Publishing date: 31/05/2016


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ACER annual report on contractual congestion at interconnection points

Period covered: 2015

Third Edition
31 May 2016

ACER - Agency for the Cooperation of Energy Regulators
Trg Republike 3, 1000 Ljubljana, Slovenia

Mr David Merino
Tel. +386 (0)8 2053 417
Email: david.merino@acer.europa.eu
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Note: All hyperlinks referred to in this document were correct and functioning at the time of publication.
Executive Summary

The purpose of this report is to identify contractual congestion at Interconnection Points (IPs) in the European Union for the period 2015-2017. For the purpose of this report, contractual congestion is identified if at least one of the four criteria listed in paragraph 2.2.3(1) of the Congestion Management Procedures Guidelines ('CMP GL') is met. Therefore, this report not only analyses where demand exceeded the offer of firm capacity, but also at which IP sides no firm capacity product with a duration of one month or longer was offered.

Relying on the available data, the following conclusions can be drawn:

- 41 (or about 17%) of the 246 IP sides in scope of the CMP GL were contractually congested in the reference period. These IP sides are listed in Annex 4. According to paragraph 2.2.1.4 and 2.2.3.1 of the CMP GL, the Firm Day-Ahead Use-It-Or-Lose-It (FDA UIOLI) mechanism shall be implemented at these IP sides as of 1 July 2016.

- As FDA UIOLI mechanism is already applied at 22 of these 41 IP sides, this means that at the remaining 19 contractually congested IP sides (cf. Annex 5), which should have implemented and applied Oversubscription and Buy-Back rules by October 2013, the respective NRA shall require the relevant TSO(s) to implement and apply the FDA UIOLI mechanism by 1 July 2016.

- Most contractual congestion was found at the borders of Germany with its neighbours, where the FDA UIOLI mechanism is already applied. Other cases of contractual congestion were found at IP sides between Bulgaria and Greece, between Romania and Bulgaria, between the Czech Republic and Poland, and at the Interconnector IUK IP sides. In the latter case, the congestion is mitigated by active secondary trading. The French in-country North-South connection was found congested as well, but the latest auction data from 2016 suggests that this congestion no longer exists.

- 88% of the contractual congestion is due to the non-offer of firm products with a duration of at least one month for use between 2015 and 2017. Congestion is signalled by auction premia for monthly and yearly products at only 2 and 3 IP sides, respectively.

- 20 of the 41 congested IP sides in this report were already assessed as congested in the Agency’s previous congestion report, and 10 of those even in the first report.

- At 22 of the congested IP sides the FDA UIOLI mechanism is already implemented, and therefore their identification as contractually congested in this report will not have any material effect.

- Physical congestion, indicated by actual interruptions of interruptible capacity, occurred (temporarily) at 9 of the contractually congested IP sides, mostly only for a few days in 2015.

- Congestion management procedures (CMPs) have yielded additional capacity offers only at the borders of 6 Member States in 2015; no application of the Long-Term Use-It-Or-Lose-It (LT UIOLI) mechanism has been reported to the Agency. Oversubscription is only applied in 4 Member States, and almost all additional capacity amounts are offered on the Dutch IP sides.

In order to facilitate future data processing and to improve the quality of future reports, the Agency provides a number of recommendations on data and transparency for ENTSOG’s Transparency Platform and for the three capacity booking platforms (section 8.2).

In section 8.3, the Agency also offers some policy recommendations to the Commission, concerning in particular the scope and definition of contractual congestion, a minimum number of upcoming gas years to be offered in auctions and a future implementation period.
1 Introduction

(1) According to paragraph 2.2.1(2) of the Commission Guidelines on Congestion Management Procedures (hereafter, the ‘CMP GL’1) the Agency for the Cooperation of Energy Regulators (‘the Agency’) is responsible for publishing a yearly monitoring report on congestion at interconnection points (‘IPs’) by 1 June of each year2, starting from 2014.

(2) This 3rd edition of the report is based on data on firm capacity products sold in 2015 for use in 2015, 2016 and/or 2017, taking into consideration, to the extent possible, capacity trading on the secondary market and the use of interruptible capacity. Such data has to be published by each Transmission System Operator (‘TSO’) pursuant to Section 3 of Annex I of Regulation (EC) No 715/20093 and, where appropriate, validated by national regulatory authorities (‘NRAs’).

(3) The main purpose of this report is to identify the existence of contractual congestion at IPs between entry-exit zones in the European Union, based on the definition in Article 2(21) of Regulation (EC) No 715/20094. In particular, the report aims to detect whether at least one of the specific conditions set out in paragraph 2.2.3(1) of the CMP GL is met during the reference period, from 1 January 2015 to 31 December 2017. In the event that one of those conditions is met, the Firm Day-Ahead Use-It-Or-Lose-It (‘FDA UIOLI’) CMP mechanism is triggered. The concerned NRAs shall then require the respective TSOs to apply the FDA UIOLI mechanism at the congested IP (side) as of 1 July 2016, unless it is shown that a congested situation is unlikely to reoccur in the following three years, e.g. due to capacity becoming available by a physical expansion of the network or through the termination of long-term contracts. In such cases, the relevant NRAs may decide to terminate the FDA UIOLI mechanism.

(4) All IPs within scope of the CMP GL, including those found congested in the two preceding reports (2014 report5 and 2015 report6), are (re)assessed in this 3rd edition.

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2 The original deadline of 1 March was changed to 1 June of every year.
4 cf. section 2.2
2 Scope of the report and definition of contractual congestion

2.1 Scope of the report

The report covers cross-border IPs, in-country inter TSO IPs connecting entry-exit zones, IP sides with a third country and virtual IPs, to which the Network Code on Capacity Allocation Mechanisms (NC CAM) applies, as covered in the ‘NC CAM IP scope list’. This scope list is regularly updated by ENTSOG and the Agency. The last published version - covering 186 IPs - was reviewed by the Agency, disaggregating the IPs into their entry and exit sides (‘IP sides’) for the purpose of a NC CAM implementation monitoring survey. From that survey, the Agency received various TSO and NRA comments on the list by the end of March 2016, which led to an updated NC CAM scope list, which currently contains 347 IP sides.

For the congestion analysis, the Agency worked under the assumption that CMP measures apply to the same IPs included in this NC CAM scope list, except for those IP sides without any firm technical capacity. Additionally, 9 IP sides with non-EU countries, where NRAs have not decided to apply the CMP GL, have been also excluded. The point-by-point analysis of technical capacity – using ENTSOG’s Transparency Platform, auction reports, ENTSOG’s capacity map and TSO/NRA feedback – resulted in a total of 101 IP sides being out of scope, leaving 246 IP sides within the scope of the CMP GL.

Chapter 0 of the report presents in detail the data sources used and the methods applied for the analysis of congestion based on the specific indicators provided in paragraph 2.2.3(1) of the CMP GL.

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10 I.e. doubles and no longer existent IP sides were removed, new IP sides added, EIC codes, names and directions corrected and updated and a categorisation of IP types was added.

11 Such IP sides mainly concern “virtual reverse flow” IP sides (i.e. interruptible backhaul directions), but also at least 7 IP sides, where currently no (firm) capacity has yet been marketed (e.g. IP still under construction). To facilitate the differentiation of the NC CAM IP scope list from the CMP GL IP scope list, a marker/filter for IP sides within the CMP GL’s scope was added.

12 These 101 IP sides also include “special cases”, such as the LUX IP sides of Remich (for which a derogation has been granted), or “double” IP sides from the NC CAM scope list (e.g. Wallbach (exit Fluxys TENP), Negru Voda II,III Entry Bulgarransgaz), Oltingue (Exit GRTgaz) for which two TSOs exist on the other side of the IP (with whom dedicated bundled capacity products could be offered in the future), and 6 further IP sides (Haanrade (2x), PoppeI(2x), Blaregnies, Petrzalka), which have to be removed from the CMP scope list for other various reasons.
(9) The analysis of contractually congested IP sides in Chapter 4 is completed with an analysis on the offer and use of interruptible products (based on ENTSOG’s Transparency Platform), on the occurrence and extent of unsuccessful requests and on the regional localisation of congestion.

(10) Furthermore, occasionally occurring physical congestion is signalled through the indicator “actual interruptions of nominated interruptible capacity” at contractually congested IP sides (Section 4.4).

(11) Chapter 5 covers an assessment of secondary capacity trades for the congested IP sides (based on TSO data) and an analysis of capacities made available through the application of the various CMPs in 2015.

(12) For two examples of IPs, where data was provided by the NRAs, the links between capacity bookings, flows and price spreads between adjacent markets are explored in a congested and a non-congested situation (Chapter 6).

(13) Chapter 7 supplements the congestion analysis with recent data from the March 2016 auction reports.

(14) IP sides already indicated as congested in the first and/or second edition of the congestion report - and still found congested in the current report - are highlighted in Annex 4.

(15) The report neither assesses the “supply side” of capacity offer (in terms of maximisation and calculation), nor a potential underuse of capacity (“capacity hoarding”). While the first aspect may be addressed by the Agency in the upcoming NC CAM implementation monitoring report, the latter would require an in-depth analysis of (non-published) individual network user’s data, which is rather a task for national regulators. However, the Agency is ready to assist regulators by providing the list of congested IP sides, filtered by country, proposing their closer assessment.

### 2.2 Definition of contractual congestion

(16) The concepts of contractual congestion and physical congestion are defined in Articles 2(21) and 2(23) of Regulation (EC) No 715/2009 in the following way:

“contractual congestion’ means a situation where the level of firm capacity demand exceeds the technical capacity;”

“physical congestion’ means a situation where the level of demand for actual deliveries exceeds the technical capacity at some point in time”.

(17) A frequent occurrence of physical congestion - representing a (severe) form of contractual congestion - cannot be remedied through the application of CMPs, but should be addressed, where efficient to do so, by infrastructure expansions or, in some instances, via contractual arrangements (such as flow commitments).

(18) Contractual congestion (during time periods without physical congestion) is meant to be tackled through the congestion management procedures laid down in the CMP GL. The CMP GL contain, in addition, certain conditions that require the application of one of the CMPs (i.e. the FDA UIOLI mechanism). Paragraph 2.2.3(1) of the CMP Guidelines sets out that NRAs shall require TSOs to apply the FDA UIOLI mechanism at IPs where, on the basis
of the findings in this report, it is shown that demand exceeds supply, at the reserve price when auctions are used, in the course of capacity allocation procedures for products for use in either that year or in one of the subsequent two years,

(a) for at least three firm capacity products with a duration of one month or
(b) for at least two firm capacity products with a duration of one quarter or
(c) for at least one firm capacity product with a duration of one year or more or
(d) where no firm capacity product with duration of one month or more has been offered.

(19) The main purpose of this report is therefore to identify for which IP sides at least one of these conditions is met during the analysed period. For the purpose of this report, only IP sides fulfilling at least one of the above mentioned criteria are identified as “contractually congested”\(^\text{13}\). That situation occurs if there is more market demand than offer for a certain capacity product of a distinct duration at a specific moment in time, which can be noted in the following ways:

(a) In the event of auctions, congestion is apparent once the auction clears with an auction premium. The auction premium is a top-up paid by the successful bidder, on top of the reserve price at a specific IP.

(b) In cases where auctions are not (yet) applied and available firm capacity at the concerned IP is lacking (capacity fully booked), the capacity demand exceeding the offer (at the reference price) may be indicated and reported through the “unsuccessful requests” and/or additional capacity demand for interruptible capacity.

\(^{13}\) All references to the occurrence of ‘congestion’ or ‘congested IPs’ in this report should be understood in the light of this assumption. Some of the IPs identified as contractually congested could also be physically congested. There can be cases of contractual congestion which are not covered by the 4 criteria of paragraph 2.2.3.1 of the CMP GL, as for example contractual congestion can also occur on the day-ahead or within-day timeframe (and would still fall under the general definition of contractual congestion in Regulation (EC) No 715/2009).
3 Data sources and applied methodology

3.1 Capacity booking platform data

(20) The CMP GL specify that the Agency’s Report on Congestion shall be based on data published by TSOs on ENTSOG’s Transparency Platform (‘ENTSOG’s TP’)\(^{14}\). However, not all data – in particular not all relevant auction results from the PRISMA\(^{15}\) capacity booking platform and no complete list of non-offered products at IPs - are currently published on ENTSOG’s TP. Therefore, the primary auction data from the 3 existing capacity booking platforms - PRISMA, GSA\(^{16}\), and RBP\(^{17}\) - have been used for the assessment of auction premia and for the manual point-by-point assessment of non-offers of capacity products with a duration of one month or longer.

(21) The auction data sources are generally accessible and reliable\(^{18}\). However, the auction reports are not standardised. Not only some data fields are missing\(^{19}\), but also the different structure and form(at) of IP labels (“names”) used in the reports from the different platforms makes it impossible to conduct an efficient or automated analysis or synthesis of the data from different sources. The currently unavoidable manual joint assessment or cross-checking of different data sources (ENTSOG’s TP, booking platforms) is tedious and error-prone. The introduction of a unique ID (or “name”) for each IP side to be used by all stakeholders is essential for an efficient data processing.

(22) Nevertheless, the auction reports from booking platforms contain most of the relevant information on the auction results, including the identification of the IPs (and mostly also TSOs), capacity products and types, offered and allocated capacity, tariffs, and auction premia. This information enables an analysis of contractual congestion at IP sides in line with points a) to c) - and indirectly point d) - of paragraph 2.2.3(1) of the CMP GL, as ‘demand exceeding offer’ can easily be detected by comparing demanded volumes with allocated volumes per auction (e.g. PRISMA) and/or by filtering for the occurrence of an auction premium (all 3 booking platforms).

(23) The non-offer of firm products with a duration of at least one month or longer (cf. point d) of paragraph 2.2.3(1) of CMP GL) was identified and assessed for all IP sides by screening the respective auction reports for the offer/non-offer of all respective product categories (months, quarters, (gas) years 2015-17/18).

3.2 ENTSOG’s Transparency Platform data

(24) On 24 February 2016, the Agency received two Transparency Platform bulk data export files from ENTSOG, as requested and specified by the Agency.

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\(^{14}\) [https://transparency.entsog.eu/](https://transparency.entsog.eu/)

\(^{15}\) PRISMA is currently the largest common European platform for capacity allocation via auctions, with 37 TSOs connected to the platform [status 18.04.2016]: [https://www.prisma-capacity.eu/web/start/](https://www.prisma-capacity.eu/web/start/)

\(^{16}\) The capacity booking platform GazSystem Auctions (GSA) is run by the Polish TSO GazSystem: [https://auctions.gaz-system.pl/](https://auctions.gaz-system.pl/)

\(^{17}\) The Regional booking platform (RBP) is run by the Hungarian TSO FGSZ: [https://rbp.eu/](https://rbp.eu/)

\(^{18}\) ENTSOG’s TP does already feature auction results from booking platforms, such as the Polish GSA and the Regional booking platform (RBP).

\(^{19}\) E.g. EIC codes (in GSA reports), separate TSO names and a clear distinction of entry/exit direction (RBP reports), total capacity demanded in each auction’s first round (both reports)
The transport data file for 2015 covers daily data for each NC CAM IP side, e.g. on booking levels of firm/interruptible capacities, technical capacity, flows (physical, commercial flows and nominations) and actual interruptions. The CMP file provides information on the application of CMPs, auction results (premia), unsuccessful requests of capacity and non-availability of capacity products in 2015.

If the CMP file were complete, consistent and checked by all TSOs and ENTSOG, it could in principle serve as the single source to detect contractual congestion. However, in the course of the assessment, it became apparent that this is not the case. Besides the missing auction premia occurring in 2015 on PRISMA and some inconsistencies in the files, the list for non-availability of products (months, quarters, gas years) for use at least in 2015 - 2017 (GY17/18) is far from complete and can therefore not be used as a reliable source to screen for congestion indicators.

For this reason, available and technical capacity (as well as other data) for 2015, 2016 and 2017 had to be assessed by the Agency using the online tool of the Transparency Platform for more than 3/4 of all IP sides within the scope of NC CAM.

### 3.3 The Agency’s approach to the congestion analysis

Due to the above-mentioned limitations of ENTSOG’s TP data, the Agency had to apply a method which involves a combination of checking for all IP sides using both sources mentioned above and of the use of the ENTSOG capacity map to properly assess the existence of contractual congestion:

1. Starting in January 2016, auction reports covering the period from January until December 2015 were downloaded from the booking platforms, combined and consolidated, and then screened for those auctions at IPs where capacity demand exceeded the offer and/or where auction premia occurred. Products with an auction premium at a specific IP side (or bundle) were listed in the results table (see link in Annex 4), created on the basis of the updated NC CAM / CMP IP scope list.

2. All available CMP data on unsuccessful requests, capacity made available through CMPs, auction premia and non-availability of products stemming from ENTSOG’s TP CMP export file were added to the results table, as they may signal congestion.

3. All auction reports were screened IP-by-IP for the offer and non-offer of capacity products (of at least one month’s duration) and the outcome was noted in the results table (see link in Annex 4).

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20 For less than 30% of IP sides finally found congested, data on non-availability was provided in the CMP file (on the ENTSOG TP respectively). Even when data was provided, it was not complete, as mostly non-offers of relevant Gas Years (e.g. 15/16, 16/17, 17/18) were missing. Taking into account the fact that TSOs had the chance to check their data submitted via ENTSOG, the Agency requests ENTSOG/TSOs to put more efforts in checking the accuracy of the data.

21 Firstly, to find out which IP sides are within the scope of CMP GL (no virtual reverse point, i.e. technical firm is zero), since there is no separate marking of virtual reverse IP sides on the ENTSOG TP, and secondly to check the availability of firm/interruptible/technical capacity for those IP sides, where the auction reports did NOT list all relevant products to be offered (e.g. missing offers of gas years 15/16 – 17/18, quarters, months).

22 to check for virtual reverse flow IP sides
4. Virtual reverse-flow IP sides were identified using all the above mentioned sources and previous congestion analyses, then marked in the results table, and excluded from further analysis.

5. The ENTSOG TP was checked online for the technical and available firm capacity levels during the reference period\(^{23}\) mainly for those IP sides\(^{24}\) for which the auction reports did not show the full range of relevant capacity products offers.\(^{25}\) Firm capacity availability for those IP sides was recorded in the results table with monthly granularity (using “yes”, “no”, “partially”\(^{26}\) as indicators). When it was apparent that available capacity was low compared to technical capacity, the ratio of available over technical capacity was calculated and reported in the results table on a monthly basis (i.e. “<10%” or “<5%”, down to “<1%” of capacity availability, respectively).

6. In parallel, further information on whether interruptible capacity was generally\(^{27}\) offered at an IP side was checked on the ENTSOG TP, and, if this was the case, it was assessed whether it was fully, partially or not at all booked (in terms of predefined time periods\(^{28}\)). The information on interruptible capacity bookings can be used as a proxy in the analysis to show that demand for capacity exceeded the actual offer of firm capacity. This is in line with the provision of the CMP GL ‘to take into account the use of interruptible capacity’.

7. Additionally, the occurrence of actual interruptions of nominated interruptible capacity (as a possible indicator for physical congestion) was documented in the results table, based on ENTSOG’s TP data (transport file and online tool).

8. Based on the above-mentioned information collected in the results table (Annex 4), each IP side was categorised with regards to its congestion status.

9. For the identified congested IP sides, it was also indicated whether they were already congested in the first and second congestion reports published in 2014 and 2015) and whether the FDA UIOLI mechanism is already applied.

### 3.4 TSO data on capacity trading on the secondary market

The analysis of secondary capacity trading is required by the CMP GL (‘taking into consideration to the extent possible capacity trading on the secondary market’).

For the IP sides qualifying as “contractually congested” or “close to be congested”, the Agency requested the respective TSOs (via ENTSOG) to provide data on the activities on the secondary markets, as each TSO has the best oversight on its capacity being traded\(^{29}\)

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\(^{23}\) i.e. 1.1.2015 – 31.12.2017

\(^{24}\) i.e. more than 75% of the total number of 347 IP sides (The high number is partly explained by a number of TSOs not using any of the 3 booking platforms for allocation of annual yearly capacity products in March 2015 (as NC CAM was only applicable as of 1 November 2015).)

\(^{25}\) i.e. the Gas Year products (2015/16, 2016/17, 2017/18), the quarterly products (Q4/15 – Q3/16), and/or the monthly products (M2/15 - M1/16)

\(^{26}\) “partially” meaning that capacity was not available for all days in a given month

\(^{27}\) Some TSOs offer interruptible capacity in predefined amounts, others in unlimited amounts, a few TSOs do not offer interruptible capacity (or only when the respective firm capacity is sold out).

\(^{28}\) i.e. Q1/2015, Q2/2015, Q3/2015, Q4/2015, year 2016, year 2017

\(^{29}\) Regardless of the trading venue used, TSOs’ customers have to inform the TSO(s), if they want to transfer, sublet or reassign booked capacity to another party.
and relevant publicly available data is limited. For this purpose, the Agency shared the draft results table with TSOs from 8 to 18 April 2016\(^{30}\), asking them to provide secondary trade data.

\(^{31}\) All information provided on capacity products and volumes offered, requested and/or traded on any of the possible venues (e.g. booking platforms, TSO bulletin boards, brokers, bilateral communication etc.) was added to the final results table. The full data table presenting all compiled data for those IP sides within the scope of this report as well as the final results of the Agency’s assessment is available for download on ACER’s website\(^{31}\). A summary of the results is given in Annex 4.

### 3.5 Review of results of congestion analysis by TSOs and NRAs

\(^{32}\) To ensure quality and reliability of the results of the congestion analysis, TSOs were also asked in April 2016 to check and - where necessary - amend and explain the data in the shared draft results table, containing the assessment of all IP sides within the CMP GL scope.

\(^{33}\) In line with the CMP GL, compiled data, results and the draft report were also shared with NRAs for data validation purposes from March until the end of the assessment and report drafting process in May 2016.

\(^{34}\) This (partial) review by TSOs and NRAs resulted in some changes in the categorisation of congestion (status), whenever the necessary additional data and proper justification were provided.

\(^{30}\) Late responses and contributions from TSOs were received until 5 May 2016.

4 Overview and analysis of results on congestion

4.1 Identified contractual congestion and its breakdown

The results of the analysis of the auction reports and the ENTSOG TP data for firm products offered in 2015 for use in 2015, 2016 or 2017 for the 347 IP sides are presented in Figure 1. 41 IP sides resulted as contractually congested\(^{32}\). This number is slightly higher than the one found in 2014 (36 instances).

Figure 1 also shows that, next to the 41 congested IP sides, 27 IP sides are considered “close to be congested” (compared to 18 in 2014). At those IP sides either

- at least one gas year product has not been offered due to the 10% short-term quota of the NC CAM (23 IP sides)\(^{33}\), or
- auction premia occurred at a lower frequency than the threshold determined in the CMP GL (3 IP sides), or
- offered capacity was marginal (1 IP side).

32 In addition, 3 IP sides with non-EU countries have been identified as contractually congested: Oltinque (FR→CH, exit GRTgaz), Drozdowicze (UA→PL, entry Gaz-System), Tieterowka (BY→PL, entry Gaz-System). However, at those IP sides, the respective NRAs have not decided to apply the CMP GL (yet). Therefore, these points are considered out of scope for the purpose of this report.

33 NC CAM Art. 8 (7b) requires 10% of technical capacity to be set aside and offered only in the annual quarterly capacity auctions.
About half (178) of the IP sides were found “not to be congested” or “likely not to be congested”, the latter covering those IP sides where no or not all products were offered on booking platforms, but the ENTSOG TP data showed sufficient available capacity for the concerned IP sides. This can mostly be explained by some TSOs joining a booking platform only late in 2015\textsuperscript{34}, thereby missing e.g. the March auction date for the annual allocation of yearly capacity. The remaining 101 IP sides are out of scope of the CMP GL and this report (as explained in section 2.1).

Figure 2 illustrates the breakdown of the 41 congested IP sides according to the 4 indicators described in points a) to d) of paragraph 2.2.3.1 of the CMP GL. It shows that for most (i.e. 36) of the congested IP sides, congestion is signalled by the non-offer of a firm capacity product with duration of at least one month in the monitored period. This number has significantly increased compared to the last year’s report (23). Auction premia for at least one yearly\textsuperscript{35} or at least three monthly products\textsuperscript{36} only occurred in 5 instances altogether (2 exits, 1 entry and one bundled exit + entry), while in 2014 they added up to 16 instances. Auction premia for at least two quarterly products for use within the front gas year (i.e. 2015/16) did (again) not trigger any contractual congestion.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{ congestion_identified.png}
\caption{Identified congestion - categorisation of triggers}
\end{figure}

\textsuperscript{34} NC CAM was legally applicable as of 1 November 2015.
\textsuperscript{35} 3 vs. 7 instances in the previous report
\textsuperscript{36} 2 vs. 9 instances in the previous report
About half (20) of the IP sides found congested had already been indicated as congested in the last congestion report and again half (10) of those even in the first congestion report.

The distribution of congestion across IP types is depicted in Figure 3 below. Most congestion is detected at cross-border IP sides, which also represent the majority of IP sides within the CMP GL scope list. A non-negligible number of congested IP sides also occurred at IPs with third-countries (non-EU countries). In-country cross-zonal IP sides (8) as well as IP sides with the IUK Interconnectors (IC) (both “cross-border” and “in-country”) represent the remaining share of congested IP sides. None of the 8 existing IP sides of the 2 virtual IPs were found congested; however at VIP Iberico, capacity is only offered 1 Gas Year ahead.

Figure 3: Identified congestion – breakdown by IP type

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37 The congestion analysis has also shown that at least 3 further IP sides with non-EU countries are contractually congested. However, as NRA have not (yet) decided or have decided not to apply the CMP GL at those IP sides, they are not further considered in this report.

38 The distinction is necessary, as the Interconnector belongs to a UK based company, while it is not part of the UK entry exit system itself.

39 Such a non-offer of capacity beyond the upcoming GY was also reported for all IP sides of Ellund operated by Energinet.dk, due to absent market demand for longer term auctions in DK. Similar cases of limited offers of upcoming gas years are known to the Agency.
4.2 Extent of congestion at IP level: unsuccessful requests

(41) At IPs where all capacity products are offered via auctions, the indicator for demand exceeding offer can easily be derived from the emergence of auction premia, whereby the volume of “unsuccessful requests” can be calculated by subtracting total allocated capacities from total demanded capacities at the reserve price. The unsuccessfully requested capacity amounts show to what extent an IP side is contractually congested.

(42) Only at 9 out of the 41 congested IP sides unsuccessful requests were reported on the ENTSOG TP and/or were retrievable from the auction reports. Capacity demand remained more often unsatisfied mainly at two IP sides: Oberkappel (exit Open Grid Europe, Germany to Austria) and the internal interconnection point Liaison Nord-Sud (in the direction from North to South), connecting the Northern and the Southern entry-exit zones in France. The unsuccessful requests reported at the above-mentioned IP sides represent more than 84% of the total number of such requests (194 occurrences) at the 9 IP sides.

(43) The majority of the unsuccessful requests occurred for monthly (M-1, M-3 and M-10) and quarterly (Q-1, Q-2) products for use in 2015. A detailed table showing the volumes / extent of unsuccessful requests is provided in Annex 2.

4.3 Regional localisation of contractual congestion

(44) As described in Section 4.1, 41 instances of contractual congestion have been identified for the analysed period. To provide a geographic visualisation and overview of congestion in Europe, all instances are marked by arrows on ENTSOG’s gas network map, which is provided in Annex 6, including a complete key for the differently coloured arrows.

(45) In this section, these results are presented with a regional focus, with the three regions of the Gas Regional Initiative (GRI) taken as the geographical reference.

(46) Figure 4 illustrates the identified contractual congestion in North-West Europe, which concerns mainly the Interconnector IUK in both directions. While identified in this report, a vivid secondary trading market has so far ensured demand is being met at IUK IPs.
Contractual congestion has also been detected at Eynatten 2 (exit Fluxys TENP, Germany, to Fluxys Belgium), between the two entry-exit zones within Germany and at the German exit side of Ellund (GUD) to Denmark. The German entry side of Dornum (GUD) from Norway (Gassco), although congested, does not represent a barrier, as entry capacity into the Gaspool zone is available via an alternative IP with the German TSO Jordgas.

Although the CMP GL’s criteria used to identify contractual congestion are fulfilled in the cases at hand, there are already measures in place alleviating the effects of congestion in the North West region, such as the FDA UIOLI mechanism (at German IP sides).

The South region comprises France, Spain and Portugal. In this region, contractual congestion was only found for the in-country IP in France (GRTgaz, Liaison Nord-Sud, in the direction from North to South), as illustrated in Figure 5. The point connecting the balancing zones of GRTgaz Nord and GRTgaz Sud was marked as critical, because both sides of the IP (i.e. the bundled products) are congested (as signalled by the emergence of auction premia) and there are no alternative IPs connecting the same zones. However, it seems that contractual congestion has meanwhile disappeared, as the recent March 2016 auctions for this IP all cleared at the reserve price.

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40 In addition, the German exit sides of the IP Wallbach towards Switzerland were found congested. However, those IPs are not part of the GRI’s South Region.
Within the South-South-East region, shown in Figure 6, congestion was found for a number of IPs. This concerns mainly the interconnections between Germany and Austria, Germany and the Czech Republic, as well as Germany and Poland (two Polish IP sides\(^41\)) and between Czech Republic and Poland (Czech exit side). The latter is also identified as critical, due to the absence of alternative connections. Other cases of congestion are observed at IPs from Romania to Bulgaria and from Bulgaria to Greece. Furthermore, congestion has been observed also in the direction Belarus to Poland at the Tietierowka IP.

\(^{41}\) Since 1 April 2016, the 3 Polish-German IP sides Lasów, Gubin, Kamminke were joined to form the virtual IP “GCP Gaz-System/Ontras”, at which contractual congestion currently does not exist (anymore).
4.4 Analysis of offer and use of interruptible capacity and instances of interruptions

Interruptible capacity was offered for 93% of the IP sides for which contractual congestion was identified. As indicated in Figure 7 below, interruptible capacity was booked for almost 2/3 of the congested IP sides for use in 2015 and 2016 and for more than 1/4 of congested...
IP sides for use in 2017. Only for 3 congested IP sides (Negru Voda I, II, III exits of Transgaz, Romania to Bulgaria) no interruptible capacity was offered.

**Offer, bookings & interruptions of interruptible capacity in 2015 at 41 congested IP sides**

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</table>

**Number of IP sides**

Note: partial bookings for a given period are included under "yes"

**Figure 7: Interruptible capacity offer and demand at congested IP sides and bundles**

(52) Beside the occurrence of unsuccessful requests for firm capacity, the booking(s) of interruptible capacity can be used as an indicator for capacity demand exceeding the technical capacity (i.e. contractual congestion) under the assumption that those who booked interruptible capacity would have preferred firm capacity\(^{42}\).

(53) Actual interruptions of nominated interruptible capacity mostly occurred at congested IP sides with substantially or even fully\(^{43}\) booked interruptible capacity, which may, in some cases, indicate the existence of (temporary) physical congestion\(^{44}\). Such instances of possible physical and contractual congestion have been observed at 9 IP sides, for most of which at least partial interruptions occurred for a limited number of days in 2015, ranging from 1 to 24 days, but also in more severe cases up 56 days (Liason Nord to Sud, within France) or even 73 days (Oberkappel, Germany to Austria). More details can be found in Annex 4.

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\(^{42}\) For 5 IP sides - next to the 3 IP sides where no interruptible capacity was offered - (cf. Annex 4 results table) existence of contractual congestion as defined in Article 2(21) of Regulation (EC) No 715/2009 could not be ultimately proven, because no indicator for demand exceeding technical firm capacity could be found, despite the fact that condition d) of CMP GL 2.2.3(1) was fulfilled. That means that neither an unsuccessful request was reported, nor was interruptible capacity booked (at least temporarily / partly), nor an auction premium occurred.

\(^{43}\) A "full" booking requires interruptible capacity to be offered in predefined amounts.

\(^{44}\) The assessment did not distinguish reasons for interruptions, which could also include planned interruptions due to maintenance.
5 Secondary Trading and application of CMPs

5.1 Secondary capacity trading at congested IP sides

Thanks to the direct reporting of secondary trade data by TSOs to the Agency for the possibly congested IP sides, data availability - and with it the oversight of activities on the secondary market - has further increased compared to last year’s report. Nevertheless, the number of congested IP sides for which secondary capacity was either offered, requested or traded, is relatively low. Firm capacity was traded only for 14\(^{45}\) of the 41 congested IP sides, either via PRISMA Secondary, OTC, bilaterally or using TSO bulletin boards (to announce the offer of secondary capacity).

The concluded trades on the secondary markets are summarised in Figure 8, showing that most trades for the congested IP sides took place “Over-the-Counter” for the IUK Interconnector, demonstrating a vivid secondary market for the IUK capacity. PRISMA Secondary is also increasingly used as a trading platform by shippers. While standard capacity products have been predominantly traded for the congested IP sides, the possibility to trade non-standard capacity product durations remains an important advantage of the secondary markets and is (still) often used.

Further details on the activities at secondary markets, such as the products, volumes and periods traded, offered or requested can be viewed in Annex 4 (and in the respective complete data set available through a download-link provided there).

\(^{45}\) On one additional IP side, only interruptible capacity was traded on the secondary market (and therefore excluded from the statistics).
5.2 Application of CMPs

(57) According to ENTSOG’s TP data\(^\text{46}\), the overall CMP application instances - and therefore additional offer of capacities – has remained at a similar level in 2015 compared to 2014.

(58) Figure 9 shows the number of days\(^\text{47}\) for which additional capacity was offered through the various CMPs at all IP sides. While the Long-Term Use-It-Or-Lose-It (LT UIOLI) mechanism has still not been applied, the (daily) instances of oversubscription have increased in 2015 compared to the previous year; however almost all concern IP sides of the Dutch TSO GTS\(^\text{48}\).

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\(\text{Figure 9: Indicative development of CMP application (number of occurrences at all IP sides)}\)

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\(^{46}\) The analysis in this chapter is solely based on publicly available CMP data from ENTSOG’s transparency platform. There are TSOs, such as Interconnector IUK, that have applied oversubscription and surrender in 2015 (for IUK from Sept. 2015 on), but data was not published on ENTSOG’s TP. The CMP data delivered by IUK to the Agency on 26.5.15 was added to the table in Annex 3.

\(^{47}\) In case of capacity offers beyond a day’s duration (e.g. months), the longer periods have been converted into days.

\(^{48}\) Further applications of oversubscription have only been reported for Poland, France, UK IP sides. However, in terms of capacity amounts made available via OS, 99.6% of total amounts concern Dutch IPs. The latter is explained by a revenue sharing mechanism, which was put in place by the Dutch NRA (ACM), which entitles the Dutch TSO (GTS) to keep 50% of the additional revenues made through oversubscription and buy-back.
The number of days for which capacity products were surrendered during 2015 for use in that year increased by more than 1/3 compared to 2014. Again, the majority of products and amounts were surrendered at Dutch IP sides.\textsuperscript{49}

Taking into account that the first congestion report only covered the final quarter of 2013, and extrapolating the number of Q4/2013 to a full year, the (average) frequency of daily capacity offers due to the application of the FDA UIOLI mechanism at German and Austrian IP sides\textsuperscript{50} seems to have actually slightly decreased both in 2014 and 2015. This may have different causes, such as data reporting issues, no resulting FDA capacity due to the 10% threshold clause\textsuperscript{51}, change in IP scope, utilisation of capacity etc.

The application of CMPs in 2014 and 2015 leading to an additional offer of capacity for congested and non-congested IP sides is compared in Figure 10. While the number of IP sides for which capacity was offered through the surrender mechanism remained the same, the IP sides for which oversubscription\textsuperscript{52} led to additional capacity offers increased by 19%. The extended application of oversubscription however has not reduced the number of contractually congested IP sides (since oversubscription was not applied at the congested IP sides), but it may have prevented contractual congestion in some cases.

At 11 IP sides where the FDA UIOLI mechanism is applied, congestion was identified in 2015. Although the FDA UIOLI mechanism cannot resolve the contractual congestion for products beyond the day, it increases the amount of FDA capacity available to the market, supporting spot market price convergence even in the reverse flow direction at unidirectional IPs. The reduction of the number of IP sides where the FDA UIOLI mechanism led to additional capacity offers in 2015 may be explained by the possible reasons mentioned above (i.e. missing data\textsuperscript{53}, 10% threshold, changes in the IP scope list not yet implemented on the ENTSOG TP etc.).

\textsuperscript{49} 79% of instances / amounts concern the Dutch IP sides, 18% Austrian, 2% German and 1% French IP sides.
\textsuperscript{50} 53% concern Austrian IP sides, 47% concern German IP sides.
\textsuperscript{51} According to the CMP GL 2.2.3.5, the nomination restriction does not apply to network users holding less than 10% of the average technical capacity in the preceding year. This means, that if a high number of network users has booked capacity at an IP, the FDA UIOLI mechanism cannot yield any additional capacity offers.
\textsuperscript{52} Actual buy-backs of oversubscribed capacity were not assessed in this report as respective data was not available, i.e. no buy-backs seem to have taken place in 2015.
\textsuperscript{53} FDA UIOLI data may for example not have been submitted to the ENTSOG TP for all respective IP sides in 2015 (anymore).
For the 11 congested German IP sides, which are listed in Figure 11, the FDA UIOLI mechanism is implemented, but seems not to have yielded any additional day-ahead capacity offer according to the CMP section of ENTSOG’s TP\(^{54}\). However, the relevant information (i.e. that the FDA UIOLI mechanism is leading to additional capacity offers at these IP sides) is implicitly contained in the information provision on available firm capacity on ENTSOG’s TP and also in the day-ahead capacity offers at PRISMA. The individual reasoning for the non-publication of the relevant data in the CMP section of ENTSOG’s TP for each concerned IP side is currently being investigated and followed up by the respective NRA.

\(^{54}\) There are 22 German and Austrian congested IP sides, for which – next to the non-congested IP sides - the FDA UIOLI mechanism is already implemented, but data reporting in the CMP section of the ENTSOG TP is not (yet) fully implemented.
An analysis of CMP application based on ENTSOG’s TP data shows that additional capacity was made available via CMPs at IP sides of only 6 Member States\(^\text{55}\). This might partly be explained by missing or incomplete CMP data submission of TSOs to ENTSOG’s TP, but it is more likely that CMPs (in particular the oversubscription method) have still not been applied by TSOs of most Member States in 2015. This is even more visible by the fact that for none of the congested IP sides the oversubscription has yielded in any additional capacity offers.

Annex 3 gives an overview of the average capacity made available in 2015 via the various CMPs at each of the congested IP sides for which data reported was greater than “0”. Annex 4 shows for each of the 41 congested IP sides, whether capacity was made available via CMPs or not. Whether and to which extent any of the respective capacity released by CMPs was eventually booked cannot be determined, since publications of capacity offers (at the booking platforms) and of capacity bookings (at the ENTSOG’s TP) do not differentiate the sources of capacity.

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\(^{55}\) AT, DE, FR, NL, PL, UK
6 Correlation of contractual congestion and market price spreads

6.1 Price spread in a congested situation

In this section, the links between capacity bookings, flows and price spreads between adjacent markets are explored with reference to the interconnection point Oberkappel, which connects the German NCG\textsuperscript{56} market area with the Austrian one. This IP, was found contractually congested on the German exit side in 2015.

The average price spread in 2015 between the relevant German virtual trading point NCG and the Austrian virtual trading point CEGH\textsuperscript{57} was approximately 0.65 EUR/MWh. In February 2015, the price spread reached its maximum, with CEGH trading at a premium of 5 EUR/MWh over NCG. Only during 4 days in 2015 the situation was reversed, with NCG showing a premium over CEGH. The combined network tariffs (German exit and Austrian entry) applicable at Oberkappel was 0.402 EUR/MWh/d in 2015.

As can be seen from Figure 12, the price spreads between the NCG and CEGH spot gas markets triggered significant physical flows, resulting in auction premia for the transportation tariffs on a large number of days, indicating contractual congestion at Oberkappel.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure12.png}
\caption{Physical flow and price spread at Oberkappel entry, DE->AT [Source: E-Control]}
\end{figure}

\textsuperscript{56} Net Connect Germany
\textsuperscript{57} Central European Gas Hub
Whenever the price spread fell below the level of the combined network tariffs, a decrease in the physical flow from NCG to CEGH could be observed. Maintenance works at the beginning of September 2015 led to the temporary unavailability of physical capacity, which resulted in an increase of the price spread to approximately 1 EUR/MWh. However, overall, the auction premia reflected the prevailing price spreads reasonably well.

The application of the FDA UIOLI mechanism on both sides of the IP Oberkappel significantly contributed to mitigating short-term contractual congestion\textsuperscript{58}, as it allowed for the additional offer of FDA capacity.

6.2 Price spread in a non-congested situation

The example below focuses on the German and French hubs NCG and PEG Nord in a non-congested situation. Figure 13 illustrates the capacity utilisation at the Obergailbach IP (allocations in dark blue colour) and the spot market price spreads between NCG and PEG Nord (red line) during the period December 2015 – January 2016. Between those hubs the price spreads are low. However, when the price spread increases, as for example on 18 January 2016, the utilisation of capacity (illustrated by the dark blue bars) also increases, as one would expect.

This observation indicates (at least for the short period analysed for this specific IP) a proper utilisation of the interconnection capacity, suggesting an effective connection of markets. Prompt market responses have been pushing the hub prices to converge quickly, getting the price spreads down to the minimum level of transport costs.

\textsuperscript{58} Short-term contractual congestion is out of scope of the current CMP Guidelines that only consider capacity products with a duration of one month or longer.
7 Supplement: Results of the 2016 annual yearly auctions

In order to complement the congestion analysis with the latest available data, the Agency has also looked at the occurrence of auction premia at the recent annual yearly auctions. In early March 2016, annual yearly capacity auctions and month-ahead auctions were run (among other day-ahead and within-day auctions) at the 3 existing booking platforms GSA, PRISMA and RBP.

The analysis of the respective March auction results revealed no auction premia at the GSA platform.

Auction premia for monthly products and thereby unsuccessful requests occurred on the PRISMA platform - and in the respective March auction report published in April 2016 - for the following IP sides:

- The German unbundled exit side of Oberkappel (GRTgaz Dtl.) to Austria for the firm monthly product of February (M-2-2016);
- The German unbundled exit side of Oberkappel (Open Grid Europe) to Austria for the firm monthly product of February (M-2-2016);
- The Dutch unbundled exit side of Zevenaar (Gasunie Transport Services) to Germany for the firm monthly product of April (M-4-2016);

Since these are auction premia for only one monthly product per IP side, they do not suffice for these IP sides to be qualified as contractually congested (yet), as the results of the remaining monthly auctions in 2016 are not available before the end of the year.

On RBP, one monthly auction cleared with an auction premium as found in the March auction report (published end of April 2016) for the following IP sides:

- The Hungarian unbundled entry side of Mosonmagyarovar (FGSZ) from Austria for the firm month ahead product (M-4-2016).

Again, this situation does not (yet) suffice to qualify the IP side as contractually congested.

Continued existing contractual congestion was confirmed by further auction premia for yearly products at PRISMA for the following IP sides:

- The German unbundled exit side of Überackern 2 (bayernets) to Austria for the gas year products GY 2017/18 and GY 2018/19;
- At the German unbundled exit side of Steinitz (Ontras) to NCG (Open Grid Europe), an auction premium occurred for the firm gas year product GY 2016/17.

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59 This IP side was already congested due to non-offer of any gas year products in the respective monitoring period.
60 This IP side was already congested in the monitored period, but all relevant gas year products have been offered in the March 2016 auction. If no further monthly or quarterly products exhibit auction premia, this IP side will no longer be regarded as contractually congested.
61 No bundled product for the same period was offered.
Auction premia emerging for yearly capacity products at PRISMA exhibit new contractual congestion (and unsuccessful requests) at the following IP sides:

- The Spanish unbundled entry side of VIP Pirineos (Enagas) from France as well as the bundled firm product of exit TIGF (France) and entry Enagas (Spain) for the gas year product GY 2016/17.

- The German unbundled exit side of Wallbach (Open Grid Europe) to Switzerland for the firm gas year product GY 2017/18.

It is noteworthy, that the March 2016 auction reports have not been screened for all IP sides within the scope of the CMP GL for any non-offer of yearly or monthly products. Only those IP sides have been checked for which the current assessment (based on 2015 data) suggested a congestion situation according to the CMP GL criteria. The full assessment will be part of the next years’ assessment and congestion report, which will cover all auctions run in 2016.

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62 Premium: 1,566 ct/kWh/h/runtime, only 3 kWh/h unfulfilled demand
63 Premium: 7,544 ct/kWh/h/runtime, 673 kWh/h unfulfilled demand
64 Both the volumes of capacity allocated with a premium and the premium itself are very small and, in addition, at this virtual IP, some shorter-term capacity remains unbooked, showing that the two markets are sufficiently interconnected. At this IP, TSOs will implement OSBB procedures in 2017.
8 Conclusions and recommendations

8.1 Conclusions and implications

(80) Compared to last year’s report, where 36 instances of congestion were identified (~15% of the 257 IP sides considered), the level of congestion has slightly increased to 41 instances (~17% of the 246 IP sides within the scope of the CMP GL).

(81) For the 41 contractually congested IP sides listed in Annex 4\textsuperscript{65}, the FDA UIOLI mechanism shall be implemented by 1 July 2016, pursuant to paragraphs 2.2.1.4 and 2.2.3.1 of the CMP GL\textsuperscript{66}.

(82) As the FDA UIOLI mechanism is already applied at 22 of these 41 IP sides\textsuperscript{67}, this means that at the remaining 19 contractually congested IP sides (cf. Annex 5), which should have implemented and applied Oversubscription and Buy-Back rules by October 2013\textsuperscript{68}, the respective NRA shall require the relevant TSO(s) to implement and apply the FDA UIOLI mechanism by 1 July 2016\textsuperscript{69}.

(83) The map in Annex 6 may assist in determining whether the contractually congested IP side is the only one connecting two entry-exit zones.

(84) A “capacity hoarding” check cannot be provided within the scope of this report, as, in order to do so, individual shipper data on capacity utilisation would be needed, which is not publicly available. Such data could be requested by NRAs from TSOs or network users, The Agency’s findings and detailed data sets (see link in Annex 4) are accessible to NRAs for this purpose.

8.2 Recommendations on data availability and consistency and on transparency

Recommendations for TSOs ENTSOG and NRAs

(85) On the basis of the experience gained in producing this report, the Agency formulates the following recommendations to NRAs, ENTSOG and TSOs, in order to improve data availability and consistency and, ultimately, transparency.

- Progress has been made on data availability and transparency at ENTSOG’s TP in relation to the transport data required for this report. However, transport data is still

\textsuperscript{65} 3 congested IP sides with a 3rd country, for which currently none of the respective NRAs have (yet) decided to apply the CMP GL on the EU side, are excluded and not part of the list.

\textsuperscript{66} Annex I of the Regulation 715/2009 amended by European Commission by the Decision of 24 August 2012

\textsuperscript{67} FDA UIOLI mechanism is currently only implemented and applied at DE and AT IP sides.

\textsuperscript{68} Paragraph 2.2.1 (4) of the CMP GL requires TSOs to implement an OS & BB scheme by 1 October 2013. Paragraph 2.2.3 (6) allows – under certain conditions – to refrain from implementing OS & BB, if the FDA UIOLI mechanism is applied. For all of the 19 remaining IP sides, no capacity was reported on ENTSOG’s TP as “capacity made available via CMPs” (incl. OS & BB), which may hint to non-implementation or non-application or absent/faulty data reporting.

\textsuperscript{69} This does not preclude that further IP sides, for which congestion is detected later, cannot fall under the obligation to apply the FDA UIOLI mechanism as well.
missing or incomplete for a small number of specific IP sides. ENTSOG shall remind TSOs of the missing data, while the responsible NRAs shall enforce these transparency obligations. Automated checks by ENTSOG on the ENTSOG’s TP data should facilitate having complete, updated, correct and consistent information.

- CMP data availability on the ENTSOG’s TP needs to be further improved by ENTSOG/TSOs, by ensuring that auction results with premia (in particular from PRISMA) and data on all non-available capacity products are uploaded on the ENTSOG’s TP, as required by the CMP GL.

- A consistent use of EIC codes and an alignment of IP names and format (“unique identifier”) used for the same IP side on ENTSOG’s TP, in the NC CAM IP scope list and on booking platforms should be reached by TSOs and ENTSOG to enable efficient and automated data processing by all stakeholders.

- ENTSOG shall check, incorporate in the ENTSOG’s TP and publish ACER’s updated CAM IP scope list, which now also includes a filter for a separate CMP IP scope list (e.g. backhaul IP sides are out of the CMP GL’s scope).

- ENTSOG’s TP should aim to incorporate information on bundled capacities.

- Information on interruptible capacity (e.g. unlimited offers, offers only after firm is sold out etc.) may need to be made more „visible“ on the ENTSOG’s TP (e.g. as „pop-up“ info-box when selecting the online graphical presentation on ENTSOG’s TP).

### Recommendations for Booking Platforms (and ENTSOG)

(86) On the basis of the experience gained in producing this report and in order to enhance transparency, the Agency recommends that booking platform auction reports are standardised in terms of content, format and publication dates (i.e. to be published monthly within the first week of the new month for the previous month). If required, ENTSOG could facilitate the standardisation process. In the Agency’s view, the current PRISMA auction reports could serve as a common minimum standard in terms of completeness of content, user-friendly format and publication frequency.

### 8.3 Policy recommendation

#### Recommendations to the European Commission

(87) On the basis of the experience gained in producing this report, the Agency formulates the following recommendations to the European Commission.

- The Commission may consider clarifying the scope of criterion d) of paragraph 2.2.3(1) of the CMP GL to align it with the other congestion criteria. The current reading of criterion d) considers an IP side not congested, if at least one month was offered out of 12 months in the preceding year’s rolling monthly auction procedures. All 12 monthly

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70 For details, please check the comprehensive results table (for „no data“) provided for download via the link in Annex 4.

71 An IP sides can be uniquely identified only with a combination of the following: IP name, TSO, direction, connected TSO.

72 For example, for some German IPs no data on total (e.g. “unlimited”) and available interruptible capacity is provided in (or next to) the online charts, although bookings occurred. A clarification on interruptible capacity offers occurring only when firm capacity is sold out may be helpful as well.
products should be offered at an IP in order for it not to be considered contractually congested, as there is no way to test “demand exceeding offer” in auction regimes if no such product is offered. (Also, no quota applies for monthly products.)

- With respect to paragraph 2.2.1 of the CMP GL, the Commission may consider clarifying:
  a) **until when** the Agency shall produce congestion reports (or under which conditions the reports are not required anymore);
  b) an implementation period for the FDA UIOLI mechanism, if congestion is identified at IP sides only after 1 July 2016.

- The Commission may also consider to extend the scope of ”contractual congestion” to the day-ahead timeframe between hubs (requiring the Agency to assess auction premia and the non-offer of firm DA products at a cross-zonal level), which could then also result in an obligatory application of the FDA UIOLI mechanism at IPs/VIPs/IP sides between the corresponding market areas, to promote a short-term gas market price convergence.

- In addition, it should be further clarified that Article 6 of Regulation (EU) No 984/2013 regarding the joint method to maximise capacity and the dynamic approach to capacity (re-)calculation, takes priority over the application of oversubscription in the yearly, quarterly and monthly timeframe.

- Some TSOs offer capacity at certain IP sides\(^{73}\) only for the upcoming gas year. In at least one case this is justified by the respective TSO claiming no market demand for longer-term capacity allocation. The NC CAM does not explicitly require a minimum number of gas years to be offered\(^{74}\). The Commission may consider aligning the NC CAM with the CMP GL (which requires the congestion assessment of the “current” and the two upcoming gas years), by introducing a mandatory minimum offer of two gas years ahead. This can be also justified by the fact that capacity market demand may change over time and therefore cannot be accurately predicted.

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\(^{73}\) E.g. VIP Iberico, Ellund (DK sides) and others

\(^{74}\) One could interpret the NC CAM text, that only one gas year is required, which in fact could be any within the upcoming 15 gas years (and not even the immediately upcoming one).
## Annex 1: List of abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tr>
<td>ACER</td>
<td>Agency for the Cooperation of Energy Regulators</td>
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<tr>
<td>CAM</td>
<td>Capacity Allocation Management (Gas)</td>
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<td>CEGH</td>
<td>Central European Gas Hub (gas hub in Austria)</td>
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<tr>
<td>CMP</td>
<td>Congestion Management Procedures (Gas)</td>
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<td>DZK</td>
<td>Dynamically allocable capacity</td>
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<td>E/E</td>
<td>Entry/exit</td>
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<td>EC</td>
<td>European Commission</td>
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<tr>
<td>ENTSOG</td>
<td>European Network of Transmission System Operators for Gas</td>
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<td>EU</td>
<td>European Union</td>
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<tr>
<td>FDA UIOLI</td>
<td>Firm Day-Ahead Use-It-Or-Lose-It</td>
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<td>FZK</td>
<td>Freely allocable capacity (firm)</td>
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<tr>
<td>GY</td>
<td>Gas Year</td>
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<td>IP</td>
<td>Interconnection Point</td>
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<td>LT UIOLI</td>
<td>Long-Term Use-It-or-Lose-It</td>
</tr>
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<td>NC</td>
<td>Network Code</td>
</tr>
<tr>
<td>NCG</td>
<td>Net Connect Germany (one of Germany’s gas hubs)</td>
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<td>NRA</td>
<td>National Regulatory Authority</td>
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<td>OS &amp; BB</td>
<td>Oversubscription and Buy Back</td>
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<td>SUR</td>
<td>Surrender of Capacity</td>
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<td>TP</td>
<td>ENTSOG’s Transparency Platform</td>
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<td>TSO</td>
<td>Transmission System Operator</td>
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Annex 2: Unsuccessful requests at congested IP sides in 2015

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<td>GSA</td>
<td>Cieszyn (PL) / Český Těšín (CZ)</td>
<td>Exit</td>
<td>NET4GAS</td>
<td>CZ to GAZ-SYSTEM</td>
<td>1</td>
<td>240000</td>
<td>M-2-2015</td>
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<td>Hora Svaté Kateřiny (CZ) / Deutschneudorf (Sayda) (DE)</td>
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<td>ONTRAS</td>
<td>DE to NET4GAS</td>
<td>1</td>
<td>3205920, 1146456, 14346456, 5192208</td>
<td>M-3-2015, M-4-2015, M-5-2015, M-9-2015</td>
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<td>GRTgaz</td>
<td>FR to GRTgaz</td>
<td>1</td>
<td>63834032, 4581688, 22916539, 1881231</td>
<td>M-1-2015, M-2-2015, Q-2-2015, Q-3-2015, Q-4-2015</td>
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<td>FR from GRTgaz</td>
<td>1</td>
<td>already covered above (as bundled product)</td>
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<td>Oberkappel</td>
<td>Exit</td>
<td>GRTgaz Deutschland</td>
<td>DE to Gas Connect Austria</td>
<td>1</td>
<td>2152373, 165000, 3859213, 161987, 129945, 50000, 601192, 1301192</td>
<td>M-1-2015, M-2-2015, Q-1-2015, M-3-2015, M-6-2015, M-10-2015, Q-4-2015, Q-5-2015, Q-6-2015, Q-7-2015</td>
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<td>Oberkappel</td>
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<td>DE to Gas Connect Austria</td>
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<td>M-1-2015, M-2-2015, Q-1-2015, M-3-2015, M-6-2015, M-10-2015, Q-4-2015, Q-5-2015, Q-6-2015, Q-7-2015</td>
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<td>DE to NET4GAS</td>
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<td>Q-3-2015</td>
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<td>CZ from LBTG</td>
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<td>1, 3840000, 720000, 19495546, 960000, 35680000, 24000000, 960000, 7200000, 2815546</td>
<td>1.2.15-31.3.16, M-2-2015, Q-2-2015, M-6-2015, 1.6.15-30.9.15, 1.6.15-31.12.15, Q-3-2015, 1.10.15-31.3.16, 1.11.15-30.9.18</td>
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Note: IP names in red font indicate suggested IP name changes to the NC CAM IP scope list.
Annex 3: Capacity made available at congested IP sides through the application of CMPs

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<th>IP name/ location</th>
<th>IP side/ Direction</th>
<th>TSO1</th>
<th>Country1 to / from</th>
<th>Connected TSO2</th>
<th>Connected country2</th>
<th>Capacity made available via CMPs [average cap. made available in 2015 for use in 2015 in kWh/d] via</th>
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<td>DE</td>
<td>to Energinet.dk</td>
<td>DK</td>
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<td>Exit</td>
<td>Gasunie Deutschland Transport Services</td>
<td>DE</td>
<td>to Thyssengas</td>
<td>DE</td>
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<td>ONTRAS</td>
<td>DE</td>
<td>to NET4GAS</td>
<td>CZ</td>
<td>0 787,569 0 0</td>
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<td>in-country</td>
<td>Kienbaum</td>
<td>Exit</td>
<td>GASCADE Gastransport</td>
<td>DE</td>
<td>to Open Grid</td>
<td>DE</td>
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<td>Oberkappel</td>
<td>Exit</td>
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<td>DE</td>
<td>to Gas Connect Austria</td>
<td>AT</td>
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<td>to NET4GAS</td>
<td>CZ</td>
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<td>DE</td>
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<td>DE</td>
<td>from Nordstream AG</td>
<td>RU</td>
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<td>DE</td>
<td>to Gas Connect Austria</td>
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<td>DE</td>
<td>from Open Grid</td>
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<td>UK</td>
<td>to NationalGrid</td>
<td>UK</td>
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<td>Exit</td>
<td>Interconnector*</td>
<td>UK</td>
<td>to Fluxys Belgium BE</td>
<td></td>
<td>79,619,824 n/a 4,545,000 0</td>
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<td>Interconnector*</td>
<td>UK</td>
<td>to Fluxys Belgium BE</td>
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<td>Interconnector*</td>
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<td>from NationalGrid</td>
<td>UK</td>
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<td>Interconnector*</td>
<td>UK</td>
<td>from Fluxys Belgium BE</td>
<td></td>
<td>116,594,504 n/a 4,564,672 0</td>
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<td>from Fluxys Belgium BE</td>
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<td>79,166,629 n/a 4,564,672 0</td>
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* Data was made available by Interconnector IUK to the Agency on 26.5.16.
Values represent daily averages for the period from September to December 2015, as CMP application only started in Sept. 2015.
According to IUK, the CMP data will be published on ENTSOG’s TP by August 2016.

Note: IP names in red font indicate additions / IP name changes to the NC CAM IP scope list.
### Annex 4: Indicative list of 41 contractually congested IP sides within the scope of the CMP GL

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<td>Ext</td>
<td>GB</td>
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<td>yes</td>
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<td>yes*</td>
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<td>yes*</td>
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<td>yes*</td>
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<td>yes*</td>
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<td>DE, CZ</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td></td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Opal (DE)/Brandov Opal (CZ)</td>
<td>Entry</td>
<td>RO</td>
<td>yes</td>
<td>yes*</td>
<td>yes</td>
<td>no</td>
<td></td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Opal (DE)/Brandov Opal (CZ)</td>
<td>Entry</td>
<td>RO</td>
<td>yes</td>
<td>yes*</td>
<td>yes</td>
<td>no</td>
<td></td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Waltbach</td>
<td>Entry</td>
<td>DE</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td></td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Zeebrugge IZT (new name: IZT (UK) / IZT - ZTP (BE))</td>
<td>Entry</td>
<td>GB, BE</td>
<td>yes</td>
<td>yes</td>
<td>yes*</td>
<td>yes</td>
<td></td>
<td>yes</td>
<td>yes*</td>
</tr>
</tbody>
</table>

* According to IUK data made available to the Agency on 26.5.16, CMP application started in Sept. 2015 and capacity was made available through oversubscription and surrender.


**Key:**

<table>
<thead>
<tr>
<th>Colour Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>= negative</td>
</tr>
<tr>
<td>Green</td>
<td>= positive</td>
</tr>
<tr>
<td>Orange</td>
<td>= in between positive and negative</td>
</tr>
<tr>
<td>White</td>
<td>= no data</td>
</tr>
</tbody>
</table>

**Text:**

yes / no = are to be seen as answers to the questions raised in the table’s header
p = partially
np = not possible
T = Trade
O = Offer
AP = Auction Premium
CMP application? = Was any capacity made available through the application of CMPs (and reported on ENTSOG’s TP)?
### Annex 5: List of the IP sides for which the FDA UIOLI shall be applied as of 1 July 2016

The following list shows the congested IP sides, for which the FDA UIOLI mechanism needs to be implemented according to paragraph 2.2.3(1) of the CMP GL.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>non-offer</td>
<td>Bacton (UK)</td>
<td>Exit</td>
<td>Interconnector</td>
<td>UK</td>
<td>to NationalGrid</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>vivid secondary trading, no unfilled requests, LT contracts ending in 2018</td>
</tr>
<tr>
<td>non-offer</td>
<td>Cieszyn (PL) / Český Těšín (CZ)</td>
<td>Exit</td>
<td>NET4GAS</td>
<td>CZ</td>
<td>to GAZ-SYSTEM</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>persistent congestion</td>
</tr>
<tr>
<td>non-offer</td>
<td>Kukula (BG) / Sildirokastron (GR)</td>
<td>Exit</td>
<td>Bulgartransgaz</td>
<td>BG</td>
<td>to DESFA</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>absent unsuccessful requests, no bookings of interruptible capacity</td>
</tr>
<tr>
<td>auction</td>
<td>Liaison Nord Sud (N-&gt;S)</td>
<td>Exit</td>
<td>GRTgaz</td>
<td>FR</td>
<td>to GRTgaz</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>congestion resolved in 2016</td>
</tr>
<tr>
<td>non-offer</td>
<td>Mallnow</td>
<td>Exit</td>
<td>GAZ-SYSTEM (ISO)</td>
<td>PL</td>
<td>to GASCADE Gastransport</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>congestion resolved in 2016</td>
</tr>
<tr>
<td>non-offer</td>
<td>Negru Voda I (RO) / Kardam (BG)</td>
<td>Exit</td>
<td>Transgaz</td>
<td>RO</td>
<td>to Bulgartransgaz</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>missing market preconditions, absent unsuccessful requests</td>
</tr>
<tr>
<td>non-offer</td>
<td>Negru Voda III (RO) / Kardam (BG)</td>
<td>Exit</td>
<td>Transgaz</td>
<td>RO</td>
<td>to Bulgartransgaz</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>missing market preconditions, absent unsuccessful requests</td>
</tr>
<tr>
<td>non-offer</td>
<td>Negru Voda II (RO) / Kardam (BG)</td>
<td>Exit</td>
<td>Transgaz</td>
<td>RO</td>
<td>to Bulgartransgaz</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
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<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>missing market preconditions, absent unsuccessful requests</td>
</tr>
<tr>
<td>non-offer</td>
<td>Zeebrugge IZT (new name: IZT (UK) / IZT-ZTP (BE))</td>
<td>Exit</td>
<td>Interconnector</td>
<td>UK</td>
<td>to Fluxys Belgium</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>vivid secondary trading, no unfilled requests, LT contracts ending in 2018</td>
</tr>
<tr>
<td>non-offer</td>
<td>Zeebrugge IZT (new name: IZT (UK) / IZT-ZTP (BE))</td>
<td>Exit</td>
<td>Interconnector</td>
<td>UK</td>
<td>to Fluxys Belgium</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>vivid secondary trading, no unfilled requests, LT contracts ending in 2018</td>
</tr>
<tr>
<td>non-offer</td>
<td>Zeebrugge (BE)</td>
<td>Exit</td>
<td>Interconnector</td>
<td>UK</td>
<td>from NationalGrid</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>vivid secondary trading, no unfilled requests, LT contracts ending in 2018</td>
</tr>
<tr>
<td>non-offer</td>
<td>GUBIN</td>
<td>Entry</td>
<td>GAZ-SYSTEM</td>
<td>PL</td>
<td>from ONTRAS</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>congestion resolved in 2016</td>
</tr>
<tr>
<td>non-offer</td>
<td>Negru Voda II. III (RO) / Kardam (BG)</td>
<td>Exit</td>
<td>Bulgartransgaz</td>
<td>BG</td>
<td>to Transgaz</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>missing market preconditions, unsuccessful requests or bookings of int. cap.</td>
</tr>
<tr>
<td>non-offer</td>
<td>Olbernhau (DE) / Hora Svate Kateřiny (CZ)</td>
<td>Exit</td>
<td>NET4GAS</td>
<td>CZ</td>
<td>from GASCADE Gastransport</td>
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<td>no</td>
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<td>no</td>
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<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>persistent congestion</td>
</tr>
<tr>
<td>non-offer</td>
<td>Opal (DE) / Brandov Opal (CZ)</td>
<td>Exit</td>
<td>NET4GAS</td>
<td>CZ</td>
<td>from LTG</td>
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<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>persistent congestion</td>
</tr>
<tr>
<td>non-offer</td>
<td>Opal (DE) / Brandov Opal (CZ) (exempted?)</td>
<td>Exit</td>
<td>NET4GAS</td>
<td>CZ</td>
<td>from OPAL Gastransport</td>
<td>no</td>
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<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>persistent congestion</td>
</tr>
<tr>
<td>non-offer</td>
<td>Zeebrugge IZT (new name: IZT (UK) / IZT-ZTP (BE))</td>
<td>Exit</td>
<td>Interconnector</td>
<td>UK</td>
<td>from Fluxys Belgium</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>vivid secondary trading, no unfilled requests, LT contracts ending in 2018</td>
</tr>
<tr>
<td>non-offer</td>
<td>Zeebrugge IZT (new name: IZT (UK) / IZT-ZTP (BE))</td>
<td>Exit</td>
<td>Interconnector</td>
<td>UK</td>
<td>from Fluxys Belgium</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>vivid secondary trading, no unfilled requests, LT contracts ending in 2018</td>
</tr>
</tbody>
</table>

* According to IUK data made available to the Agency on 26.5.16, CMP application started in Sept. 2015 and capacity was made available through oversubscription and surrender.
Annex 6: Map of 41 contractually congested IP sides in Europe (based on 2015 data)

Key:
- Congested exit
- Non-congested entry
- Congested entry Gaspool
- Congested exit NGC
- Congested entry Gaspool (only 1 out of 2 TSOs)
- Congested bundled capacity expressed via Auction Premia
- Congestion expressed via Auction Premia

Note:
All other IP sides (marked with arrows) were found to be contractually congested due to the non-offer of capacity products with a duration of 1 month or longer in 2015 or 2016 or 2017.
Smaller sized arrows represent in-country cross-zonal IPs, and do not reflect the amount of contractual congestion.

Map source:
ENTSOG Capacity Map Q4/2015, www.entsog.eu
Publishing date: 31/05/2016

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