IT-Q4 2015	Day+1 (standard product, locational type of product, sold on the Balancing Platform +) – buy	1,564.83	20	17
IT-Q4 2015	Day+1 (standard product, locational type of product, sold on the Balancing Platform +) – sell	1,036.50	19	13
IT-Q4 2015	Day -1 (products sold in tight market conditions, locational type of product, sold on the Balancing Platform +) – buy	784.61	22	8
IT-Q4 2015	Day -1 (products sold in tight market conditions, locational type of product, sold on the Balancing Platform +) – sell	0	0	0

IT-Q4 2015	Balancing services (used)	30,175,200 MWh (storage space), 8,778,218.4 MWh/d (Injection capacity), 8,778,218.4 MWh/d (withdrawal capacity). Injected 423,215.50 MWh, withdrawn 263,085.08 MWh		30.67
IT prospect, expected as of Q4 2016	Title products	0	0	0
IT prospect, expected as of Q4 2016	Locational products	0	0	0
ES** Prospect for Q4 2016	Within-day title products	0	0	0
ES** Prospect for Q4 2016	Locational within-day title products	0	0	0
ES** Prospect for Q4 2016	Day-ahead title products	0	0	0
ES** Prospect for Q4 2016	Locational day-ahead products	0	0	0

* Czech Republic – The products included in the merit order communicated for Q4 2015 were different from the ones allowed by the Code and were therefore not listed here. No merit order was communicated for 2016.

**Portugal – The Spanish approach may be adopted in the coming year.

Comparison of Merit orders - Interim measures countries¹

Countries	Balancing product (e.g. within-day title products, within-day locational products, day- ahead title products, day-ahead locational products)	Monthly averaged volumes procured in Q4 2015 (MWh or link in English)	Monthly averaged weighted average price in Q 4 2015 (€/MWh or link in English)	Number of balancing actions in Q4 2015 (monthly averaged)
EL	Balancing services - buy	105,000.00	25	12
EL	Balancing services - sell	0	0	0
IE	Balancing services - buy	8,333.33	7.85	1.67
IE	Balancing services - sell	1,666.67	4.93	0.33

¹ The merit orders communicated for Bulgaria and Romania are not listed here as the necessary market environment in which those merit orders would be applied is still missing.

LT-Q4 2015	Within-day title products	0	0	0
LT-Q4 2015	Day-ahead title products	0	0	0
LT-Q4 2015	Balancing services - buy	109	12.88	30
LT-Q2 2016	Within-day title products	0	0	0
LT-Q2 2016	Day-ahead title products	0	0	0
LT-Q2 2016	Balancing services - buy	176	12.33	30
PL- methane gas balancing area*	Intra-day short-term standardised title products on Polish commodity exchange market (TGE) - buy	91,682.00	19.55	12.3
PL- methane gas balancing area*	Intra-day short-term standardised title products on Polish commodity exchange market (TGE) - buy	63,675	16.24	9.7
PL- methane gas balancing area*	Day -ahead short-term standardised title products on Polish commodity exchange market (TGE) - buy	6,088.00	13.87	1
PL- methane gas balancing area*	Day -ahead short-term standardised title products on Polish commodity exchange market (TGE) - sell	2,336.00	18.18	0,3
PL- methane gas balancing area*	Intra-day short-term standardised title products on European Energy Exchange (EEX) GASPOOL, trading in adjacent market - buy & sell	0	0	0
PL- methane gas balancing area*	Day-ahead short-term standardised title products of European Energy Exchange (EEX) GASPOOL, trading in adjacent market - buy & sell	0	0	0
PL- methane gas balancing area*	Title product on the Balancing Platform, gas delivery and off-take at a virtual entry point - buy & sell	0	0	0
PL- methane gas balancing area*	Locational product on the Balancing Platform (gas delivery at the physical entry point, gas off-take at a physical exit point, reduction of gas delivery at a physical entry point) - buy & sell	0	0	0

SE	Interim measures - Balancing Action Trade buy & sell	0	0	0
SE	Interim measures - Weekly Trading sell	9,600.00	15.5	3
SE	Interim measures - Weekly Trading buy	4,080.00	17	1
UK-NI	Balancing services - buy	11,866.67	18.57	5.3
UK-NI	Balancing services - sell	666.67	17.72	0.7

*Poland – High methane gas balancing area – Balancing services in Branice Q4 2015 have been contracted as from 1 January 2016. The NRA communicated merit orders for its SGT and low-cal zones; however, no figures were associated to the products.