

8th ACER Report on Congestion in the EU Gas Markets and How It Is Managed

Period covered: 2020

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Executive summary

- (1) In this Report, the European Union Agency for the Cooperation of Energy Regulators ('the Agency') monitors contractual congestion in the EU gas markets and how it is addressed. The presence of contractual congestion implies that some network users were not able to acquire the capacity product of their choice and they had to rely on mitigating measures to access the market. Such measures are necessary to improve the efficient use of the network and the overall market efficiency, and to avoid investment in physical capacity when contracted capacity remains unused. To harmonise the approaches for identifying and dealing with contractual congestion, the European Commission issued Commission Guidelines on Congestion Management Procedures ('CMP GL')¹.
- (2) While the problem of contractual congestion is currently less important than it was at the time the CMP GL were issued, the Agency continues to publish the annual Report to fulfil its legal obligation. This edition of the Report covers capacity products sold during 2020 for use in 2020, 2021 or 2022 and takes stock of the Congestion Management Procedures ('CMPs') that have been used in 2020.
- (3) One cannot evaluate observations made in 2020 without considering the COVID-19 pandemic that led to worldwide uncertainty in all fields, including economics and markets. Therefore, the Agency suspects that the remarkable drop in congestion year-on-year may be explained by dynamics following the pandemic that lead to a year-on-year demand decrease in Europe of about -3% with peak drops of 20% in spring; advanced statistical analysis may confirm this hypothesis, but such analysis is outside the scope of this Report.
- (4) Whether the level of congestion will remain at this level, drop further or increase again remains to be seen as apart from COVID-19-induced uncertainty, there are several other factors that might affect year-on-year demand for gas transport capacity including general gas market supply and demand dynamics, LNG market dynamics and expiration of long-term contracts. In the longer term, by 2030-2040, decarbonisation is likely to reduce gas demand by a significant amount and thus the demand for transport capacity. On the other hand, the potential repurposing of gas pipelines for transportation of decarbonised gases like hydrogen, may reduce the offer of gas transport capacity and may lead to tight capacity situations also in the future.
- (5) The Agency finds that in 2020:
 - Congestion has almost halved compared to 2019 and is back at levels reported in 2017;
 - The number of auction premia for yearly, quarterly and monthly capacity products dropped drastically to 44 in 2020, coming from 138 in 2019, and the volume of unsuccessful requests plunged to 372 GWh/d from 3,186.3 GWh/d in 2019;
 - 17 out of 19 (89%) congested IP sides have been found congested before;
 - The amount of capacity made available via secondary capacity trading and allocation of interruptible capacity at congested IPs surpassed the amount of capacity that has been requested unsuccessfully by network users;
 - Oversubscription remains the most applied Congestion Management Procedure ('CMP'), even though capacities made available via Firm Day-Ahead Use-It-Or-Lose-It ('FDA UIOLI') and Surrender mechanisms have increased significantly compared to 2019;
 - 59% of the congested IPs are already covered by the FDA UIOLI, for the other IPs NRAs need to take action.

¹ Commission Decision of 24 August 2012 on amending Annex I to Regulation (EC) No 715/2009 of the European Parliament and of the Council on conditions for access to the natural gas transmission networks (2012/490/EU), OJ L 213/16, 28.8.2012, http://eur-lex.europa.eu/LexUriServ.do?uri=OJ:L:2012:231:0016:0020:en:PDF.

(6) Based on the data provided by the European Network of Transmission System Operators for Gas ('ENTSOG') and the three Booking Platforms, ² Table 1 summarises the Agency's main observations regarding contractual congestion in the analysis year 2020.

Table 1: Main observations regarding congestion in the analysis year 2020

Observ ations conceming analysis year 2020	Numbers
Number of congested IP sides (out of 251 CMP-relevant IP sides)* - Due to auction premia - Due to non-offer	19 (7.6%) 9 (3.6% of total) 10 (4% of total)
Occurrences of auction premiaper product** (out of 44 auction premia) - Yearly products - Quarterly products - Monthly products	8 (18%) 18 (41%) 18 (41%)

^{*} This report considers as relevant those IPs that are marked as CMP-relevant, have physical flow capacity (no virtual reverse flow) and were valid at least one day during the year of analysis (calendar year 2020).

(7) For those IP sides that were found to be congested, the Agency examined the severity of the congestion with the following indicators: unsuccessful requests, capacity trades on the secondary market, demand for interruptible capacity (and effective interruptions), and recurrent³ presence of IPs in previous editions of the Congestion Report. Table 2 lists the main observations on severity of congestion aggregated for the congested IP sides.

Table 2: Main observations regarding severity of congestions (at congested IP sides)

Observations concerning analysis year 2020	Numbers
Number of IP sides found congested for the first time Number of IP sides with recurrent inclusion in Congestion Reports	3 (of which 1 new IP) 16
Firm technical capacity of congested IP sides (from ENTSOG TP) Unsuccessful requests Capacity made available via secondary trades Interruptible capacity allocated Effective interruptions (counted as days on which interruption occurred)	2,763.0 GWh/d 372.6 GWh/d 509.2 GWh/d 185.6 GWh/d 3 days

- (8) Physical congestion, indicated by actual interruptions of interruptible capacity, occurred at 2 contractually congested IP sides with varying frequencies.
- (9) The Agency checked the application of CMPs at the congested IPs. The FDA UIOLI mechanism is already applied at 12 of the 19 IP sides detected as congested. This means that at the remaining 7 congested IP sides, the respective National Regulatory Authorities ('NRAs') shall require the relevant Transmission System Operator(s) ('TSO(s)') to implement and apply the FDA UIOLI mechanism, according to Point 2.2.3(1) of the CMP GL, or show that the congested situation is unlikely to reoccur in the following three years. ANRAs can use the information contained in this Report in their decision making. The list of congested IPs and their depiction on a map is available in Annex I and Annex II, respectively, of this Report. A separately published Technical Annex contains the full analysis of all IP sides regarding congestion and application of CMPs.

^{**} Multiple auction premia can occur at the same IP side.

² The Agency notes a significant improvement with respect to combining both data sets, thanks to the efforts from the booking platform operators to make available the auction data in an agreed template that structurally includes EIC codes.

³ Recurrent means an IP side has been found contractually congested in at least one previous edition of the Congestion Report.

⁴ The concerned IP sides are Csanádpalota (HU>RO, entry), Nea Mesimvria (TAP>GR, entry), Negru Voda II (RO>BG, exit), Negru Voda III (RO>BG, exit), RC Thayngen-Fallentor (DE-CH, exit), VIP PIRINEOS (FR>ES, exit and entry)

(10) The Agency has been publishing Congestion Reports since 2014 and the observations vary from one year to the other. Currently, the Agency does not investigate the reasons underlying these changes, which would require advanced analysis. Nevertheless, the Agency observes the following evolutions over time of congestion and of the application of CMPs, as listed in Table 3.

Table 3: Evolution of congestion and CMP application

Evolution over recent Congestion Reports	2017	2018	2019	2020
Number of congested IPs	17	31	37	19
Application of CMPs[GWh/d] - LT UIOLI - FDA UIOLI - Oversubscription - Surrender	8.6 486.8 5,175 535.6	3,190.6 492,352.2 1,638,285.4 281,616.6	3,190.6 225,931.6 1,667,881.5 71,818.1	3,206.9 408,291.0 1,248,621.1 92,816.6

(11) Based on its analysis, the Agency formulates a set of recommendations addressed to TSOs, ENTSOG and the European Commission in Section 4 of this Report. These recommendations largely reiterate recommendations already formulated in previous Reports.

1. Introduction

- (12) The CMP GL, in particular its Point 2.2.1(2), stipulate that the Agency has to publish a yearly report on contractual congestion at IPs. The present Congestion Report is the eight Report fulfilling this legal obligation and it covers the year 2020.
- (13) This Report uses the concepts of contractual congestion and physical congestion that 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.
- (14) Contractual congestion during time periods without physical congestion can be tackled through the CMPs laid down in the CMP GL. Additionally, the CMP GL contain certain criteria that require the application of the FDA UIOLI mechanism.
- (15) The criteria which may lead to the application of the FDA UIOLI are set out in Point 2.2.3(1) of the CMP GL. In particular, FDA UIOLI shall be applied at IPs where, based on 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:
 - for at least three firm capacity products with a duration of one month, or
 - for at least two firm capacity products with a duration of one quarter, or
 - for at least one firm capacity product with a duration of one year or more, or
 - where no firm capacity product with duration of one month or more has been offered.
- (16) The concepts above are used for the Agency's screening of the data made available by ENTSOG and auction data collected from the booking platform operators GSA Platform, PRISMA and RBP.
- (17) Given that the transitional period following the Withdrawal Agreement of the UK from the EU applied till 31 December 2020, the Agency collected and analysed the data for the UK interconnection points. The term 'Member States' in this Report shall be understood to include the UK for statistics until and including 2019 and to exclude UK for statistics referring to 2020.
- (18) The remainder of this Report contains the congestion analysis in Chapter 3 and an analysis concerning the application of CMPs in Chapter 4. The Report concludes with a set of recommendations addressed to the European Commission, NRAs and TSOs, and suggestions for further analysis, e.g., for research institutes and scholars.

2. Analysis of contractual congestion

2.1 Assessment methodology

- (19) The congestion analysis contains two parts. The first part concerns the assessment of the existence of congestion at IP sides. The second part concerns the assessment of the severity of the identified congestions.
- (20) First, with respect to the assessment of the existence of contractual congestion, the data provided by ENTSOG were analysed. Furthermore, auction reports were collected from the booking platforms, consolidated and screened IP by IP, for the offer and non-offer of capacity products and for those auctions at IPs where the total capacity demand exceeded the offer and/or where auction premia occurred for monthly, quarterly and yearly products. The Agency notes a significant improvement with respect to combining both data sets, thanks to the efforts from the booking platform operators to make available the auction data in an agreed template that structurally includes EIC codes.
- (21) In line with the criteria set out in Point 2.2.3(1) of the CMP GL, the IP sides for which auction premia and/or non-offers of firm products occurred were labeled as contractually 'congested'. The IP sides have been classified accordingly into four mutually exclusive categories:
 - i. 'Congested': those which meet the criteria set in sub-Points (a) to (d) of Point 2.2.3(1) of the CMP GL, but do not fall into category ii below;
 - "Formally congested": those which only meet the criterion set in sub-Point (c) of Point 2.2.3(1) of the CMP GL because of a missing yearly product for the gas year 2021/22 in the auction of July 2020;
 - iii. 'Close to be congested': those which had auction premia occurring at a lower frequency than the threshold defined in the CMP GL criteria, namely for either two monthly products or one quarterly product;
 - iv. 'Not congested': those which do not meet the criteria (a) to (d) of Point 2.2.3(1) of the CMP GL and do not fall into category iii above.
- (22) Second, with respect to the assessment of the severity of contractual congestion for those IP sides identified as congested (category i above), the Agency collected and analysed further information on 'unsuccessful requests', on the products (monthly, quarterly, yearly) traded on the secondary market and on whether interruptible capacity was allocated at an IP side. Finally, the Agency also connected the current analysis to the results of the previous editions of the Congestion Report.
- (23) The volume of 'unsuccessful requests' sheds light on the extent of congestion where auction premia have occurred. Unsuccessful requests are calculated by subtracting total allocated capacity from total requested capacity at the reserve price. ⁵
- (24) The information on interruptible capacity bookings can be used in the analysis to indicate 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'. Additionally, the occurrence of actual interruptions of nominated interruptible capacity was documented as a possible indicator for physical congestion.
- (25) For the identified contractually congested IP sides, the Agency assessed the severity of congestion at IP sides based on:

⁵ In the seventh edition of the Congestion Report, unsuccessful requests have been reported as the difference of requested capacity at the reserve price and the offered capacity.

- the amount of unsuccessful requests (where auction premia occur);
- to which extent secondary capacity trading took place;
- to which extent interruptible capacity was allocated and whether interruptions occurred;
- whether they were found congested in the previous Congestion Reports;
- (26) The chapter closes with the conclusion concerning the application of FDA UIOLI at congested IPs.

2.2 Identification of contractually congested IPs

- (27) For this year's Report, 372 IP sides were considered to be CAM-relevant, of which 251 were considered CMP-relevant, based on the feedback received from the TSOs.
- (28) The year-to-year composition of IP sides changes for several reasons. For instance, several physical IP sides have been merged into a virtual interconnection points (VIPs)⁶ during the year, meaning both the VIP and the merged-in IPs had to be assessed. On the other hand, newly created IP sides⁷ were included in the list for the first time.
- (29) This report considers as contractually congested only those IP sides labelled as 'congested'. IP sides labelled as 'formally congested' could potentially be congested in the future but are not the focus of this report. A Technical Annex that is published alongside this Report contains the full classification of IP sides and clarifications provided by TSOs and NRAs on possible reasons for the occurrence of congestion.
- (30) According to the criteria (a) to (d) of Point 2.2.3(1) of the CMP GL, 19 IP sides were identified as congested. The reasons why these IP sides were identified as such differ as follows.
- (31) The occurrence of auction premia resulted in 9 IP sides being classified as congested, of which:
 - 2 IP sides⁹ had premia on monthly, quarterly and yearly products;
 - 2 IP sides ¹⁰ had premia on quarterly and yearly products;
 - 2 IP sides¹¹ had premia on monthly and yearly products;
 - 2 IP sides 12 had premia on monthly and quarterly products;
 - 1 IP side ¹³ had premia for quarterly products only.
- (32) 10 IP sides were identified as congested due to the non-offer of firm capacity products.

⁶ E.g., inclusion of physical IPs occurred at VIP-BENE, VIP TTF-GASPOOL H, VIP TTF-GASPOOL L, VIP TTF-NCG H, VIP-TTF-NCG-L. For a recent overview of VIPs in EU gas markets see ACER's Monitoring update on incremental capacity projects and virtual interconnection points of July 2020.

⁷ E.g. Nea Mesimvria and Melendugno

⁸ The Agency's analysis identifies a large number of formally congested IPs within Germany due to the yearly product 2021/22 not being on offer as these internal IPs will disappear after the German market merger on 1 October 2021.

⁹ Csanádpalota (HU>RO, both exit and entry)

¹⁰ Mosonmagyaróvár (AT>HU, both exit and entry)

¹¹ VIP PIRINEOS (FR>ES, both exit and entry)

¹² Überackern SUDAL (AT)/Überackern 2 (DE) (DE>AT, both exit and entry)

¹³ Nea Mesimvria (TAP>GR, entry)

- (33) Congestion triggered by occurrences of auction premia dropped to 9 in 2020 from 30 in 2019 (16 in 2018, 6 in 2017 and 9 in 2016) and by occurrences of non-offer of firm capacity products increased to 10 in 2020 from 7 in 2019 (15 in 2018, 11 in 2017 and 14 in 2016).
- The markedly decreased occurrence of auction premia after a steady increase in the past years might be the result of changed booking behaviour due to exceptional COVID circumstances. Annex III contains a small analysis of unsuccessful requests for a subset of IPs that were identified as congested due to auction premia in the 7th Congestion Report (published in May 2020). The unsuccessful requests at these highly-demanded IPs dropped significantly in 2020 compared to 2019 in the majority of cases. More detailed analysis of capacity bookings in 2020 vis-à-vis the pre-COVID-19 years is necessary to confirm this hypothesis; however, such analysis is beyond the scope of this Report.
- (35) 8 of the 251 CMP-relevant IP sides were not analysed because they allocate implicitly and do not organise auctions for allocating yearly, quarterly and monthly products; the concerned IPs are Kiemenai (Ambergrid exit and entry, Conexus exit and entry) and Balticconnector (Elering exit and entry, Gasgrid Finland exit and entry). Based on the information from the respective TSOs, there is no contractual congestion as defined in this Report at these IPs. However, at the Balticconnector IP in the direction from Estonia to Finland, there is a form of congestion due to the technical capacity being lower than expected; the implicit allocation mechanism relies on accepting nominations exceeding capacity on pro-rata basis.¹⁴
- (36) Figure 1 graphically presents the results of the analysis.

Close to be congested, 5

Congested, 19

Formally congested, 47

Not congested, 172

Figure 1: Result of the congestion analysis of 251 CMP-relevant IP sides - 2020

2.3 Severity of contractual congestion

- (37) The Agency reports in this section on four indicators that shed light on the severity of congestion at an IP. These indicators are the unsuccessful requests, capacity traded on the secondary market, demand for interruptible capacity (and effective interruptions), and the recurrence of congestion over several years as recorded in the previous editions of the Congestion Report.
- (38) Similarly to the previous year's Report, the Agency checked ENTSOG's Transparency Platform ('TP') for the **unsuccessful requests**. Unfortunately, unsuccessful requests were reported there only for 4 out of the 9 IP sides that were labelled congested due to the auction premia, meaning that the Agency could not rely on the information available on the TP. The unsuccessful requests based on the Agency's analysis of auction data concern 18 IP sides, of which 9 were congested due to the auction premia and 5 were close-to-be-congested IP sides. ¹⁵

¹⁴ The Agency has not assessed the functioning of the implicit allocation mechanism that is applied in the Estonian, Finnish and Latvian gas markets.

¹⁵ The remaining 4 IP sideshad 1 monthly premium each.

- (39) The majority of unsuccessful requests occurred at: Mosonmagyaróvár (AT>HU, both exit and entry), followed by Überackern SUDAL (AT)/Überackern 2 (DE) (DE>AT, both exit and entry) and Csanádpalota (HU>RO, both exit and entry). The largest volumes were requested at Mosonmagyaróvár (AT>HU both exit and entry) IP, followed by VIP Brandov-GASPOOL (DE>CZ, both exit and entry) and Bacton BBL (GB>BBL, entry).
- (40) The Agency observed that with 5 IP sides out of 19, the number of congested IP sides for which **secondary trades for capacity** occurred remained relatively low. 16
- (41) The congested IP sides with the most active secondary trading of capacity products are: Csanádpalota (HU>RO exit) IP side, followed by Mosonmagyaróvár (AT>HU exit) IP side and Mosonmagyaróvár (AT>HU entry) IP side.
- (42) The demand for **interruptible capacity** can also be used as an indicator for capacity demand exceeding the technical capacity, under the assumption that those who booked interruptible capacity would have preferred firm capacity.
- (43) Interruptible capacity, with a duration exceeding one day, was offered for at least one product for 13 of the 19 congested IP sides. For 6 congested IP sides, no interruptible capacity with a duration exceeding one day was offered for use in the calendar years of 2020 or 2021. The Agency encourages the relevant TSOs to offer interruptible capacity with a duration exceeding one day, according to the provisions of Article 32 of the NC CAM 17, to ease the severity of congestion.
- (44) Effective interruptions occurred at one congested IP side, 2 days at Überackern SUDAL (AT) Überackern 2 (DE) (DE>AT, exit). Effective interruptions that occur structurally hint at physical congestion.
- (45) Of the 19 IP sides identified as congested, 3 are included for the first time. **Recurrence of congestion** in the three preceding years (2017-2020) has been observed at 16 IP sides: 16 were found congested in 2019, 11 were already found congested in 2018 and 11 IP ¹⁸ sides have been identified as congested in the last three editions of the Congestion Report (current edition included), and 3 IP sides ¹⁹ were continuously congested in the last four editions.

2.4 Application of FDA UIOLI

(46) Annex I lists the IP sides for which the FDA UIOLI mechanism needs to be implemented and applied according to Point 2.2.3(1) of the CMP GL, unless it is shown that a congested situation is unlikely to reoccur in the following three years.

(47) 11 IP sides ²⁰ labelled as congested already apply FDA UIOLI. The Agency notes that NRAs take the final decision on how to mitigate and prevent congestion, taking into account the severity of

Mosonmagyaróvár (AT>HU exit) IP side, Mosonmagyaróvár (AT>HU entry) IP side, Oberkappel (AT>DE exit) IP side, Csanádpalota (HU>RO exit) IP side, and Csanádpalota (HU>RO entry) IP side.

¹⁷ Commission Regulation (EU) 2017/459 of 16 March 2017 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013.

¹⁸ The 11 IP sides found congested in the Reports covering 2018, 2019 and 2020 (current) are Überackern ABG (AT)/Überackern (DE) (bayernets entry), Mosonmagyaróvár (FGSZ entry), Mosonmagyaróvár (Gas Connect Austria exit), Überackern SUDAL (AT)/Überackern 2 (DE) (bayernets exit), Überackern SUDAL (AT)/Überackern 2 (DE) (Gas Connect Austria entry), Kienbaum (Gascade exit), Greifswald / LBTG (LBTG entry), VIP PIRINEOS (Enagas entry), VIP PIRINEOS (TERÉGA exit), Negru Voda II (Transgaz exit), Negru Voda III (Transgaz exit).

¹⁹ Überackern SUDAL (AT)/Überackern 2 (DE) (bayernets exit), Überackern SUDAL (AT)/Überackern 2 (DE) (Gas Connect Austria entry), Kienbaum (Gascade exit).

²⁰ Überackern ABG (AT)/Überackern (DE) (bayemetsentry), Mosonmagyaróvár (FGSZ entry), Mosonmagyaróvár (Gas Connect Austria exit), Überackern SUDAL (AT)/Überackern 2 (DE) (bayemets exit), Überackern SUDAL (AT)/Überackern 2 (DE) (Gas Connect Austria entry), Oberkappel (Gas Connect Austria exit), Kienbaum (Gascade exit), Bunder-Tief (Gasunie Deutschland exit), Greifswald / OPAL (OPAL Gastransport entry), Brandov / OPAL (OPAL Gastransport exit), Csanádpalota (FGSZ exit).

congestion and the application of FDA UIOLI or other CMPs. They can use the information contained in this report to support their decision making.

3. Application of CMPs

- (48) According to Point 2.2.3 of the CMP GL, any additional capacity made available through the application of one of the CMPs shall be offered by the respective TSO(s) in the regular allocation process.
- (49) The CMP GL Section 2.2 defines four CMP measures to mitigate congestion:
 - Long Term (LT) UIOLI is described in Point 2.2.5 of the CMP GL. This mechanism aims at
 deterring capacity hoarding over the longer term. LT UIOLI dictates that NRAs require their
 TSOs to fully or partially withdraw systematically underutilised capacity if certain criteria are
 met. The process could trigger the release of yearly capacity products.
 - FDA UIOLI brings unused firm capacity back to the market on a day-ahead basis. TSOs are not incentivised financially by this CMP. The network user loses its capacity and provides the additional capacity volumes by being subject to re-nomination restrictions.
 - Oversubscription allows TSOs to offer more firm capacity than is technically available at IPs on the assumption that not all the allocated capacity will be actually used by network users. This scheme provides financial incentives for the TSOs and requires basic modelling built on statistical scenarios.
 - Surrender is a CMP measure that allows network users to return their capacity to the TSO.
 The TSO will again offer this capacity in the primary market (by an auction on a booking
 platform). Capacity returned by network users will only be sold after the TSO has sold its
 own available capacity. During the auction, the capacity given back by a network user will
 not be distinguished from the TSO capacity, and it will be offered based on the standard
 volume and price units applied in the auctions. The Agency remarks that users could sell
 their capacity on the secondary market, which might be a faster option in liquid secondary
 markets, than triggering surrender.
- (50) In 2020, 10 Member States ('MSs') and the UK reported capacity amounts made available via CMPs, while in 2016, 2017, 2018 and 2019 there were 7, 11, 10 and 12 MSs (including the UK) reporting such amounts, respectively. For calculating the average deployment of CMPs, the Agency calculated the occurrences by counting on how many days the application of CMPs took place. An increase of surrender (~20%) has been observed in 2020 compared to the previous year, while the use of oversubscription and FDA UIOLI has decreased (~15% and ~10% respectively). LT UIOLI remained at the same level with 2019.
- (51) Figure 2 shows the results in 2020 per MS and per CMPs applied.²¹

²¹ The capacity numbers include capacity released at CMP-relevant and non-CMP relevant IP sides as reported to ACER by ENTSOG.

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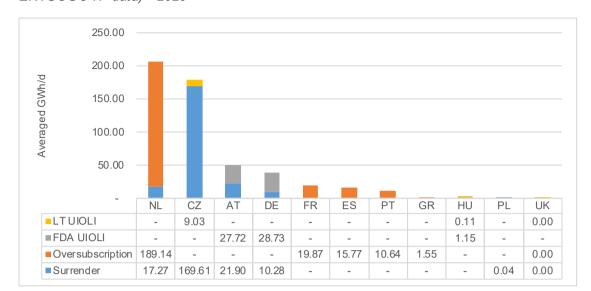


Figure 2: Capacity released by CMP measures [averaged GWh/d] via CMPs in the EU (according to ENTSOG's TP data) – 2020

- (52) Compared to 2019, the use of LT UIOLI in 2020 in the Czech and UK markets remained constant, however, the capacity released in Czech Republic is by far larger than that released in the UK.²²
- (53) As in the previous Reports, in 2020 FDA UIOLI was applied at the German and Austrian IP sides, but this year the mechanism was also used in Hungary. In Austria the daily occurrences of this CMP was significantly reduced vis-à-vis 2019 (~1,800 days in 2020, from ~3,000 in 2019), while in Germany occurrences of FDA UIOLI remained at the 2019 levels. In terms of absolute capacity released, FDA UIOLI almost doubled compared to 2019, driven by a large increase of FDA UIOLI offers at the German borders, even though FDA UIOLI capacity at Austrian IPs was slightly decreased.
- (54) The extent of application (the number of instances in days) of oversubscription and the corresponding capacity offered decreased compared to 2019. As is 2019, the vast majority of the reported applications still concern IP sides of the Dutch TSO, GTS.
- (55) The daily instances of surrender of capacity products, and the capacity surrendered, has increased in 2020 compared to 2019. The increase was driven by the surrender of capacity at the IPs in Austria and the Netherlands.

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²² The capacity values in UK are small, making the averaged values appear to be 0 when expressed in GWh/d.

4. Recommendations

(56) Although an overall improvement has been achieved on data quality and the data files from ENTSOG, including the CAM scope list and instructions being better prepared for the analysis, the experience gained in producing this report indicates that the recommendations with respect to data quality from the previous report are still relevant. In order to improve data availability, consistency and transparency, the Agency reiterates the following recommendations.

4.1 Recommendations for ENTSOG and TSOs

- On improving data quality, implementing automated data processing and making the data available at one single platform, progress was limited.
 - ENTSOG/TSOs shall ensure that auction results with premia and data on all non-available capacity products are uploaded on the ENTSOG's TP, as required by the CMP GL, and that these are consistent with the information reported by the booking platforms;
 - ENTSOG/TSOs shall ensure that the TP includes up-to-date information on the virtualised operation²³, on the commercial and operational validity of the IP sides and on the identification of virtual reverse flow (i.e. absence of technical capacity). The Agency appreciated that ENTSOG made available a list of IPs where the dual model virtualisation applies and recommends that such information is unambiguously available on the TP;
 - The Agency noted a significant improvement in terms of the use of EIC codes ('unique identifier' ²⁴) in booking platform data collected through an agreed template developed by the Agency. The more consistent use of EIC codes by stakeholders enabled the Agency to perform a more efficient and partially automated data processing. Continuous improvement and quality checks of consistency of EIC codes by data providers remain fundamental to allow data users to efficiently and effectively combine data sets from different providers;
 - Although ENTSOG has updated its version of the CAM/CMP scope list, a few IPs were still
 identified as non-relevant²⁵ during the analysis. Therefore, based on the findings in this
 Report, ENTSOG shall adapt and publish the updated CAM/CMP IP scope list on its TP
 continuously;
 - ENTSOG's TP should aim to incorporate information on bundled capacities. 26

4.2 Policy recommendations

On the basis of the experience gained in producing the Congestion Reports, the Agency reiterates the following recommendations to the European Commission:

²³ The dual model entails that a physical IP remains operational for existing contracts whereas future capacity offering is done at the VIP that the physical IP has been merged into.

²⁴ An IP side can be uniquely identified only with a combination of the following: IP name (EIC code), TSO (EIC code), direction, connected TSO (EIC code, if applicable).

²⁵ The Agency notes that in particular the labelling of IP sides where virtual reverse flow applies without technical capacity requires corrections.

²⁶ Currently, some commercial information on capacity products (e.g. on bundling and the level of firmness and allocability of firm capacity) is not available on the ENTSOG TP. Such data is only publicly accessible through the reporting of the three booking platforms. In order to fully comply with CMP GL's obligation to report on auction premia on the ENTSOG TP, at least an indicator on whether the auction premia occurred for bundled or unbundled capacity products is necessary. For the future, it would be desirable to have a single platform for all public gas transport data related to CAM, CMP, balancing and tariff data to enable stakeholders to efficiently access all the required information in a harmonised form.

- The Report fulfils the requirements of the CMP GL to analyse the auction data for a calendar year. However, the Agency highlights that the CMP GL should be improved in three ways:
 - i. Gas capacity auctions follow an auction calendar that is organised according to the gas year, which lasts from 1 October of the calendar year until 30 September of the following calendar year. The scope of the analysis in the Congestion Report should be aligned and follow the auction calendar for the gas year. The current wording and timing in the CMP GL do not allow the Agency to do so;
 - ii. A clarified CMP GL could make the congestion analysis more market oriented. For network users it is relevant to have the opportunity to book capacity for delivery throughout the period under review regardless of whether the booking takes place for any month during the year, in the form of either monthly, quarterly or yearly products. The current practice in the Congestion Reports has been to analyse whether at least one product with a minimum duration of one month has been offered during the period under review.
- Therefore, the following recommendations from last year's Congestion Report are still valid and restated:
 - i. The EC may consider **aligning criterion d**) of Point 2.2.3(1) of the CMP GL with the other congestion criteria. The current reading of criterion d) considers an IP side not congested if at least one monthly product was offered out of 12 months in the preceding year's rolling monthly auction procedures;
 - ii. Alternatively, criterion d) could be aligned with the timeframes of criteria b) or a) as follows: At least 6 [but minimum 3] monthly products should be offered at an IP in order for it not to be considered contractually congested.
- With respect to Point 2.2.1 of the CMP GL, the Commission may consider clarifying, as recommended also in last year's Congestion Report:
 - Until when the Agency shall produce Congestion Reports (or under which conditions the reports are not required anymore) and whether its frequency could be lowered;
 - ii. An **implementation period** for the FDA UIOLI mechanism, if congestion is identified at IP sides only after 1 July 2018 and the respective NRA has decided to require the TSO to implement and apply the FDA UIOLI mechanism.
- The EC may consider amending the CMP GL to improve the effectiveness of the CMP measures, in particular when applied as preventive measures ²⁷, before contractual congestion occurs.
- The EC may also consider to extend the **scope of 'contractual congestion'** to the **dayahead timeframe** between hubs (requiring the Agency to assess auction premia and the non-offer of firm day-ahead products at a cross-zonal level).
- 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.

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²⁷ At least at those IP sides which are found 'potentially' or 'close to be congested' or where the TSOs can anticipate any risk for contractual congestion occurring.

4.3 Topics for further analysis

- (59) This Report focuses on the identification of contractual congestion in line with the criteria set out in Point 2.2.3(1) of the CMP GL and on monitoring the use of CMPs.
- (60) The Agency acknowledges that deeper and broader analyses of the congestion data can provide additional insights and invites academia, research institutes and other interested parties to use the data, which is publicly available for several years, for other types of analysis than the one included in this Report.
- (61) Topics of interest to the Agency include for instance:
 - The identification and statistical analysis of the factors that could explain the changes in the level of contractual congestion over time. Such factors can include market events (e.g., changes in transport tariffs, demand and supply changes and shocks) or non-market events (such as changes in national policies) and other events. In particular, the COVID-19 pandemic may have affected the booking behaviour in 2020;
 - A detailed analysis of the preventive and mitigating measures to deal with contractual congestion, including the role of CMPs therein;
 - A critical review of the criteria for identification of contractual congestion as defined in the CMP GL, including the formulation of alternative criteria;
 - The analysis of contractual congestion as a signal for market failures (that could trigger deeper and more specialized analysis such as investigating anti-competitive behaviour).
 - A detailed analysis of congestion at a daily level.
- (62) Insights from such studies could feed into the Agency's monitoring of the gas markets and lead to a refinement of the Report and of policy recommendations based thereon.



Annex I: List of the 2020 IP sides for which NRAs should require the FDA UIOLI application

The list shows the congested IP sides, for which the FDA UIOLI mechanism needs to be applied according to Point 2.2.3(1) of the CMP GL, unless it is shown that a congested situation is unlikely to reoccur in the following three years. NRAs take the final decision on this matter, considering the severity of congestion and the application of all CMPs. The separate Technical Annex contains the full analysis and all TSO and NRA clarifications.

In the table C stands for congested, FC for formally congested and CTBC for close to be congested.

Operator	Interconnection Point	Connected operator	Direction	Status of congestion	Trigger for congestion	Interruptible offered	LT UIOLI (volumes offered)	FDA UIOLI (volumes offered)	Oversubscription (volumes offered)	Surrender (volumes offered)	Unsuccessful request	DA Auctions: No of PREMIA occurrences	Has this IP side been (indicatively) contractually congested in Q4/13	Congested in 2014	Congested in 2015	Congested in 2016	Congested in 2017	Congested in 2018	Congested in 2019	Congested in 2020 (current)				
bayernets	Uberackern SUDAL (AT)/ Überackern 2 (DE)	Gas Connect Austria	exit	CONGESTED	PREMIA	Yes		Yes			Yes	8			С	С	С	С	С	С				
bayernets	Uberackern ABG (AT)/ Überackern (DE)	Gas Connect Austria	entry	CONGESTED	NON-OFFER	Yes		Yes				0						С	С	С				
DESFA	Nea Mesimvria	TAP	entry	CONGESTED	PREMIA						Yes	0 Not in CA			Not in CAM list			Not in CAM list			in CAM list			
Enagas	VIP PIRINEOS ^{1,4}	TERÉGA	entry	CONGESTED (bundle)	PREMIA				Yes		Yes	0				С		С	С	С				
FGSZ	Csanádpalota	Transgaz	exit	CONGESTED	PREMIA	Yes		Yes			Yes	0				FC			С	С				
FGSZ	Mosonmag yaróvár	Gas Connect Austria	entry	CONGESTED	PREMIA	Yes	Yes	Yes			Yes	0				С		С	С	С				
Gas Connect Austria	Uberackern SUDAL (AT)/ Überackern 2 (DE)	bayernets	entry	CONGESTED	PREMIA	Yes		Yes		Yes	Yes	8	С	С	С	FC	С	С	С	С				
Gas Connect Austria	Mosonmag yaróvár	FGSZ	exit	CONGESTED	PREMIA	Yes		Yes		Yes	Yes	0				FC	FC	С	С	С				
Gas Connect Austria	Oberkappel	GRTgaz Deutschland	exit	CONGESTED	NON-OFFER	Yes		Yes				0					FC	FC		С				
GASCADE Gastransport	Kienbaum	Open Grid Europe	exit	CONGESTED	NON-OFFER	Yes		3				0		O	С	С	С	C	С	С				
Gasunie Deutschland	Bunder-Tief	Open Grid Europe	exit	CONGESTED	NON-OFFER	Yes		Yes				0					FC		С	С				
LBTG	Greifswald / LBTG	Nord Stream	entry	CONGESTED	NON-OFFER	Yes		3				0		С	С	С		С	С	С				
OPAL Gastransport	Greifswald / OPAL	Nord Stream	entry	CONGESTED	NON-OFFER	Yes		3				0			С	FC	FC		FC	С				
OPAL Gastransport	Brandov / OPAL	NET4GAS	exit	CONGESTED	NON-OFFER			3				0			С	FC	FC		С	С				
TERÉGA	VIP PIRINEOS⁴	Enagas	exit	CONGESTED	PREMIA	Yes			Yes		Yes	0				С		С	С	С				
terranets bw	RC Thayngen-Fallentor	Erdgas Ostschweiz	exit	CONGESTED	NON-OFFER	Yes				Yes		0	_				С		С	С				

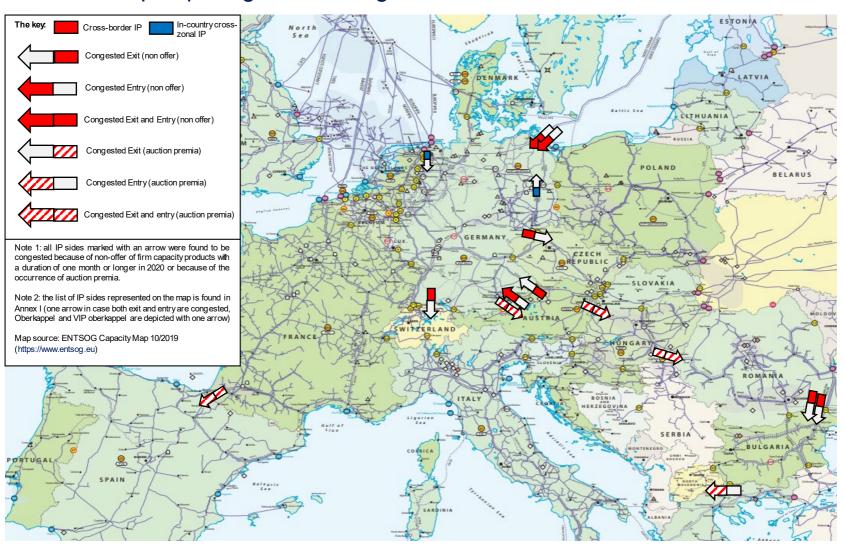
Operator	Interconnection Point	Connected operator	Direction	Status of congestion	Trigger for congestion	Interruptible offered	LT UIOLI (volumes offered)	FDA UIOLI (volumes offered)	Oversubscription (volumes offered)	Surrender (volumes offered)	Unsuccessful request	DA Auctions: No of PREMIA occurrences	Has this IP side been (indicatively) contractually congested in Q4/13	Congested in 2014	Congested in 2015	Congested in 2016	Congested in 2017	Congested in 2018	Congested in 2019	Congested in 2020 (current)
Transgaz	Csanádpalota	FGSZ	entry	CONGESTED	PREMIA						Yes	0				FC			С	С
Transgaz	Negru Voda II ²	Bulgartransgaz	exit	CONGESTED	NON-OFFER							0		С	С	С		С	С	С
Transgaz	Negru Voda III ²	Bulgartransgaz	exit	CONGESTED	NON-OFFER							0	Not in CAM list	С	С	С		С	С	С

¹ On the Enagas side of VIP PIRINEOS, the auction premia occurred only for bundled capacity products, while unbundled entry capacity was still available for the concerned products.

² ANRE states that currently third party access is not applied at these IPs.
³ FDA UIOLI mechanism is implemented for the IPs Kienbaum, Greifswald/OPAL and Brandov/OPAL. However, in practice, no capacities were offered through the mechanism in 2020.

⁴ CRE states that the auction premia in 2019 and 2020 for the yearly (bundled) product at VIP PIRINEOS are the result of strategic bidding behaviour of few network users and that effectively booked yearly capacity is close to null. Following an analysis of the situation, CRE concluded that shippers' booking behaviour aimed at triggering the 'congestion tariff' which has been in place at French IPs since several years. It consists in bringing multipliers down to 1 on all short-term capacity products (quarterly, monthly and daily) when an IP reaches contractual congestion [as defined in the French tariff regulation] at yearly auctions. In its deliberation dated 21 January 2021, CRE decided to add a condition for triggering the multiplier reduction: it is brought to 1 (i) when an auction premium appears and (ii) when a minimum of 98% of yearly auctioned capacity is actually booked.

Annex II: Map depicting the 19 congested IP sides in 2020





Annex III: COVID-19 - Comparison of unsuccessful requests 2019 and 2020

The graph reports the difference of unsuccessful requests volumes for a subset of IPs that were identified as congested (excluding IPs that merged into VIPs in 2020) due to auction premia in the 7th Congestion Report.

