

# Congestion Management Procedures Guidelines Implementation and Effect Monitoring Report

2017

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PART I

# Implementation Monitoring of CMP Guidelines 2017

Image courtesy of REN





# Introduction

The guidelines for Congestion Management Procedures (CMP GL) were developed by the European Commission in 2010–2011 and approved by the EU Gas Committee on 24 August 2012 as “Commission Decision on amending Annex I to Regulation (EC) No 715/2009”. The implementation date was 1 October 2013.

Under Article 8(8) of the Gas Regulation, ENTSOG monitors the implementation of the CMP GL.

ENTSOG launched its annual monitoring process in December 2017 to ensure the timely publication of results in the Annual Report 2018.

For the implementation monitoring of the Congestion Management Procedures (CMPs), the same questionnaire was used as in the previous year and was only updated for those TSOs for which the process of implementation of all the mandatory measures was still ongoing according to last year’s report.

Additionally to the update of the TSOs who were still in the process of implementing all CMPs when the previous report was published, the TSOs whose IP(s) were mentioned in ACER’s Congestion Report, and for which NRAs chose to implement OS+BB instead of FDA UIOLI, were also asked to provide information about the status of implementation of FDA UIOLI, as it is a requirement of the CMP GL.

# Overview of Implementation Status

In the survey conducted by ENTSOG at the end of 2017 on the level of implementation of the CMPs, an improvement is registered in comparison with the survey of the previous year.

In 2017, 38 TSOs out of 49 EU TSOs (45 ENTSOG members, two associated partners and two more TSOs that are not ENTSOG members) have implemented Surrender of Capacity, Long-Term Use-It-Or-Lose-It (LT UIOLI) and Oversubscription and Buy-Back (OS+BB) or Firm Day-Ahead Use-It-Or-Lose-It (FDA UIOLI). OS+BB and FDA UIOLI are interchangeable in terms of compliance with CMP Annex, as at least one of these mechanisms must be implemented. The National Regulatory Authority (NRA) of each country has to decide whether to use the OS+BB scheme or the FDA UIOLI mechanism.

From July 2016, ENTSOG also has to monitor if the TSOs have implemented FDA UIOLI in case their IPs are mentioned as “congested” in ACER’s Congestion Report. This obligation is coming from the CMP Annex: *“National regulatory authorities shall require transmission system operators to apply at least the rules laid down in paragraph 3 per network user at interconnection points with respect to altering the initial nomination if, on the basis of the yearly monitoring report of the Agency in accordance with point 2.2.1 (2), it is shown that at*

*interconnection points demand exceeded offer, at the reserve price when auctions are used, in the course of capacity allocation procedures in the year covered by the monitoring report for products for use in either that year or in one of the subsequent two years, ...”.*

There are 4 TSOs that were in the particular situation of having one or more IPs mentioned as “congested” in ACER’s report. 1 TSO has implemented FDA UIOLI as asked by its NRA as from 1st April 2017. For another TSO it has been decided by the NRA not to implement FDA UIOLI but OS+BB. 1 TSO were not asked by the NRA to implement FDA UIOLI and for 1 TSO no NRA decision was made on the deployment of OS+BB and FDA UIOLI.

And although for 9 TSOs the CMP GL are not applicable (for some Member States derogation under Article 49 of the Gas Directive has been granted by the European Commission), one of these TSOs has implemented the CMP measures.

Number of TSOs	Oversubscription and Buy-Back scheme (OS+BB) or Firm Day-Ahead UIOLI mechanism (FDA UIOLI)*	Surrender of Contracted Capacity	Long-term UIOLI (LT UIOLI)	Comments
37				
1				Have implemented both OS+BB and FDA UIOLI due to the fact that 1 of its IPs was mentioned as “congested” in ACER’s congestion report 2016
1				OS+BB: The NRA has not approved the proposed scheme yet
1				Implementation in 2018
9				No IPs/Derogation

	Implemented		In process of implementation
	Not implemented		Not applicable, as regards scope or derogation under Article 49 of Gas Directive

\* The Firm Day-Ahead UIOLI mechanism should be implemented as of 1 July 2016, where ACER’s congestion monitoring report shows that there is an over-demand for firm capacity products that are offered in the next three years or where no firm capacity is offered at all.

**Table 1:** Overview of Implementation status



# Conclusion

Most of ENTSOG members have already fully implemented the CMP GL. 42 TSOs out of 49 were fully compliant with the CMP GL, and only two TSOs were still in the process of implementing some of the CMP measures. After the approval by the NRAs of most of the proposals of implementation of the remaining mechanisms by the end of 2017, most of the TSOs that were not fully compliant with CMP rules have finalised the implementation of the remaining mechanisms at the end of the first quarter of 2018. Two TSOs expect to implement all CMP rules before the end of year 2018.

This means that, with the information received by ENTSOG during December 2017 and January 2018, a total compliance with the CMP Annex all around Europe is expected at the end of 2018. This compliance is subject to the expected approval by the NRAs of the CMP implementation proposals provided by the TSOs, and to the fact that the expected times for the implementation of the remaining CMPs are accomplished and experience no delays.



An aerial photograph of an industrial facility, likely a refinery or petrochemical plant. In the foreground, two large, cylindrical storage tanks are prominent, both featuring the 'enagas' logo. The tanks are surrounded by yellow scaffolding and piping. To the left, a tall, red and white striped chimney stands out. In the background, a dense cluster of smaller storage tanks is visible, some with the 'Meroil' logo. Further back, a large industrial complex with various buildings and structures is situated near a body of water. The sky is clear and blue.

# Annex

Image courtesy of Enagás



# Survey Participants

Table 2 lists the TSOs who answered the questionnaire during December 2017 and January 2018. All TSOs were asked to answer the questionnaire due to the fact that they were still in the implementation process of all of the CMP measures in 2017. TSOs which were already compliant were not asked to answer the questionnaire. However 4 TSOs out of 7 participants were also asked to answer the questionnaire due to the presence of at least one of their IPs in ACER's Congestion Report, and due to the fact that their NRAs decided to apply OS+BB instead of FDA UIOLI.

## SURVEY PARTICIPANTS

MEMBER STATE	TSO
BULGARIA	Bulgartransgaz EAD
FRANCE	TIGF SA
HUNGARY	FGSZ Zrt.
ITALY	Snam Rete Gas S.p.A.
PORTUGAL	REN - Gasodutos, S.A.
ROMANIA	Transgaz S.A.
SPAIN	Enagás S.A.

**Table 2:** List of TSOs participating in the survey



# Overview of Implementation Status by EU countries

The following table shows the implementation status of the different congestion management procedures per EU Member State.

Country	OS & BB	FDA UIOLI	LT UIOLI	Surrender of Capacity	Comment
AUSTRIA					
BELGIUM					
BULGARIA					NRA approval since 29.09.2017
CROATIA					
CZECH REPUBLIC					
DENMARK					
ESTONIA					Derogation under Article 49 of Gas Directive
FINLAND					Derogation under Article 49 of Gas Directive
FRANCE					NRA decided not to implement FDA UIOLI; OS + BB is implemented
GERMANY					NRA: OS + BB shall not be applied
GREECE					
HUNGARY	Pending NRA approval				
IRELAND					
ITALY					Further measures to prevent congestions could be evaluated by the Regulator in the future (see Resolution 464/2016/R/gas, point 2.a)
LATVIA					Derogation under Article 49 of Gas Directive
LITHUANIA					No contractual congestion
LUXEMBOURG					Derogation under Article 49 of Gas Directive
NETHERLANDS					
POLAND					NRA analysed the congested IP and decided not to implement FDA UIOLI
ROMANIA					OS + BB, LTA and FDA mechanism is expected to be implemented at the end of 2018
PORTUGAL					OS + BB mechanism is implemented since the 1 <sup>st</sup> of April 2017, according to the rules established on the SGRI
SLOVAKIA					
SLOVENIA					
SPAIN					OS + BB mechanism is implemented since April 2017 for VIP Ibérico and November 2017 for VIP Pirineos
SWEDEN					Not applicable
UNITED KINGDOM					NRA analysed the congested IP and decided not to implement FDA UIOLI

Implemented
  In process of implementation
  Not implemented
  Not applied or derogation under Article 49 of Gas Directive

**Table 3:** Overview of Implementation Status by EU Member State

# Specific Situation of Countries

ENTSOG conducted the monitoring of the implementation of the CMP measurements for the year 2017.

During this exercise, ENTSOG consulted seven TSOs. Two of these TSOs are still in the implementation process of one or more CMP measures. The other 5 TSOs applied OS+BB mechanism as requested by their NRAs, so they were compliant with CMP Annex, but were in any case subjected to monitoring because at least one of their IPs was mentioned in ACER's Congestion Report. The CMP Annex states that in case one IP is mentioned in ACER's Congestion Report as "congested", the relevant NRA shall require the TSO to apply the FDA UIOLI mechanism, and this is why these five TSOs were consulted.

Except two TSOs all the TSOs in the European Union are fully compliant with CMP Guidelines.

## ITALY

In Italy, Surrender of Capacity and LT UIOLI were implemented in year 2013. Although a OS+BB proposal was submitted by the TSO to the NRA in March 2014, the NRA has approved a FDA UIOLI mechanism (Resolution 464/2016/R/gas), which has been implemented from 1<sup>st</sup> April 2017 (Resolution 13/2017/R/gas). Further measures to prevent congestions could be evaluated by the Regulator in the future (see Resolution 464/2016/R/gas, point 2.a).

## SOUTH WEST REGION COUNTRIES

France, Spain and Portugal have been developing a joint mechanism to apply OS+BB to avoid situations where the additional capacity offered through OS+BB mechanisms is unbundled. During the process, all relevant parties were involved (GRTgaz, TIGF, Enagas and REN as TSOs, and CRE, CNMC and ERSE as NRAs).

The TSOs sent the OS+BB proposal to the NRAs who approved it after discussing it in the 36<sup>th</sup> IG Meeting on 20 April 2016.

The TSOs implemented the OS+BB mechanisms between April and November 2017.

## HUNGARY

In Hungary, Surrender of Capacity and LT UIOLI were implemented in year 2013. Although the OS+BB mechanism was introduced into the Hungarian legislation and the BB algorithm was implemented on the Regional Booking Platform, during the previous CMP monitoring some parts of the Hungarian domestic legislation was deemed insufficiently detailed by ACER (i.e. when OS+BB is triggered). A more detailed joint OS+BB scheme was submitted to the NRA for approval by the Hungarian TSOs (FGSZ and MGT) and it has not been approved yet.

## BULGARIA

In Bulgaria the proposal of CMP procedures consist of OS+BB, Surrender of Capacity and LT UIOLI. OS+BB will be applied instead of FDA UIOLI after the NRA decision. It has been approved by the NRA and implemented on 29<sup>th</sup> September 2017.

## ROMANIA

In the case of Romania, the Romanian national legislation provided rules on how to implement Surrender of Capacity and LT UIOLI. However there are few details which need to be fully aligned to the CMP Annex. In this respect, Transgaz has submitted a proposal to the Romanian NRA. Regarding OS+BB or FDA UIOLI there is still not decision from the NRA, but a final decision is expected to be expressed soon.

The expected implementation date for the three CMP mechanisms in Romania is 1 October 2018.

## COUNTRIES WITH CONGESTED IPs

There are 4 TSOs out of the survey participants that were in the situation with one of their IPs mentioned in ACER's Congestion Report 2017 as congested:

- ▲ Bulgaria
- ▲ France
- ▲ Romania
- ▲ Spain



## PART II

# Effect Monitoring of CMP Guidelines 2017

Image courtesy of ONTRAS







# Introduction

The guidelines for Congestion Management Procedures (CMP GL) were developed by the European Commission in 2010–2011 and approved by the EU Gas Committee on 24 August 2012 as “Commission Decision on amending Annex I to Regulation (EC) No 715/2009”. The implementation date was 1 October 2013.

Under Article 8(8) of the Gas Regulation, ENTSOG monitors the effects of the CMP GL.

Three years after the implementation deadline for the CMP annex, ENTSOG decided to develop the first Effect Monitoring questionnaire, since this is deemed to be a sufficiently long period to observe the effects of the CMP measures in the market.

ENTSOG launched their new annual Effect Monitoring process in December 2017 to ensure that the results could be published in time for the 2018 Annual Report.

The collected data corresponds to the gas year 2017 (which is the period from 1 October 2016 at 6:00 am to 1 October 2017 at 6:00 am). ENTSOG has aimed for producing reports which can be considered supplementary to ACER’s reports. Regarding the effect monitoring, ENTSOGs focus has in particular been to identify to which extent the main aims of the network codes have been achieved.

To measure the effects of CMPs in the European market, ENTSOG and its members agreed on two indicators that show the impact of introducing congestion management mechanisms at Interconnection Points (IPs).

To monitor the effect of the congestion management procedures, the questionnaire was also addressed to all IPs rated as “congested” by ACER in its annual contractual congestion report, published on 31 May 2017.

# Effect Monitoring Indicators

## CMP INDICATORS

Effect monitoring will be performed only on the side of IPs considered to be congested by ACER in its latest annual report, published 31 May 2017 concerning contractual congestion at interconnection points.

ENTSOG has decided to develop the following indicators.

### Indicator 1 (CMP.1): Additional capacity volumes made available through each CMP

**Note:** If the amount of unused capacity reallocated by TSOs to the market at network points measures the effectiveness of CMP, an analysis and overview of congested IPs will be also needed to gain a deeper understanding of the situation at each IP.

Premise 1: gas year to be used is from 1 Oct 2016 to 30 Sep 2017

Premise 2: MWh/h/y is used as the unit for every product to monitor the evolution of the below mentioned ratio by gas year for every of the 4 CMP tools.

#### Calculation formula:

$$CMP1 = \frac{ACMPx}{CMPx} \times 100$$

#### Where:

**CMPx:** Return ratio of additional capacity allocated through a given CMP measure, relative to the total additional capacity offered through the given CMP measure.

**ACMP:** Sum of additional capacity allocated through a given CMP measure.

**CMP:** Sum of additional capacity offered through a given CMP measure.

#### Interpretation:

**CMPx = 100:** All of the additional capacity offered through the CMP measure has actually been allocated, indicating a fully efficient CMP measure where the market demand for this additional capacity is allocated through the CMP and fully acquired by market parties.

**CMPx < 100:** indicates that the allocated percent of additional capacity offered through each CMP measure is efficient, even though the market demand was less than supply for of this additional capacity during the period under consideration.

The “x” in CMPx is to be replaced with one the following numbers, depending on the CMP measure it was calculated for:

- ▲ 1 for Oversubscription and Buy-Back
- ▲ 2 for Firm Day-Ahead UIOLI
- ▲ 3 for Surrender of Contracted Capacity
- ▲ 4 for Long-term UIOLI

### Indicator 2 (CMP.2): Share of capacity reallocated through CMP among total capacity reallocated

#### Calculation formula:

$$CMP2 = \frac{ACMP}{(ACMP + ASM)} \times 100$$

#### Where:

**CMPx:** Return ratio of additional capacity allocated through a given CMP relative to the total allocation of additional capacity within a definite period of time.

**ACMP:** Sum of allocated additional capacity offered through CMP measures within a definite period of time.

**ASM:** Sum of allocated capacity acquired from organized secondary markets within the same period.

#### Interpretation:

**CMPx = 100:** all reallocated capacity is supplied through CMP measures applied by TSOs

**CMPx < 100:** This indicates that network users reallocate capacity themselves using the secondary market and not only through CMP measures applied by TSOs

#### Conclusion:

The higher the CMPx, the better the acceptance for additional capacity offered by applying CMP measures compared to using the secondary market. The lower the ratio, the higher the capacity that is allocated on the secondary market in comparison to offer via the application of CMP measures.

# Survey Participants

The TSOs included in the survey are those with one or more IPs rated as “congested” in last year’s Congestion Report from ACER.

MEMBER STATE	TSO
<b>BULGARIA</b>	Bulgartransgaz EAD
<b>FRANCE</b>	GRTgaz SA
	TIGF SA
<b>GERMANY</b>	bayernets GmbH
	Fluxys TENP GmbH
	Fluxys Deutschland GmbH
	GASCADE Gastransport GmbH
	Lubmin-Brandov Gastransport GmbH
	Open Grid Europe GmbH
	ONTRAS Gastransport GmbH
	terranets bw GmbH
<b>HUNGARY</b>	FGSZ Zrt.
<b>SPAIN</b>	Enagas S.A.
<b>ROMANIA</b>	Transgaz S.A.

**Table 1:** List of TSOs participating in the survey



# Results of Effect Monitoring Exercise

## Indicator 1 (CMP.1): Additional capacity volumes made available through each CMP

	OS + BB	FDA UIOLI	SURRENDER	LT UIOLI
<b>ADDITIONAL CAPACITY OFFERED</b>	–	999.687,98 MWh/h/y	–	–
<b>(RE)ALLOCATED CAPACITY</b>	–	9456544 MWh/h/y	–	–
<b>RATIO</b>	–	9,46 %	–	–

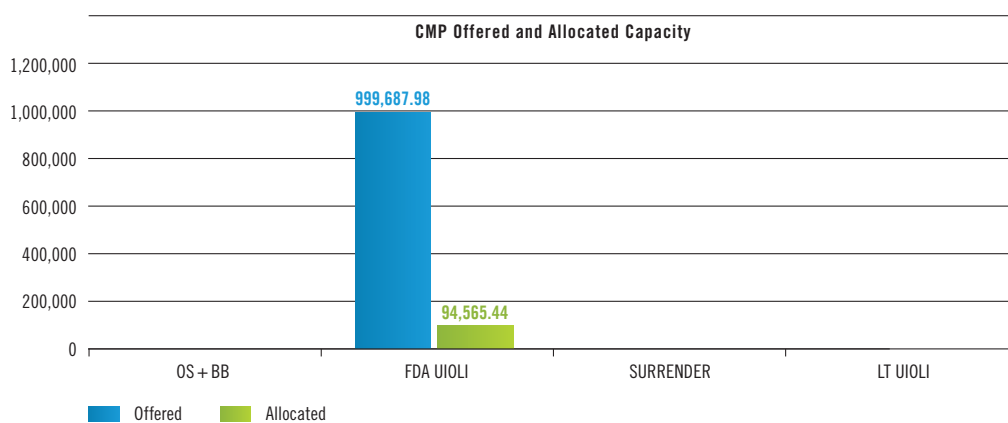
OS+BB: Oversubscription and Buy-Back

FDA UIOLI: Firm Day-Ahead Use-It-Or-Lose-It

SURRENDER: Surrender of Capacity

LT UIOLI: Long-Term Use-It-Or-Lose-It

**Table 2:** Additional capacity volumes made available through each CMP



**Figure 1:** Results of CMP indicator 1

As shown in Figure 1, FDA UIOLI is the only CMP mechanism that released capacity – on a cumulative basis for the period under consideration – at congested IPs while the LT UIOLI mechanism, OS+BB and Surrender of Capacity does not provide any additional capacity at congested IP sides to the market for the observed period.

## OVER-SUBSCRIPTION AND BUY-BACK (OS+BB)

CMP GL allow the option of choosing between OS+BB and FDA UIOLI. In most member states, NRAs have chosen to implement the OS+BB mechanism. For the NRA in Germany however, the decision was to implement FDA UIOLI.

In the reported gas year from 1 Oct 2016 to 30 Sep 2017 there was no additional capacity offered via OS+BB. This is not surprising since most IPs rated as “congested” by ACER are operated by TSOs whose NRAs have chosen to apply FDA UIOLI in their entry-exit systems.

According to ACER’s report, 14 TSOs currently have congested IPs and, of those, eight have implemented FDA UIOLI, while the other five have chosen to apply the OS+BB mechanism and one didn’t reply to the questionnaire.

This can be explained by the fact that the secondary market trading provided for the necessary capacity before OS&BB comes into effect, or that the IP was actually not congested.

In some Member States, the incentive-based OS+BB is not proportionate. Thus, the incentive provided to TSOs for offering capacity through OS+BB does not correspond to their risks.

In other countries, situations arise where no incentive regimes have been established by NRAs. These regimes would normally stimulate TSOs to offer additional capacity via over-subscription despite the risk that a buy-back may be necessary. In some cases, even if the regime has been established, the reward provided by the application of the mechanism to the TSO does not compensate the potential risk that may occur in buy-back situations.

## FIRM DAY-AHEAD USE-IT-OR-LOSE-IT (FDA UIOLI)

Most NRAs in Europe decided to apply in the respective national entry-exit systems the OS + BB mechanism instead of FDA UIOLI. However, most TSOs whose IPs are considered by ACER to be “congested” have implemented FDA UIOLI as requested by their NRAs.

The FDA UIOLI mechanism is the only mechanism of all CMPs which has released capacity, this is because the mechanism is applied every day and systematically releases up to 10 % of the technical capacity.

This mechanism is also more commonly applied in Germany than in the other Member States of the survey participants, since national laws in this country required TSOs to implement FDA UIOLI before the CMP GL came into force at the European level.

Nonetheless the amount of capacity allocated out of what was offered is not very high (the ratio between the offered versus the allocated capacity is 2.2 %). This indicates that the market was not in need of this additional capacity despite the congested status of the concerned IP. This can be explained by the fact secondary market trading provided for the necessary capacity before FDA UIOLI comes into effect, or that the IP was actually not congested.

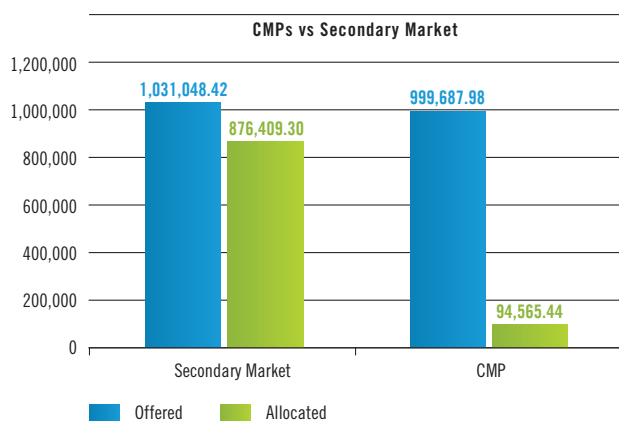


Figure 2: Results of CMP indicator 2

## SURRENDER OF CAPACITY

In last year's report Surrender of Capacity appeared to be an efficient mechanism to ease congestion. However, in the gas year 2017 there was no surrendered capacity at the IPs.

## LONG-TERM USE-IT-OR-LOSE-IT

LT UIOLI is a mechanism that prevents network users from holding on to capacity, thereby hindering other network users in the market from accessing it. Thus, if one network user is holding on to capacity at a congested IP and the use of this capacity is low or 0 during a certain period of time, the LT UIOLI mechanism will be applied by the TSO and force the network user to release this unused capacity and allow others to book it.

At most of the currently congested IPs in Europe with high physical gas flow rates additional capacity through the LT UIOLI mechanism is not offered, since the booked capacity is actually used over a longer period of time and to a high degree by the network users.

### Indicator 2 (CMP.2): Share of capacity reallocated through CMP relative to total capacity reallocated

$$CMP2 = \frac{ACMP}{(ACMP + ASM)} \times 100 = 9,7\%$$

## VOLUME UNITS ARE MWH/H/Y

The chosen indicator compares the allocation of additional capacity through CMP mechanisms with the allocation of the total additional capacity (additional capacity allocated from that offered through CMP mechanism + additional capacity allocated from offered capacity in the secondary market).

In figure 2, we can see that both means of re-offering unused capacity via CMP mechanisms and the secondary market have been established in Europe.

10% of the capacity reallocated is allocated via CMPs. Bilateral agreements between network users (secondary market) is the preferred solution for trading unused capacity.

Additionally, it is worth noticing the importance of the secondary market in offering additional capacity. Almost 50 % of the total amount of reoffered capacity is traded on the secondary market. However, it is important to note that from the total amount of allocated capacity that is re-offered, 85 % of it is allocated to other network users on the secondary market.

# Conclusions

The final analysis allows the following conclusions to be drawn:

- ▲ The current ways of offering additional capacity from unused allocated capacity effectively allows network users to access markets in situations where IPs are contractually congested and technical capacity is not available.
- ▲ The current situation in the European gas market shows that, of the total amount of additional capacity offered through CMP mechanisms, around 10% is reallocated. This means that contractual congestion situations are not limiting market access to other network users who do not hold capacity at the relevant IPs. Otherwise, the demand for additional capacity and reallocated amounts would be much higher.
- ▲ The secondary market is an important tool for trading unused capacity between network users and thus significantly helps to ease market access at congested IPs. It can therefore be considered to be a widely accepted alternative to CMP mechanisms by network users.

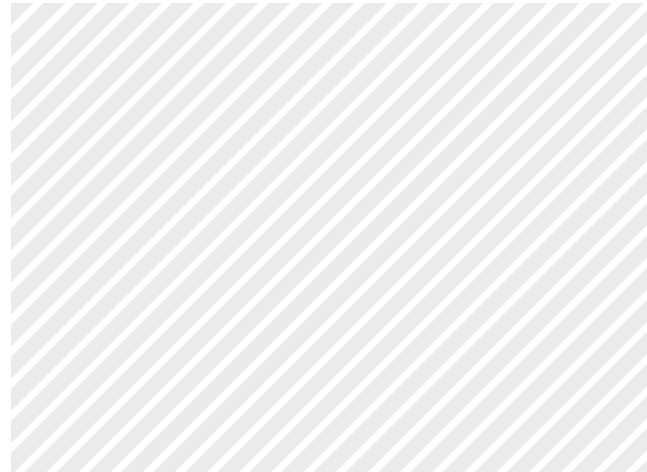


Image courtesy of Thyssengas





# Abbreviations

<b>ACER</b>	Agency for the Cooperation of Energy Regulators
<b>CMP</b>	Congestion Management Procedures
<b>ENTSOG</b>	European Network of Transmission System Operators for Gas
<b>EU</b>	European Union
<b>FDA</b>	Firm Day-Ahead
<b>IP</b>	Interconnection Point
<b>LT</b>	Long-Term
<b>NRA</b>	National Regulatory Authority
<b>OS+BB</b>	Oversubscription & BuyBack
<b>TSO</b>	Transmission System Operator
<b>UIOLI</b>	Use it or lose it



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