Public consultation by the French Energy Regulation Commission of 26 June 2012 regarding the intraday flexibility service on the GRTgaz transmission network

This public consultation relates to the modifications to be made to the intraday flexibility service on the GRTgaz transmission network.

Intraday flexibility for a site corresponds to the need to vary its gas consumption during the day, exceeding or falling behind its average hourly consumption during the day.

During the updating of the tariff for the use of the GRTgaz transmission network which entered into effect on 1 April 2011, CRE introduced an intraday flexibility service intended for sites with major consumption fluctuations, known as “highly modulated sites”, in particular gas-fired power plants. This service, billed according to use, enables GRTgaz to meet the need of its network users under transparent and non-discriminatory conditions.

Feedback was presented within the framework of Concertation Gaz one year after the service was introduced. In addition, end 2011 GRTgaz presented its updated 2011-2020 outlook study on meeting intraday flexibility needs.

On the basis of these elements, CRE intends to develop the intraday flexibility service when the next gas transmission tariff is defined, scheduled to enter into effect on 1 April 2013.

Three topics are addressed in this public consultation:

- the tariff for the intraday flexibility service;
- changes to this service;
- the competition generated between intraday flexibility sources

Interested parties are invited to answer the questions in this document, **by 23 July 2012 at the latest**.

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1. Background and work conducted

1.1. Feedback on the intraday flexibility service from 1 April 2011 to 31 March 2012

1.1.1. Number of sites concerned by this service

The intraday flexibility service is charged to clients with an average daily modulated volume exceeding 0.8 GWh. The number of sites concerned by this service increased from six to ten between April 2011 and March 2012. This includes eight combined-cycle gas turbines (CCGTs) and two gas turbines (GTs), representing an installed power of 4,822 MWe.

GRTgaz has defined nine subzones on its network, which are the distribution areas it uses to manage its network on an intraday basis. The highly modulated sites currently in operation are distributed across six subzones.

Number of highly modulated sites per subzone

	BRETAGNE	CENTRE-EST	Ile de FRANCE	LORRAINE	NORD	PROVENCE	Total FRANCE
avr-11	1	-	-	1	2	2	6
mai-11	1	-	-	1	2	2	6
juin-11	1	-	1	1	2	2	7
juil-11	1	1	1	1	2	2	8
août-11	1	1	1	1	2	2	8
sept-11	1	1	2	1	2	2	9
oct-11	1	1	2	2	2	2	10
nov-11	1	1	2	2	2	2	10
déc-11	1	1	2	2	2	2	10
janv-12	1	1	2	2	2	2	10
févr-12	1	1	2	2	2	2	10
mars-12	1	1	2	2	2	2	10

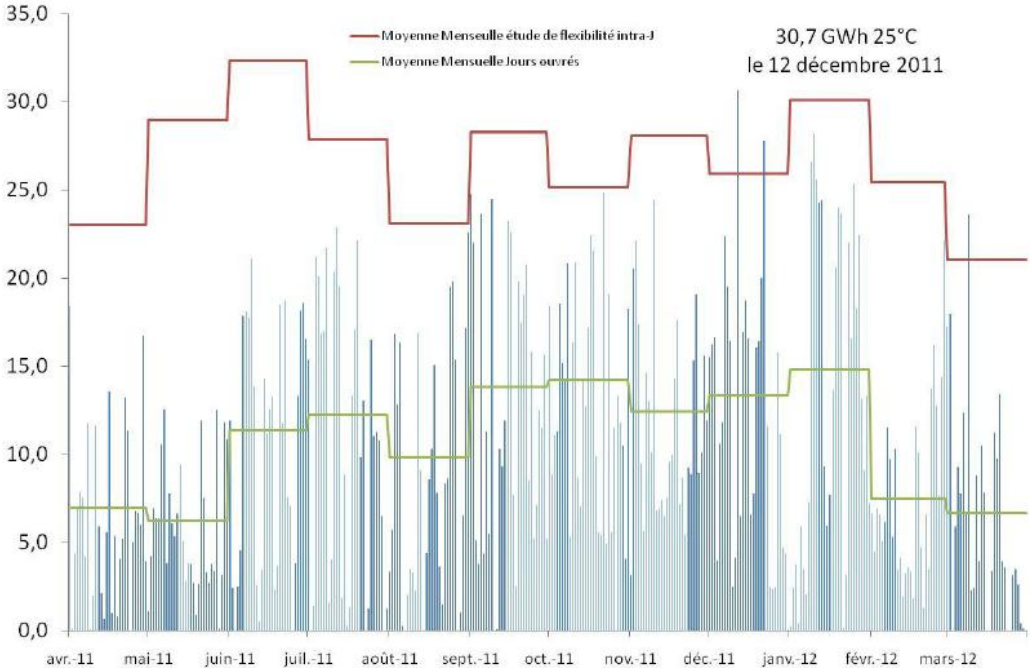
1.1.2. Availability of the service

Over the period being analysed, the intraday flexibility service has never been cut back or interrupted by GRTgaz.

1.1.3. Level of aggregate modulation of highly modulated sites

The modulation need observed for these sites was on average twice as low azs anticipated in the techno-economical study established in 2010 and revised in 2011. This study takes into account the functioning forecasts for highly modulated sites.

Record of aggregate daily modulated volumes of highly modulated sites in GWh/day 25°C between April 2011 and March 2012



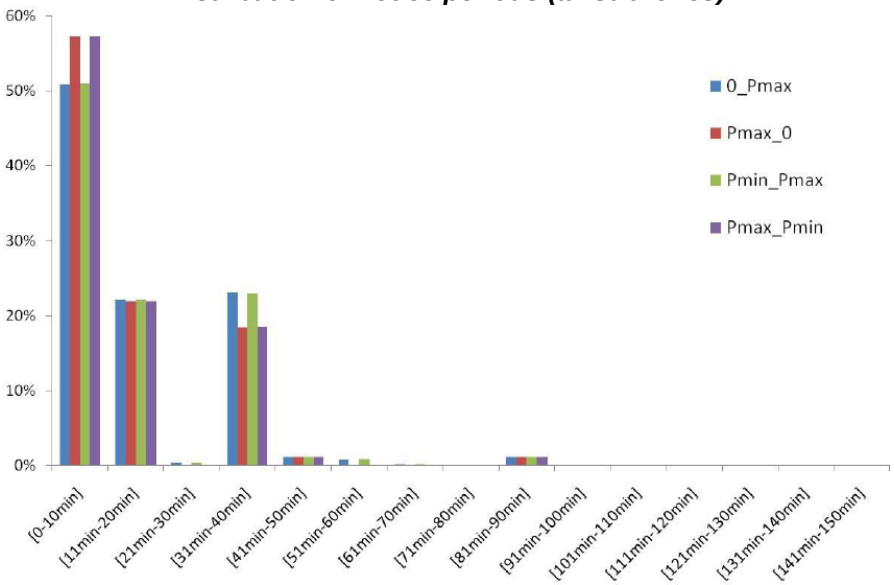
1.1.4. Notice periods

Over 75% of the notice periods[1] communicated by GRTgaz were lower than or equal to 20 minutes. However, 3% of notice periods were higher than 40 minutes. The changes implemented by GRTgaz should enable these periods to be reduced.

The notice period communicated each day by GRTgaz to the highly modulated sites is included in the offers filed in RTE's balancing mechanism. According to RTE, the mobilisation leadtime of the offer (DMO) integrating GRTgaz's notice period and the period for increasing or decreasing the plant's power must be lower than 40 minutes so that the gas-fired plants have every chance of being selected.

[1] A notice period is a minimum period between the time when the highly modulated site notifies GRTgaz of the modified hourly consumption schedule relating to a quantity greater than or equal to the flexibility tolerance of 10% and the start of its actual implementation by the customer during a gas day. This period allows GRTgaz to take the operational measures that will guarantee security and continuity in the operation of the network, while considering the dynamic aspects.
http://www.grtgaz.com/en/home/flexibility/useful-data-page/faq/

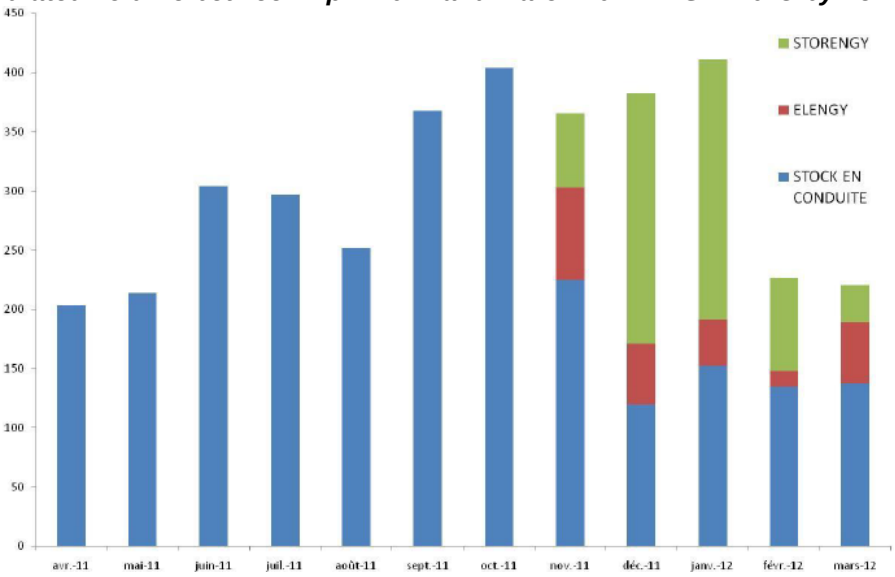
Distribution of notice periods (all subzones)



1.1.5. Recourse to external flexibility

Because of the insufficiency of internal flexibility sources available to GRTgaz for winter 2011/2012, GRTgaz had to use external flexibility sources from November 2011. Two contracts were signed at the beginning of 2011, one with Storengy and the other with Elengy for the Fos Tonkin terminal. A third contract was signed with Fosmax LNG in April 2012 for the Fos Cavaou terminal.

Monthly modulated volume between April 2011 and March 2012 in GWh 0°C by flexibility source



1.2. Update of the outlook study on meeting intraday flexibility needs

This study aims to assess the capacity of the GRTgaz network and external intraday flexibility suppliers to meet the modulation needs of highly modulated sites for the 2012-2020 period.

1.2.1. Assessment of projected flexibility needs

Highly modulated sites mainly include CCGTs and GTs.

GRTgaz's benchmark scenario expressed in number of cumulative units between 2012 and 2017

GRTgaz forecast (2011)	2012	2013	2014	2015	2016	2017
Cumulative CCGT units (*440 MWe*)	12	13	13	15	18	19
Cumulative GT units (*180 MWe*)	3	3	5	5	5	5

GRTgaz has studied three intraday flexibility demand scenarios:

- a low modulation demand scenario projecting 14 CCGT units by 2020, in line with RTE's projections with operation as estimated by producers;
- a benchmark scenario projecting 19 CCGT units by 2020 with operation as estimated by producers;
- a high modulation demand scenario projecting 19 CCGT units by 2020 with modulation levels maximised for all sites concerned.

1.2.2. Assessment of available flexibility sources

To cover its intraday flexibility needs, GRTgaz has "internal" flexibility sources related to the use of gas present in the transmission network on the one hand, and "external" flexibility sources supplied by LNG terminal operators or storage facilities on the other hand.

Forecasts for GRTgaz's internal sources take into account investments decided that will gradually increase available and usable linepack from 2013. The commissioning of Arc de Dierrey (2015), Hauts-de-France 2 (2015) and Eridan (2016) will cover the equivalent of 22 additional CCGT units each with a capacity of 440 MWe.

Availability assumptions for external flexibility sources were established taking into account the sources for which there is currently a contract agreement with Elengy, Fosmax LNG and Storengy, and complementary sources that may be available such as TIGF. Availability forecasts for intraday flexibility come directly from the previously mentioned infrastructure operators.

1.2.3. Findings of the study

For the 2012 – 2015 period, the statistical study concluded that almost all predictable day-ahead intraday modulation needs would be met. For this period, external resources will be a relatively major source of flexibility, particularly in winter.

However, in exceptional circumstances, GRTgaz might not be able to cover all intraday flexibility needs. These situations, which are estimated to occur one day per year, may lead to a reduction estimated at a maximum of roughly 15% of the modulation volume requested for that day.

From 2016, almost all intraday modulation needs of highly modulated sites will be covered by GRTgaz's internal sources and the recourse to external flexibility sources will become limited. It is forecast that external sources will no longer be used as from 2017.

1.2.4. CRE's preliminary analysis

CRE notes that possible contributions by TSOs neighbouring GRTgaz other than TIGF were not taken into account in the external flexibility sources.

It considers that the outlook study, which is already updated on a yearly basis, should take into account all changes in assumptions and in particular, the contribution of neighbouring TSOs, in particular those that apply an hourly balancing regime or with hourly constraints.

Q1 Do you think that the study on meeting intraday flexibility demands for 2012-2020 correctly reflects the supply and demand match for projected intraday flexibility?

2. Tariff for the intraday flexibility service

2.1. Overview of expenses and income

The expenses and income generated by the supply of intraday flexibility to highly modulated sites between 1 April 2011 and 31 March 2012 were reviewed by GRTgaz.

2.1.1. Operating expenses

The operating expenses that GRTgaz presented as directly related to the intraday flexibility service totalled €4.7 M from 1 April 2011 to 31 March 2012:

- Internal expenses stood at €3.2 M and break down as follows:
  - €2.7 M in fixed expenses for:
    - the creation of an additional desk operating 24/7;
    - conducting network and scheduling studies and dynamic calculations;
    - IT system developments and maintaining them in operational condition;
  - €0.5 M in variable expenses for additional compression costs required for the transportation of the modulated volume between different points of the network.
- External expenses totalled €1.5 M and break down as follows:
  - €0.66 M for the recourse to the Fos Tonkin LNG terminal;
  - €0.85 M for the recourse to Storengy's storage facilities.

2.1.2. Income related to the intraday flexibility service

Income related to this service from 1 April 2011 to 31 March 2012 totalled €4 M.

2.2. CRE's preliminary analysis

GRTgaz's expenses as well as its income were lower than projected, because of unfavourable conditions to the functioning of CCGTs.

Since the service is billed wholly on use, the CCGTs were not penalised.

Moreover, GRTGaz's outlook study shows that recourse to external sources will be greatly reduced as from 2016 and entirely discontinued as from 2017 due to the commissioning of new transmission works. At that time, expenses related to the flexibility service will be only internal.

The identification of internal expenses exclusively related to the flexibility service is complex and subject to interpretation. GRTgaz's development of an hourly management of its network in part benefits all users of the network, particular in light of the changes required to comply with the future European balancing network code. Furthermore, the sums concerned (roughly €3 M/year) are low compared to the net operational expenses of GRTgaz (approximately €631.9 M/year).

CRE therefore plans to share the internal expenses in GRTgaz's transmission tariff. However, it considers, at this stage, that the external expenses which are directly related to the flexibility service, must be borne by users of the service.

CRE is also is enclined to introduce a specific treatment for industrial sites connected to the transmission network with little to no intraday modulation. These sites contribute to improving the management of the network because of the predictability and consistency of their consumption. They may benefit from a reduction of their transmission costs depending on their profile.

2.3. Synthesis

At this stage, CRE is contemplating the following provisions to be applicable as from 1 April 2013:

- maintenance of a flexibility service billed to highly modulated sites based on use; who's tariff would cover external expenses of GRTgaz
- sharing GRTgaz's internal expenses in the transmission tariff;
- introduction of a specific tariff treatment for sites with little to no modulation.

Q2 Are you in favour of the course of action envisaged by CRE for the intraday flexibility service tariff?

3. Changes in the flexibility service

In its deliberation of 24 March 2011[2], CRE defined a work programme to improve the flexibility service.

3.1. Requests fulfilled

Within the framework of Concertation Gaz, GRTgaz has provided half-yearly feedbacks since April 2011, on the functioning of highly modulated sites, operational rules, availability and use of the intraday flexibility service.

Since 24 May 2012, GRTgaz has published a record of the following data on *Smart GRTgaz*:

- indicators related to the feasibility of hourly operation schedules of highly modulated sites for the following three days;
- percentage of reduction of hourly operation schedules of highly modulated sites for the days in which there is a reduction;
- notice periods for the six subzones: Bretagne, Centre-Est, Ile-de-France, Lorraine, Nord, Provence where highly modulated sites are currently located;
- the cumulative modulated volume observed the previous day.

Q3 Do you have any comments about the implementation by GRTgaz of the requests made by CRE in the deliberation of 24 March 2011?

3.2. Requests not fulfilled

3.2.1. Terms for closer linkage between the day-ahead scheduling processes of the gas and electricity systems

GRTgaz considers that the probability of not meeting modulation needs is very low (<1 day/year). Therefore, RTE does not believe that it is necessary to create an additional nominations gate for the electricity market. RTE proposes feedback on this matter within the framework of CURTE[3] by the end of 2012. Moreover, GRTgaz proposes conducting, in coordination with RTE, an exercise in autumn 2012 simulating a partial non-coverage of flexibility needs.

CRE considers that the proposals by GRTgaz and RTE are satisfactory.

Q4 Do you have any comments on the proposals made by GRTgaz and RTE on the day-ahead scheduling processes of the gas and electricity systems?

[2] CRE deliberation deciding on the operational terms for the intraday flexibility service for highly modulated sites
[3] CURTE: Electricity Transmission System Users Committee

3.2.2. Study of the implementation for mid-2012 of specific notice periods adapted to RTE's balancing orders

In May 2012, GRTgaz and RTE launched a study on this subject, the results of which will be disclosed in September 2012. On the basis of this study, GRTgaz and RTE propose to conduct a test on the Provence subzone before end 2012.

CRE considers that GRTgaz and RTE are lagging behind on this objective.

Q5 What is your position on the implementation for mid-2012 of specific notice periods adapted to RTE's balancing orders?

3.2.3. Definition and implementation by end 2012 at the latest, of minimum and maximum values for the notice periods of each subzone; study of the visibility of conditions for the application of the intraday flexibility service from the connection phase

Concertation Gaz market players requested firm commitments from GRTgaz during the connection of each site, regarding the probabilities of service interruption and the associated notice periods.

GRTgaz expressed its inability to commit firmly to notice periods beyond one year, since transit and gas flows were too unpredictable in the medium and long term. It considers that the record of notice periods, already made available, provides visibility and it proposed to provide rules for notice periods for the coming year for each subzone. In addition, GRTgaz believes that the value of notice periods is not a decisive factor in the choice of location of a highly modulated site, given the other difficulties that exist (e.g. local acceptance).

CRE considers that GRTgaz has not responded to the request made. At this stage, it feels that is essential for GRTgaz to provide at least some indications on the zones of its network that are favourable or unfavourable to the setting up of highly modulated sites.

Q6 What is your position on the visibility necessary prior to connection of the conditions for the application of the intraday flexibility service?

3.3. Additional requests made as part of Concertation Gaz

Additional requests for changes were made within the framework of Concertation Gaz and exchanges with market players. They mainly concern:

- the formalisation of exceptional procedures related to the preservation of the electricity system if the supply of gas to power plants is interrupted;
- the validation conditions of sites' operating schedules earlier in the day.

Q7 What is your position on the additional requests made as part of Concertation Gaz? Do you have any other comments to make on the intraday flexibility service?

4. GRTgaz arrangement for generating competition between flexibility sources

On the basis of the results of the outlook study, GRTgaz studied two competitive procurement situations for external sources of intraday flexibility within the framework of Concertation Gaz:

- competition limited to gas infrastructure operators;
- competition extended to all market players based on biding offers.

4.1. Competition limited to gas infrastructure operators

Since its implementation, the flexibility service has been based on the use of internal and external flexibility sources. For external sources, GRTgaz has signed contracts with storage and LNG terminal operators.

The daily selection of the supplier(s) of external flexibility depends on economic precedence and the capacity of infrastructure to meet the demand with the expected responsiveness.

4.2. Competition extended to all market players

This competition situation would enable other players apart from infrastructure operators to supply flexibility. GRTgaz has studied the possibility of issuing call for tenders open to shippers and customers directly connected to the transmission network.

Reflection conducted within Concertation Gaz led to the determination of the characteristics of the possible contributions of industrial customers and shippers to the supply of intraday flexibility. It has been determined that these contributions will be low in volume compared to the overall flexibility required.

Moreover, the management of hourly delivery and/or withdrawal profiles in certain points of the transmission network would require both the adaptation of GRTgaz's IT system for an investment of approximately one million euros and the renegotiation of interconnection agreements with the concerned adjacent operators.

4.3. Results of the study

Given the expenses involved and the discontinuation of the use of external flexibility sources as from 2016-2017 on, GRTgaz considers that the return on investment related to extended competition is not ensured.

Moreover, GRTgaz believes that an increase in the number of available external sources, creating direct competition between four different sources (Elengy, Storengy, Fosmax LNG and TIGF), will ensure effective competition. In addition, the Dunkerque terminal may be used as an additional external source by the end of 2015.

From GRTgaz's point of view, the use of these sources is optimum in technico-economic terms, supplying the intraday flexibility needed to cover the modulation needs of highly modulated sites for the 2012-2016 transitional period.

4.4. CRE's preliminary analysis

CRE considers, similar to GRTgaz and given the exchanges with Concertation Gaz, that it is not appropriate to implement a mechanism requiring significant changes to interconnection agreements with adjacent shippers and IT developments for a need limited to two years.

Current practice based on the conclusion of contracts for services between GRTgaz and adjacent infrastructure operators, the prices of which are set by CRE as far as regulated infrastructure is concerned, as well as the application of an economic precedence criterion, seems to be suitable given the limited duration of the need.

Q8 Are you in favour of maintaining the current competition model for gas infrastructure operators?

Questions

CRE invites all interested parties to submit their contributions, by 23 July 2012 at the latest:

- by email to the following address: dirgaz.cp3@cre.fr ;
- directly on the CRE website (www.cre.fr), in the section "Documents / Public consultations";
- by contacting the Gas Infrastructure and Networks Department: + 33.1.44.50.42.12;
- by requesting an audience with the Commission.

Please indicate in your answer whether you wish for your contribution to remain **confidential and/or anonymous**. Interested parties are invited to provide well-grounded answers to the following questions.

Q1 Do you think that the study on meeting intraday flexibility demands for 2012-2020 correctly reflects the supply and demand match for projected intraday flexibility?

Q2 Are you in favour of the course of action envisaged by CRE for the tariff of the intraday flexibility service?

Q3 Do you have any comments about the implementation by GRTgaz of the requests made by CRE in the deliberation of 24 March 2011?

Q4 Do you have any comments on the proposals made by GRTgaz and RTE on the day-ahead scheduling processes of the gas and electricity systems?

Q5 What is your position on the implementation for mid-2012 of specific notice periods adapted to RTE's balancing orders?

Q6 What is your position on the visibility necessary prior to connection of the conditions for the application of the intraday flexibility service?

Q7 What is your position on the additional requests made as part of Concertation Gaz? Do you have any other comments to make on the intraday flexibility service?

Q8 Are you in favour of maintaining the current competition model for gas infrastructure operators?

Annexes

Annex 1: Outlook study on meeting intraday modulation needs for 2012-2020 (French only)

Annex 2: GRTgaz 2011 study on generating competition between external sources of intraday flexibility (French only)