



The French Energy Regulatory Commission (CRE) is consulting market participants.

PUBLIC CONSULTATION NO. 2018-009 OF 31 MAY 2018 ON THE FUNCTIONING OF THE SINGLE GAS MARKET AREA IN FRANCE

The present public consultation covers the operational conditions of the functioning of the single gas market area in France, as from 1 November 2018.

To ease the existing congestion between the North and South zones of GRTgaz's network, and to enable creation of a single market area, common to GRTgaz and Teréga, CRE adopted, in its deliberation of 7 May 2014, an investment scheme associating the reinforcement of the Val-de-Saône pipeline and the Gascogne-Midi project. This new infrastructure, developed by GRTgaz and Teréga, was configured to enable the creation of a single market area at an optimised cost. As a result, for certain network use configurations, residual congestion might emerge exceptionally.

The deliberation of 26 October 2017 on the creation of a single gas market area in France as at 1 November 2018 defined the terms and conditions for implementing the single market area, and in particular, the mechanisms for easing daily congestion.

The present public consultation aims to specify those terms. It is based on a joint proposal by the transmission system operators (TSOs), which is annexed to the present public consultation.

To participate in the consultation

CRE invites all interested parties to submit their contributions, by 29 June 2018 at the latest:

- by email at the following address: dr.cp7@cre.fr;
- by contributing directly on CRE's website (www.cre.fr) in the "Documents/Public Consultations" section;
- by post to: 15, rue Pasquier - F-75379 Paris Cedex 08 – France.

Contributions will be published by CRE; please state any elements that you wish to remain confidential. Interested parties are invited to provide well-grounded answers to the questions.

Paris, 31 May 2018

For the Energy Regulatory Commission,
The Chairman,

Jean-François CARENCO

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1. FUNCTIONING OF THE SINGLE MARKET ZONE AND WORK PROGRESS

1.1 Main decisions made by CRE in its deliberation No. 2017-246

1.1.1 Functioning of the single area

The single gas market area, called *Trading Region France* (TRF) shall function as a single entry/exit zone, divided into two balancing zones (Teréga and GRTgaz). A single virtual gas exchange point (PEG), will condense the purchase/sale of gas for the entire TRF.

The contractual imbalance of each shipper shall be calculated globally for the entire TRF. Then, every day, the TSOs shall distribute the overall imbalance of each portfolio between the two GRTgaz and Teréga balancing zones. The imbalance distribution key will depend on the type of shipper: end customer supplier, importer/exporter, PEG trader, to allow for a more accurate attribution of imbalances. This functioning is similar to that of the *Trading Region South* (TRS).

1.1.2 Treatment of maintenance work in the single market area

The repercussions of maintenance take the form of “mutualised restrictions” in proportion to capacity subscribed, based on the following rules:

- if the work relates to a particular point, the capacity restriction relates to the point concerned;
- if the work relates to the structures in the north of GRTgaz's network, the shared restriction concerns the superpoints located upstream of that restriction.
- if the work relates to structures in the south of GRTgaz's network or to Teréga's structures, the shared restriction concerns the superpoints downstream of the restriction concerned.

In addition, CRE requested the TSOs to follow and present, within the framework of Concertation gaz, indicators for distributing restrictions to enable market participants and CRE to judge the fairness of the distribution of the impact of maintenance on the different network points.

1.1.3 Treatment of maintenance work with a projected impact of less than 30 GWh/d, termed “minor work”

Minor maintenance work could be dealt with by congestion removal mechanisms in order to reduce the impact on the availability of firm capacity. Initially, CRE considers that the 30 GWh/d threshold is suitable.

Maintenance work programmes will continue to give shippers the information relating to all maintenance work, including when the work is dealt with by congestion removal mechanisms.

1.1.4 Daily congestion removal mechanisms

If congestion emerges or is anticipated, the TSOs will activate mechanisms. The adopted mechanisms are as follows:

- Agreements with adjacent infrastructure operators (swaps)
- Interruption of day-ahead and within-day interruptible capacity
- Non-trading of non-subscribed day-ahead and within-day capacity
- Use of locational spreads: contractual agreement by the TSOs for the simultaneous purchase of gas downstream of the congestion and the sale of gas upstream of the congestion.

The order of priority is as follows:

NS1	NS2	NS3	NS4
<ol style="list-style-type: none"> 1. Implementation, if possible, of inter-operator mechanisms, in particular with Fluxys 2. Interruption of interruptible capacity 3. Non-trading of available firm capacity 4. Locational spread 	<ol style="list-style-type: none"> 1. Interruption of interruptible capacity 2. Non-trading of available firm capacity 3. Locational spread 		

Lastly, if all of the mechanisms fail, and as a last resort, the TSOs shall have to resort to a mutualised restriction of nominations.

1.1.5 Monitoring of storage levels downstream of congestion and eventual means of action

For winter, the TSOs shall monitor on a daily basis the level of storage downstream of each bottleneck, to ensure effective short-term availability of locational spread bids to guarantee continuity of supply.

CRE considers that this monitoring as well as the eventual means of action aim to ensure continuity of the offering of firm supply exclusively. Therefore, it is not conceivable to use market-based mechanisms to guarantee interruptible supply. As a result, if there is a risk of interruption of supply, first, the trading of interruptible products should be suspended. Second, market-based mechanisms should be envisaged if the situation remains critical.

1.1.6 Coverage of costs incurred by the TSOs

The costs incurred for congestion management shall be included in the transmission tariff, in the form of an annual trajectory. Deviations from the trajectory shall be included in the income and expense clawback account (CRCP).

The costs incurred for congestion management on “minor work” days shall be dealt with in the same manner.

1.1.7 Requests made by CRE to the TSOs

CRE requested the TSOs, within the framework of Concertation gaz, prior to the merging of zones:

- to elaborate and present alternative plans in the event of a delay in the commissioning of infrastructure;
- to pursue their work in order to associate shippers with the operational implementation of locational spread;
- to elaborate precise rules for triggering congestion removal mechanisms;
- concerning the winter outlook, to include market participants in its preparation;
- to work with other operators, in particular storage operators, on the inter-operator swap mechanism in order to ease other bottlenecks apart from NS1 without affecting shippers;
- to specify the terms and conditions for implementing the mechanism for monitoring the level of storage downstream of congestions, in particular the indicators followed and the hypotheses considered, and to define the eventual means of action, their functioning and the associated timeframes;
- to forward to CRE a proposal about the above-mentioned elements by April 2018 at the latest.

The TSOs therefore sent CRE a technical note with proposals concerning these elements, following work conducted within Concertation Gaz. This technical note is annexed to the present public consultation.

1.2 Infrastructure progress and treatment of a delay

1.2.1 Creation of infrastructure to enable the creation of a single marketplace

In 2016, GRTgaz obtained ministerial authorisation for the strengthening of the Val-de-Saône pipeline and the authorisation for compression stations. The work to lay the Val-de-Saône pipeline and the delivery of the Etrez compressor took place from April to October 2017. The Saint-Martin-de-Crau compression station was commissioned at the end of summer 2017. All welding of the Val-de-Saône pipeline was completed early 2018 and gas connection of the South section began since 20 March 2018. Summer 2018 will be devoted to tests, restoration of the land around the pipeline, and the commissioning of the Voisines, Palleau and Etrez stations.

Teréga compiled the authorisation files concerning the Gascogne-Midi pipeline and obtained authorisation for operating a facility classified for environmental protection (ICPE). Welding is completed and trenching will end before summer 2018. In summer 2018, Teréga will carry out tests, restoration of the surrounding land and gas connection of the Gascogne-Midi pipeline and commissioning of the Barbaira station.

These elements confirm the projected date of the merging of zones as at 1 November 2018.

The TSOs regularly provide a progress report to the market concerning this work, at least every three months, through their websites.

- For Teréga:

<https://www2.terega.fr/nos-projets/projets-transport/projets-en-cours/renforcement-gascogne-midi-rgm.html>

- For GRTgaz:

<http://www.grtgaz.com/grands-projets/le-programme-val-de-saone/presentation.html>

1.2.2 Alternative plans in the event of a delay in infrastructure works or in information system deployment

In compliance with CRE's request, the TSOs nevertheless prepared alternative plans in the event of a delay in the commissioning of infrastructure or in rolling out information systems.

1.2.2.1 Case of a delay at Val-de-Saône

The Val-de-Saône pipeline will allow the supply of an additional 200 to 250 GWh/d of gas from the north to the south of France. If there is a delay with this pipeline, the TSOs have defined two situations:

- if there is a risk of delay identified before 1 September 2018, the TSOs propose to postpone the merging of zones to the 1st day of the month following the effective commissioning of Val-de-Saône;
- if a delay is identified between 1 September and 31 October, the TSOs propose to maintain the merging date at 1 November 2018, and to manage the congestion that emerges with congestion removal mechanisms.

CRE considers, similar to the TSOs, that if there is a delay at Val-de-Saône, the cost of congestion management would be considerable. It is therefore more coherent to envisage a postponement if such a delay is identified sufficiently early. However, postponing the date of the creation of a single marketplace with a notice period shorter than two months would not be desirable: the two-month period allows stock exchange operators to comfortably defer PEG Nord and TRS products to the PEG. At this stage, CRE is in favour with the operators' proposal.

1.2.2.2 Case of a delay at Gascogne Midi

This pipeline will allow shipment of gas in the south of France, particularly from the west to the east. If there is a delay, there could be congestion in the south-east.

The TSOs propose to not postpone the merging of zones if there is a delay at Gascogne Midi. They consider that the market-based mechanisms in place will suffice to remove congestion.

CRE shares the view of the TSOs: in the same manner as for winter 2017-2018, the TSOs would be able to handle, through market-based mechanisms, south-east bottlenecks if there is a delay in the Gascogne Midi pipeline. This handling of congestion would be done through the use of locational spread, which will be even easier since storage in the south-east of France has been fully booked for the year 2018-2019.

1.2.2.3 Case of a delay in information systems

If there is delay in rolling out information systems, GRTgaz and Teréga consider that they will be able to carry out the necessary actions manually (in particular the use of locational spread). Therefore, in the event of an information system delay, the TSOs propose to maintain the merging date at 1 November 2018, in a "degraded" operating mode. The main consequence would be a potential reduction in the number of windows for locational spread trading in a day.

CRE is in favour of the solution proposed by the TSOs.

Given their current work progress, the TSOs confirm the date of 1 November for the merging of zones. Only a delay at Val-de-Saône, if identified before 1 September, could lead to a delay in the merging of zones. For all other potential delays, merging will be implemented as scheduled as at 1 November.

Question 1 Are you in favour of the solutions proposed by the TSOs if there is a delay in physical infrastructure or in deployment of information systems?

2. TREATMENT OF MAINTENANCE

In its deliberation No. 2017-246 of 26 October 2017, CRE defined how maintenance with a projected impact of less than 30 GWh/d on capacity availability ("minor work") is to be handled. For such maintenance, TSOs will not publish capacity restriction in the work programme. Capacity unavailable because of such maintenance will be handled by congestion removal mechanisms.

Following consultation work (so called "Concertation gaz") and requests by market participants, the TSOs also propose to use congestion removal mechanisms to optimise the handling of maintenance with a projected impact of over 30 GWh/d. In addition, they propose terms and conditions for the management of restrictions, particularly related to maintenance, in the form of superpoints.

2.1 Use of locational spread to optimise maintenance-related capacity restrictions

2.1.1 Principles governing the use of locational spread to optimise maintenance-related capacity restrictions

The availability of capacity during maintenance periods depends on the impact of work, but also partly on consumption. The TSOs take into account consumption hypotheses when establishing the restriction levels due to maintenance. Unavailability of capacity decreases the higher the level of consumption upstream of work or the lower the level of consumption downstream of work.

With regard to maintenance having an impact on the network core, weather contingencies could be significant, particularly for maintenance scheduled in between seasons. There can therefore be major uncertainty about the level of availability of capacity related to this type of maintenance.

In the current two-zone configuration, GRTgaz can interrupt interruptible capacity, then eventually firm capacity, at the North-South link to handle the impact of this type of maintenance.

In the single market zone, the TSOs will no longer have this leverage. Without a substitution tool, it would become necessary, for establishing restriction levels and safeguarding the functioning of the network, to adopt the lowest consumption levels upstream and the highest downstream for the given period. However, this methodology would lead to restricting a lot of capacity unnecessarily and almost systematically putting back on the market capacity that was in fact available on maintenance days.

Therefore, the TSOs propose the use of locational spread to cover part of the risk taken with regard to consumption levels when they establish capacity restrictions related to work timetables. Locational spread could be activated if a weather risk not covered by restrictions materialises. This proposal therefore responds to two objectives:

- limiting the level of restrictions published in advance as the level would be close to the level actually available on day D, in order to raise the visibility of the impact of maintenance for shippers;
- implementing a market-based tool (locational spread) to handle cases where capacity not restricted is in fact unavailable (days in which weather contingencies are higher than anticipated at the time of publication).

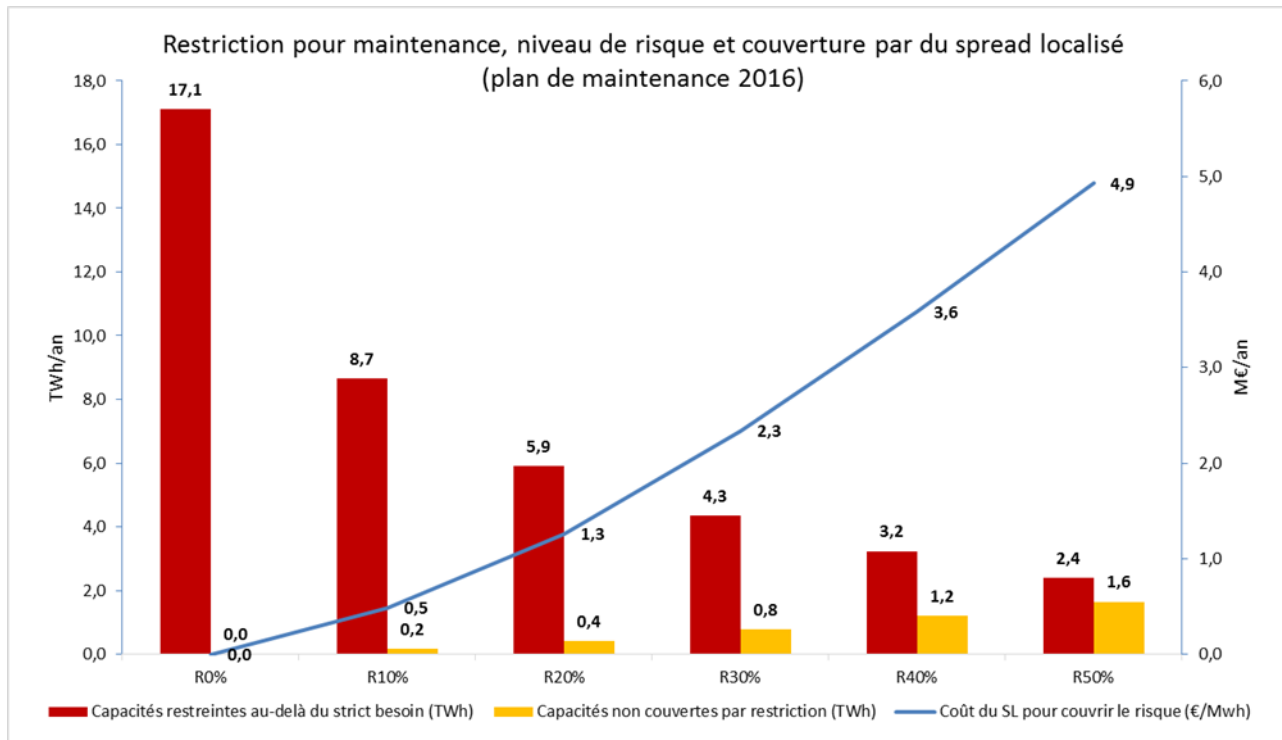
2.1.2 Analysis of the impact of this solution and TSOs' proposals

The TSOs analysed the impacts of their proposal according to different levels of consumption risk by classifying the levels of consumption observed over the previous five years. The analysis was done on the basis of the 2016 maintenance plan. The results, obtained over the previous five years, serve to understand the magnitude of the impact based on the different risk levels. To translate the impacts into cost, locational spread was valued at €3/MWh.

The table and graph below summarise these results for total capacity traded over the annual maintenance period from 1 April to 31 October of 482.4 TWh:

	R0%	R10%	R20%	R30%	R40%	R50%
Total capacity restricted (TWh/year)	64,0	55,3	52,3	50,5	49,2	48,0
Capacity restricted but finally available (TWh/year)	17,1	8,7	5,9	4,3	3,2	2,4
Capacity not restricted but finally unavailable (TWh/year)	0,0	0,2	0,4	0,8	1,2	1,6
Cost of locational spread (€M)	0,0	0,5	1,3	2,3	3,6	4,9
Occurrence of locational spread (no. days/year)	0	7	15	26	34	43
Maximum call for locational spread (GWh/d)	0	103	158	192	222	242
Average call for locational spread (GWh/d)	0	25	28	30	35	38

How to read the table: for example, if a risk of 10% is adopted, the 10% of cases with the greatest weather contingencies are not taken into account to set the volume of capacity restricted for maintenance within a one-year timeframe. Total restricted capacity is therefore 55.3 TWh. Among non-restricted capacity, 0.2 TWh would finally be unavailable the day before the gas day. To handle this unavailability, calls for locational spread would take place seven days per year, for a cost of €0.5 M (= 0.2 TWh x €3/MWh, with rounding off). Based on the case, the daily locational spread quantity would be between 25 GWh and 103 GWh. In addition, 8.7 TWh of restricted capacity (out of the 55.3 TWh) would in fact be available the day before the gas day and would therefore have been restricted unnecessarily.



GRTgaz proposes, for the first year, to adopt the use of locational spread to cover a 10% consumption risk when maintenance-related risks are calculated. This level would represent a substantial gain as concerns the level of restrictions applied, with relatively little exposure of the system to calls for the use of the locational spread mechanism. GRTgaz specifies that the higher the level having to be managed by locational spread, the greater the risk of its cost being high for a given day. The 10% risk involves exposure to a maximum level of calls for tender on maintenance days of 100 GWh/day.

Teréga proposes to cover a risk of 30%, of which maximum exceedance (192 GWh/d) is similar to the level of risk observed for the management of the NS3 limit (North-South bottleneck NS3, as defined in the deliberation of 26 octobre 2017). Teréga considers that covering a 30% risk would reduce even further the volume of capacity restricted within a one-year timeframe, with potential costs close to those for a 10% risk.

2.1.3 CRE's analysis

On the basis of the TSOs' analysis and discussions during "Concertation gaz", at this stage CRE is in favour of GRTgaz's proposal to adopt the 10% consumption risk level when maintenance-related restrictions are calculated for the first year of the single marketplace.

This level would heavily reduce restricted capacity compared to a system not using locational spread, without posing too much of a risk of a slippage in the cost of the locational spread mechanism. This level therefore seems reasonable for the first year of the single marketplace in view of the lack of historical evidence about the functioning of that market.

Feedback will potentially be used to increase the level of risk used to calculate restricted capacity when the work schedule is being established for the following years.

Question 2 Are you in favour of the use of locational spread to optimise maintenance-related restrictions by covering weather risks? If so, what level of risk would you like the TSOs to take into account to define restrictions?

2.2 Functioning of superpoints to manage capacity restrictions

The TSOs proposed managing mutualised restrictions in the form of superpoints, in order for shippers to have arbitrage flexibility. Superpoints can group together points that belong to the networks of the two TSOs. The timetables of these different points within the superpoint are interdependent. Therefore, these superpoints require co-management by GRTgaz and Teréga.

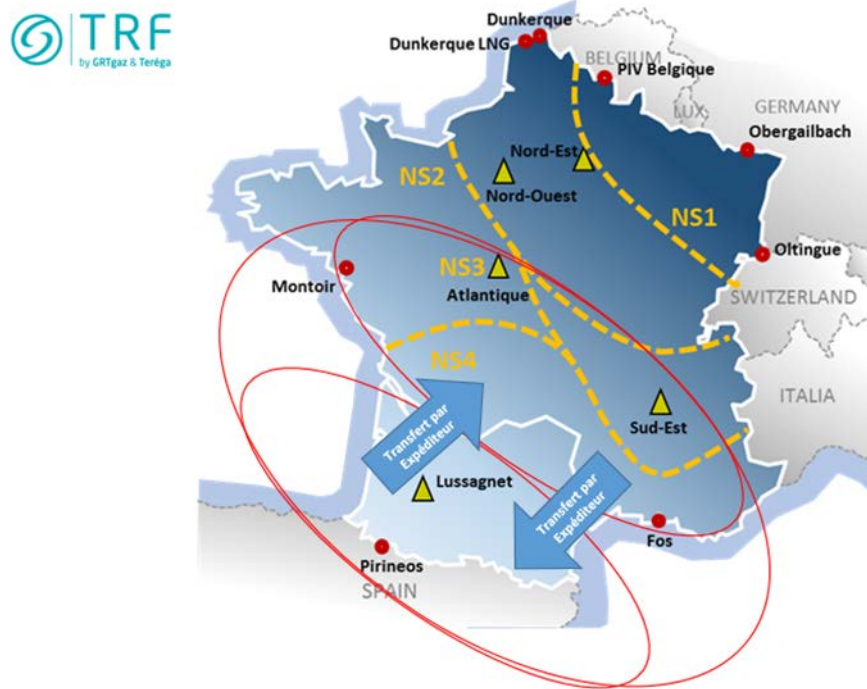
GRTgaz and Teréga developed a common solution meeting the conditions below:



- Preserve the flexibility of superpoints for customers;
- preserve the responsibility of each TSO for the timetables of their points, as well as the operational commercial relationship with their customers.

Superpoints containing the points of both TSOs will be separated into two sub-superpoints, one for each TSO, operating according to each of the TSOs' current model. Shippers shall have to manually transfer capacity between the sub-superpoints. For example, a shipper may inject less at the Atlantique PITS to inject more at the Lussagnet PITS, and conversely, by transferring capacity between GRTgaz's sub-superpoint and Teréga's sub-superpoint.

More precise terms concerning the functioning of superpoints (mutualisation of UIOLI, automatic transfer of the Fos bonus for NS4) are presented in detail in the TSOs' technical note, annexed to the present public consultation.



The functioning of common superpoints was presented in “Concertation gaz” and responds to all of the TSOs' network congestion management constraints within the framework of the single marketplace.

Question 3 Are you in favour of the functioning of common superpoints proposed by the TSOs?

3. DAILY CONGESTION REMOVAL MECHANISMS

3.1 Interruption of day-ahead interruptible capacity

There are two types of interruptible capacity in the GRTgaz and Teréga networks:

- "long-term" interruptible capacity, which concerns the North points of the GRTgaz network (Dunkirk, Oltingue, Virtualys, Obergailbach entry), which is made firm before 3:00 p.m. the day before;
- "short-term" interruptible capacity, which concerns Teréga's Pirineos point and backhaul capacity in the GRTgaz network (Virtualys, Jura entry, Obergailbach exit), which is interruptible at any time the day before and on the day.

CRE's deliberation of 26 October 2017 specifies that in the event of congestion, "if interruption of interruptible capacity serves to ensure continuity of transmission, it is triggered ahead of any other mechanism". It specifies that this capacity is interrupted when there is a red alert the day before and on the day.

The TSOs propose to adjust this rule: they propose to interrupt "long-term" interruptible capacity the day before at 2:00 p.m. also when there is an orange alert, because this capacity can then no longer be interrupted during the day. The rules concerning "short-term" interruptible capacity would not change.

At this stage, CRE is in favour of this proposal. Indeed, an orange alert means a risk of congestion. Therefore, it appears appropriate to not make interruptible capacity firm as that might aggravate the risk of congestion as well as its magnitude.

Question 4 Are you in favour of the interruption of "long-term" interruptible capacity the day before at 2:00 p.m. if there is an orange or red alert?

3.2 Locational spread

3.2.1 Terms and conditions of tendering for locational spread

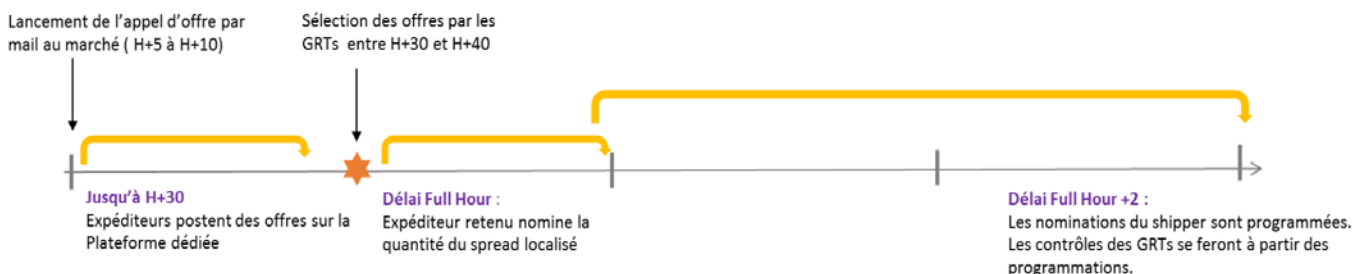
The deliberation of 26 October 2017 adopted locational spread as one of the congestion removal mechanisms. That deliberation also determined certain terms governing its use.

These terms were specified within the framework of Concertation gaz working groups.

On the basis of this work, Teréga and GRTgaz propose the following precisions:

- Calls for tenders can be made for all cycles of the gas day in progress. However, to the extent possible, it is preferred that tenders be made during working hours;
- Calls for tenders will be sent by the TSOs in the form of an email. These emails will specify:
 - the limit concerned
 - the volume of gas required, expressed in MWh/d
 - the upstream and downstream points of the limit concerned
- The products concerned shall be within-day products;
- Bidding by shippers shall be done on the platform developed for that purpose;
- The TSOs shall select the most interesting bids, i.e. the most cost-effective;
- The shippers selected shall have to perform the movement for which they have been selected at the point or points concerned. The expected change in nomination shall have to be done before the end of the hour following the selection of the call for tenders;
- Shippers shall have to notify the point or points chosen and the associated quantities, before the end of the gas day, by email to the TSOs;
- The TSOs shall check the timetables at the point or points chosen by shippers whose bids have been selected. Penalties are applicable if the service is not executed and or if rescheduling is performed in the opposite direction later on.

The diagram below summarises the operators' proposal:



The TSOs realised that it would be impossible to implement some of the target terms as of 1 November 2018:

- The possibility for shippers that so desire to place a bid the day ahead which would automatically be converted into a "within-day" bid at the start of the gas day;
- The possibility to make calls for tenders in MWh/h and not MWh/d, so that bids remain valid throughout the entire gas day, in this case with the volume of a bid automatically decreasing with the passing hours in the gas day.

CRE takes note of these points and requests the TSOs to endeavour to implement these terms as quickly as possible. All of the terms proposed by the shippers were presented within Concertation gaz. Shippers largely contributed to preparing the terms of the functioning of locational spread. CRE commends this effort.

Question 5 Are you in favour of the operators' proposals concerning the terms and conditions applicable to tendering for locational spread?

3.2.2 Penalties in the event of non-compliance by a participant in a call for tender for locational spread

If a shipper winning a call for tender for locational spread does not comply with its commitments, a penalty may be applied. In the decision of 26 October 2017, CRE adopted the principle of a penalty proportional to the volume concerned at the transaction price plus 25%.

The rule for calculating this penalty gave rise to discussions within Concertation gaz. Some participants that had to pay penalties stated that the level of penalties was so high compared to the benefits of participating in the calls for tenders for locational spread, that some shippers might be discouraged from participating in those calls.

In addition, the regulation of this penalty does not exempt the shipper from having to settle potential imbalances in their nominations.

In order to encourage participation in locational spread tendering, CRE intends to amend the method for calculating the penalty to prevent it from being excessive. It proposes to not oblige shippers to pay for the entire volume concerned at the transaction price, but to keep the 25% penalty.

Therefore, the penalty would be calculated based on the following principles:

- the penalty would be calculated independently between the purchase of gas on one side of the bottleneck and the sale of gas on the other side of the bottleneck, including when the same shipper is selected on both sides of the bottleneck;
- the penalty would be proportional to the volume concerned;
- if there is a delay in nominations, the penalty would be calculated by applying a *prorata temporis*;

The amount of the penalty would be calculated as the volume concerned multiplied by 25% of the average price of the day, to which is added the margin made by the shipper on this call for tenders corresponding to the portion of the volume in question. This margin is calculated by considering the difference between the price of the bid selected and the average price of the day.

Example 1: A participant is selected downstream of a bottleneck to ship 10,000 MWh, at the price of €24/MWh. The average price of the day is €20/MWh. This participant nominates an upward amount of only 7,500 MWh at the points downstream of the bottleneck.

The penalty applicable is therefore $P = 2,500 \times 25\% \times 20 + 2,500 \times (24 - 20) = €22.5k$

Example 2: A participant is selected upstream of the bottleneck for 10,000 MWh, at the price of €18/MWh. The average price of the day is €20/MWh. This participant nominates a downward amount of 10,000 MWh at the points upstream of the bottleneck with a three-hour delay compared to the time scheduled by the locational spread. Fifteen hours of the gas day remain covered by the locational spread.

The penalty applicable is therefore $P = 10,000 \times 3/15 \times 25\% \times 20 + 10,000 \times 3/15 \times (20 - 18) = €14k$

CRE considers that this method is not likely to dissuade market participants from participating in calls for tenders, and that it has enough of an incentive to prevent arbitrage at the expense of congestion removal.

CRE also proposes that feedback be given regarding compliance with locational spread commitments and the level of the penalty.

CRE proposes to apply similar terms and conditions for locational products.

Question 6 Are you in favour the method proposed by CRE for determining the penalties applicable in the event of non-compliance by a shipper regarding locational spread?

4. MONITORING OF STORAGE LEVELS DOWNSTREAM OF BOTTLENECKS AND PREVENTIVE MECHANISMS IN THE EVENT OF GAS DEFICITS

4.1 Monitoring of storage levels downstream of bottlenecks

4.1.1 Monitoring principles

To ensure the continuity of supply downstream of north-south congestion, different flexibility means can be used: storage, LNG terminals, imports from Spain. The locational spread mechanism will enable the TSOs to use those means if needed the day before or on the day itself.

However, if there is tightness simultaneously in France and in Spain, it might not be possible to reduce exports to Spain. Similarly, increase in send-out at LNG terminals can only be used in the short-term if LNG is available in tanks. Therefore, the only flexibility TSOs can count on under every circumstances is storage, within the limit of the flow for filling sites located downstream of bottlenecks.

This is why CRE decided, in its deliberation of 26 October 2017, on the implementation by the TSOs of daily monitoring in winter of the level of storage downstream of each bottleneck, to ensure effective availability, in the short term, of locational spread bids so as to guarantee continuity of supply.

The purpose of this monitoring is to anticipate an insufficient level of storage to guarantee the necessary flow for handling congestion that might occur in the short term. If there is insufficient storage levels, monitoring can serve to trigger preventive measures to counter the risk of a lack of downstream flexibility.

Monitoring is based on:

- a supply scenario, which must represent a tight but realistic situation;
- taking into account all of the elements known or projected (consumption for the upcoming days, LNG terminal send-out timetable, other certain events);
- projection for the end of winter of different weather scenarios, in order to detect any critical configuration that would put the functioning of the single zone at risk.

4.1.2 TSOs' proposal

4.1.2.1 Description of the monitoring tool

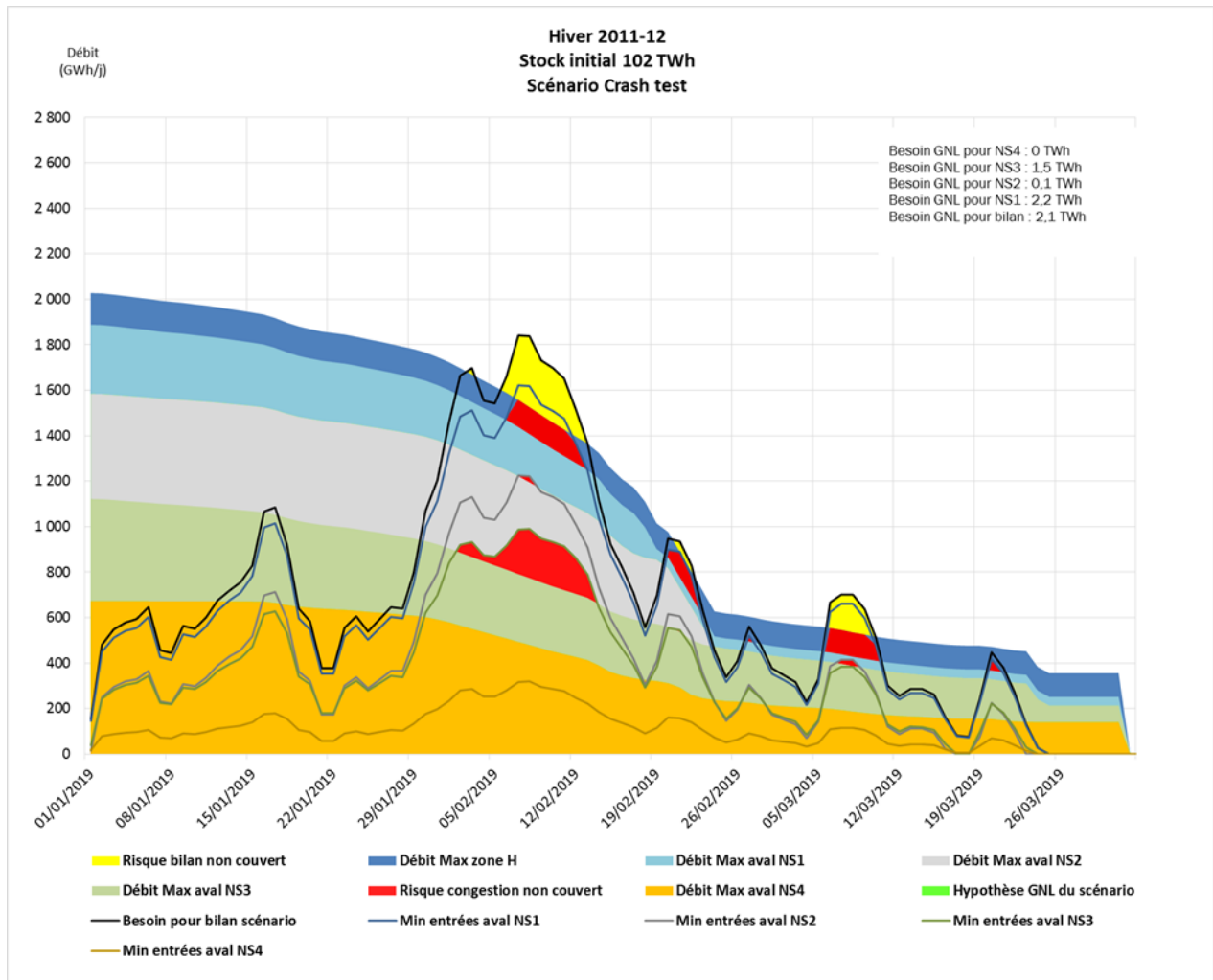
The tool proposed by the TSOs can be used to test different combinations of weather scenarios (past winters, 2% risk cold winter (the entire winter as it occurs once every 50 years)) and of supplies (little LNG arrival) corresponding to tight situations.

For each winter gas day, the tool estimates the level of storage withdrawal necessary for the functioning of the network. The estimated quantities of withdrawal from storage are therefore limited strictly to network balancing needs. In addition, several storage points may be solicited indifferently in response to the same constraint. In this case, the tool proposes a distribution which corresponds to a relatively homogenous use of storage throughout winter, seeking in particular to preserve, if possible, peak capacity at 45% of working volume as at 1 February.

Lastly, the TSOs calculate maximum storage withdrawal capacity based on the volume remaining in storage and development factors published by storage operators. The volume withdrawn on a given day is subtracted from the remaining stock so as to indicate the new maximum storage withdrawal capacity for the following day, and so on and so forth for each day of the scenario tested. As such, the tool takes into account storage dynamics throughout winter and detects the period from which the volume remaining in storage is no longer sufficient to meet the network's flexibility requirements downstream of bottlenecks (so called "limits").

Monitoring results are viewed in the form of curves representing storage use requirements downstream of each limit, compared to the maximum flow available in storage downstream of each limit. Periods during which the flows available in storage, given storage consumption, do not suffice to meet the network's flexibility needs, appear on the monitoring graph, presented below, in red (limit reached: not enough gas to supply downstream of a bottleneck) or in yellow (balancing problem: not enough gas for all of the network). In this last case, it is not a matter of a bottleneck, but of an overall imbalance that shippers remain required to resolve in compliance with balancing rules.

On the basis of the hypotheses adopted, the tool therefore serves to detect beforehand periods which present a risk of insufficient downstream supply. If the scenario feared is confirmed within a predefined timeframe, it is possible to trigger a preventive mechanism in order to cover this risk.



The example proposed above presents a combination of extreme scenarios, in order to generate risk periods:

- A past weather scenario with a cold winter and a major cold spell early February (winter 2011-2012);
- A total lack of LNG in LNG terminals throughout all of winter, maximum flows of firm technical capacity to Spain all winter, consumption of CCGTs with a 71% use rate in winter;
- The initial level of storage at its lowest ever (that of 1 November 2017).

In reality, such scenario combinations, extreme across the board (storage level, weather conditions and supply) are very unlikely particularly following the implementation of storage reform in France.

4.1.2.2 Model parameters, publications and criteria for triggering a preventive mechanism

The TSOs shall configure monitoring by taking into account the best information at their disposal, i.e.

- the actual storage level during winter;
- consumption forecast over the following 15 days;
- beyond the following 15 days, several restrictive weather scenarios based on recent winters and on a typical 2% R2 cold winter risk and P2 cold spell risk for three and ten days shall be tested;
- a tight supply scenario, but taking into account known events (send-out timetables of the Fos and Montoir LNG terminals for the month in progress).

Between 1 November and 1 April, the TSOs shall publish a report on storage monitoring every 15 days. If a risk is detected, they shall indicate the different hypotheses that lead to the emergence of this risk (consumption scenario and supply scenario mainly).

Regarding the triggering of a preventive measure (flow commitment, see section 4.2):

- if the risk detected concerns only a balancing problem and not a limit being reached, only the information shall be relayed to the market and the TSOs shall not trigger any measure;
- if the risk detected concerns a limit being reached (i.e. that shippers have the resources in their portfolio to balance, but the network cannot supply the capacity necessary), the TSOs shall inform the market of the triggering of a preventive measure.

4.1.3 CRE's analysis

CRE is in favour of the TSOs' proposals concerning the monitoring tool, the parameters taken into account and the terms for publishing the monitoring report.

The tool presented by the TSOs indeed detects a possible gas deficit in storage downstream of different north-south bottlenecks during winter, which, if they emerge, would lead to a break in supply.

The test for monitoring of storage by TSOs for the last five winters, but taking into account the infrastructures that will operate from 1 November 2018, presented within Concertation gaz, is reassuring. It concluded that at no time would it have been necessary to trigger a preventive measure to counter a gas deficit in storage downstream of bottlenecks in the single market area.

CRE considers that the TSOs must define the parameters taken into account for monitoring. They must then present the scenarios adopted for market participants' consultation.

In addition, CRE considers that regular publishing of monitoring is important to keep market participants informed during winter. A publishing interval of every 15 days appears suitable.

- Question 7** Are you in favour of the operators' proposal concerning the method for monitoring downstream storage and the parameters adopted?
- Question 8** Are you in favour of the publishing of downstream storage monitoring during winter every 15 days?

4.2 Preventive measures in the event of a gas deficit in storage downstream of bottlenecks

4.2.1 Non-trading of interruptible capacity

In its deliberation of 26 October 2017, CRE considered that monitoring storage levels downstream of bottlenecks (or "limits") exclusively aims to ensure the continuity of firm supply, and that therefore it is unconceivable to use market-based mechanisms to ensure the offering of interruptible supply.

Therefore, if there is a medium-term risk to the continuity of supply, trading interruptible capacity downstream of bottlenecks shall be interrupted temporarily. In practice, when a risk of a gas deficit in storage downstream of bottlenecks is detected through the monitoring tool (described in section 4.1), the TSOs propose to use a flow commitment with a maximum lead time of four weeks (see section 4.2.2.1). Interruptible capacity downstream of bottlenecks therefore would not be traded four weeks before the detected risk of deficit.

CRE considers that the suspension of the selling of interruptible capacity must precede all market-based mechanisms. Nevertheless, given the low risk of this situation occurring and conscious of the importance of not restricting the trading of interruptible capacity unnecessarily, CRE is in favour of adopting an identical timeframe between the maximum lead time for launching a flow commitment and the suspension of the selling of interruptible capacity.

4.2.2 Flow commitment

Flow commitment is a market-based mechanism consisting of a contract with TSOs for a flow of gas downstream of limits, at entries other than storage.

4.2.2.1 Triggering period

The triggering period is determined based on the date at which a risk of a gas deficit in downstream storage is identified by the monitoring tool described in section 4.1.

GRTgaz and Teréga both propose an initial duration of seven days to enable shippers to respond to calls for tenders.

GRTgaz considers that a reasonable period for then buying and delivering an LNG cargo in one of the French terminals is three weeks. This is the period that was presented during the working group meeting of 15 March 2018. It

is the result of work conducted by GRTgaz with an external consultant who questioned market participants likely to respond to the flow commitment. The results of this study are annexed to the TSOs' technical note.

Teréga carried out a complementary assessment with an external consultant, the results of which are annexed in the TSOs' technical note. Following this assessment, the TSOs consider that the LNG market offers more flexibility and that the delivery deadline can be reduced based on the volume needed. Indeed, if a period of 20 days is required for a spot purchase of LNG cargo, shippers could use faster means to honour a flow commitment, such as cargo deviations or reloading in terminals close to the French terminals, or using LNG already present in tanks in the terminals in the Iberian Peninsula.

Therefore, the TSOs propose different delivery timeframes, and therefore different flow commitment triggering timeframes based on the missing volume detected by the monitoring tool for storage downstream of bottlenecks presented in section 4.1. The period that would be added to the minimum period of one week for the call for tender, would therefore be as follows according to the missing volume:

- 3 weeks for a identified need over or equal to 900 GWh;
- 2 weeks for an identified need between 450 and 900 GWh;
- 1 week for an identified need lower than 450 GWh.

CRE considers that a flow commitment would only be launched in the event of a particularly tight situation in France and in the neighbouring countries. For a large volume, it appears wise to not count on the feasibility of reloading in another European terminal or on the presence of LNG available in the tanks of a terminal in the Iberian Peninsula. However, studies carried out by the TSOs show that the LNG market could offer sufficient flexibility for smaller quantities. In addition, the reduction of the delivery period serves to refine the need identified.

Therefore, at this stage CRE is in favour of the operators' proposal to launch a flow commitment with a variable timeframe according to the volume of the need identified.

Question 9 Are you in favour of the terms and conditions for launching the flow commitment proposed by the TSOs? What delivery timeframes do you consider necessary, based on the need identified?

4.2.2.2 Characteristics of the call for tender

The TSOs propose that the call for tender be configured based on the missing volume and flow which will be highlighted by the results of the monitoring of storage downstream of bottlenecks.

It shall specify:

- A delivery start date;
- A total volume to deliver over a determined period. GRTgaz proposes a period up to 15 days, Teréga proposes a period up to 7 days. Beyond that, if a need is detected, another call for tender for a flow commitment would be launched;
- A maximum possible daily flow that can be demanded by the TSOs each delivery day the day before for the following day;
- The entry points eligible for flow commitments.

Contractual agreement with the flow commitment provider shall be made by the TSO managing the point or points selected for the flow commitment.

4.2.2.3 Remuneration based on the delivery profile

When they launch a call for tender for a flow commitment, the TSOs do not become owners of the gas: the provider of the flow commitment remains the owner of the gas that it sends out on the network.

The TSOs shall be able to request the provider to adjust its daily flow the day before, within the limit of the maximum daily flow specified in the call for tender and at a constant volume over the period.

In order for the risk related to this adjustment to be borne by the TSOs and not the provider, Teréga and GRTgaz propose to financially compensate, *a posteriori*, the provider for the difference between the market price for the day and the average price for the period.

At this stage, CRE is in favour of this possibility serving to limit risks for the provider of the flow commitment. It can further encourage market participants to participate in calls for tenders and should therefore enable cheaper offers to be obtained.

4.2.2.4 Consideration of flow reductions at the Pirineos exit point

Given that the hypotheses considered for configuring the flow commitment take into account a flow of 165 GWh/d at the Pirineos PIR, less use of Pirineos would be just as effective in solving the downstream storage problem as shipping an LNG cargo.

Therefore, CRE considers that a shipper holding exit capacity at Pirineos and committing to not use it must be eligible for the flow commitment. In return, it shall not be possible for this unused capacity to be re-proposed on the market.

Question 10 Are you in favour of the terms and conditions of the implementation of the flow commitment? What period covered by the call for tender appears appropriate in your opinion?

5. SPLITTING OF COSTS BETWEEN TSOs

CRE's deliberation of 26 October 2017 states that *"the costs incurred by congestion management are included in the transmission tariff, in the form of an annual trajectory. Deviations from the trajectory are included in the income and expense clawback account (CRCP). The costs incurred for congestion management on "minor work" days shall be handled in the same manner"*.

GRTgaz and Teréga propose splitting the costs of mechanisms for management of limits or maintenance-related restrictions in proportion to their authorised income for the tariff year in progress. For example, for the year 2018, since Teréga's authorised income was €246.1 M, and that of GRTgaz €1,781.9 M, GRTgaz would incur 88% of the costs and Teréga 12%.

CRE considers that this key for distributing costs between the TSOs allows a fair impact on the tariffs of each of the two operators, and therefore users of one or the other operator are not penalised. At this stage, CRE is therefore in favour of the operators' proposal.

Question 11 Are you in favour of the proposal concerning the distribution of costs between the two TSOs?

6. SUMMARY OF QUESTIONS

- Question 1** Are you in favour of the solutions proposed by the TSOs if there is a delay in physical infrastructure or in deployment of information systems?
- Question 2** Are you in favour of the use of locational spread to optimise maintenance-related restrictions by covering weather risks? If so, what level of risk would you like the TSOs to take into account to define restrictions?
- Question 3** Are you in favour of the functioning of common superpoints proposed by the TSOs?
- Question 4** Are you in favour of the interruption of "long-term" interruptible capacity the day before at 2:00 p.m. if there is an orange or red alert?
- Question 5** Are you in favour of the operators' proposals concerning the terms and conditions applicable to tendering for locational spread?
- Question 6** Are you in favour the method proposed by CRE for determining the penalties applicable in the event of non-compliance by a shipper regarding locational spread?
- Question 7** Are you in favour of the operators' proposal concerning the method for monitoring downstream storage and the parameters adopted?
- Question 8** Are you in favour of the publishing of downstream storage monitoring during winter every 15 days?
- Question 9** Are you in favour of the terms and conditions for launching the flow commitment proposed by the TSOs? What delivery timeframes do you consider necessary, based on the need identified?
- Question 10** Are you in favour of the terms and conditions of the implementation of the flow commitment? What period covered by the call for tender appears appropriate in your opinion?
- Question 11** Are you in favour of the proposal concerning the distribution of costs between the two TSOs?

7. HOW TO PARTICIPATE IN THE PUBLIC CONSULTATION

CRE invites all interested parties to submit their contributions, by 29 June 2018 at the latest:

- by email at the following address: dr.cp7@cre.fr;
- by contributing directly on CRE's website (www.cre.fr) in the "Documents/Public Consultations" section;
- by post to: 15, rue Pasquier - F-75379 Paris Cedex 08 – France.

Contributions shall be published by CRE; please state the elements you would wish to remain confidential. Interested parties are invited to provide well-grounded answers to the questions above.

Annex:

- Teréga's and GRTgaz's technical note