



Deliberation of the French Energy Regulation Commission of 24 March 2011, deciding on operating conditions of the intraday flexibility service for sites with strong flexibility needs

Participaient à la séance : Philippe de LADOUCETTE, président, Olivier CHALLAN BELVAL, Frédéric GONAND et Jean-Christophe LE DUIGOU, Commissaires

Pursuant to the Energy Regulation Commission's (CRE) proposal dated 28 October 2010 approved by the Ministers of Economy and Energy, GRTgaz proposed to CRE the operating conditions of the intraday flexibility service for sites with strong flexibility needs¹ (see Annex A and Annex B of this deliberation).

1. Background

The tariff for the use of the GRTgaz transmission network, in effect as from 1 April 2011, introduces a new intraday flexibility service within the framework of daily balancing. This price falls within the general framework of a daily balancing for the gas market in France, where gas carriers must meet the system users' needs for within-day flexibility² under transparent and non discriminatory conditions.

This service was proposed by CRE following two years of consultation work with market players. It is based on the following principles:

- it is an interruptible service billed on use which applies to all sites with strong flexibility needs, regardless of their gas use;
- the tariff for this service takes into account the additional costs related to intraday flexibility requested by these sites.

The tariff rules provide that GRTgaz propose to CRE for approval, after consultation with the French electricity transmission system operator (RTE) and market players within the framework of Concertation Gaz:

- *“the conditions for the interruption of this service, as well as the intraday flexibility distribution rules if the operator is unable to meet all demands;*
- *competitive procurement terms for intraday flexibility sources;*
- *management of the declaration a day ahead and redeclarations within the day.”*

Within this framework, after consultation with RTE and market players, GRTgaz proposed to CRE on 16 February 2011, the operating conditions for the intraday flexibility service applicable as from 1 April 2011.

1 Sites with an average daily modulated volume exceeding 0.8 GWh per operating day for the previous year.

2 The need for within-day flexibility for a site is the need to vary its consumption of gas during the day beyond or below its average hourly consumption during the day.

To prepare its decision, CRE consulted market players with regard to GRTgaz's proposal from 16 February to 1 March 2011.

On 21 March 2011, GRTgaz proposed a modified version of the operating conditions of the intraday flexibility service for sites with strong flexibility needs, in order to meet certain demands expressed by market players during the public consultation and within the framework of Concertation Gaz on 18 March 2011.

2. GRTgaz proposal

The GRTgaz proposal covers the operating conditions of the intraday flexibility service (Annex A and Annex B attached hereto) and the schedule for forthcoming work (Annex C attached hereto).

2.1. Procedure for transmitting sites' hourly operating programmes a day ahead and within the day

a) Procedure for transmitting data a day ahead

Every day before 2:30 p.m., sites with strong flexibility needs declare to GRTgaz for the three following days, their hourly operating programme, maximum and minimum hourly flow and maintenance forecasts.

A new declaration may be made before 4:30 p.m. for the following day. If no declaration is made, GRTgaz takes into account the latest elements declared by the site.

GRTgaz addresses to sites with strong flexibility needs, at 7:30 p.m. at the earliest and at 8:30 p.m. at the latest on D-1:

- the feasibility of the programme declared on D-1 for D-Day. GRTgaz's confirmation of the feasibility of this programme is considered firm. The case of non-feasibility of the programme is addressed in section 2.2;
- a courtesy period³ to be respected prior to the implementation of any modification of the hourly operating programme declared on D-1 for D-Day. This courtesy period comprises four values based on the type of programme modification requested by the site:
 - passage from zero power to maximum power
 - passage from maximum power to zero power
 - passage from minimum flow to maximum flow
 - passage from maximum flow to minimum flow
- a stress indicator for the availability of intraday flexibility of the transmission network for D+1 and D+2, taking into account the latest elements communicated on D-1 by sites with strong flexibility needs for these two days.

b) Procedure for transmitting data within the day

Sites with strong flexibility needs commit to complying with the D-Day programme declared on D-1, once its feasibility has been confirmed by GRTgaz. The programme has a flexibility tolerance of +/- 10% of the hourly capacity subscribed by the shipper supplying the site with natural gas.

Programme modifications below the flexibility tolerance do not need to be redeclared to GRTgaz. If the programme modification exceeds the flexibility tolerance, the site must communicate the new programme to GRTgaz and implement it in compliance with the courtesy period conveyed by GRTgaz on D-1.

³ The courtesy period corresponds to the time necessary for the entry into force of the modification of a site's operating programme.

c) **Consistency between gas and electricity systems**

For gas power plants concerned by the GRTgaz intraday flexibility service, the following conditions have been included following consultation between GRTgaz and RTE:

- as part of the balancing mechanism, gas power plants shall include the courtesy period in the mobilisation leadtime transmitted to RTE;
- gas power plants are temporarily dispensed from the provisions established in GRTgaz within-day planning once they implement a safeguard measure⁴ activated by RTE;
- programme variations related to the participation of gas power plants in RTE's system services⁵ are covered by the +/- 10% flexibility tolerance.

2.2. **Conditions for the interruption of the intraday flexibility service**

a) *Procedure for determining the interruption of the day-ahead service*

GRTgaz has included in its proposal a description of the methods used to calculate the different parameters transmitted to sites with strong flexibility needs.

To analyse the feasibility of the programmes declared by these sites on D-1 for D-Day, GRTgaz adds up the programmes including the flexibility tolerance to determine a single programme.

It then compares the intraday flexibility requirement associated with this aggregate programme to the intraday flexibility available on the network on D-Day. If the intraday flexibility available does not cover the intraday flexibility requirement associated with the aggregate programme, GRTgaz declares that the programmes submitted by sites with strong flexibility needs are not feasible.

b) *Visibility into the interruption of service in the following three days*

As indicated in section 2.1, in order to give visibility to sites with strong flexibility needs into the feasibility of their programmes for the following three days, GRTgaz issues a qualitative indicator that may be red or green:

- the indicator is green when GRTgaz considers that it can satisfy all of the programmes of the sites with strong flexibility needs;
- the indicator is red when GRTgaz considers that the programmes of all of these sites are not feasible.

2.3. **Rules for distributing intraday flexibility in the event that GRTgaz is unable to meet all demands**

If GRTgaz cannot satisfy all of the programmes declared on D-1 for D-Day by sites with strong flexibility needs, it requests these sites to change their programme for D-Day based on three options from which each site may choose:

- 1) **consistent programme:** the site chooses to operate with a consistent hourly flow throughout the day, at a level chosen by the site;

⁴ RTE implements safeguard measures (voltage reduction, quick transfer to maximum power, etc.) once the status of the electricity system does not follow the normal operating regime. When the gas power plant receives a *safeguard order* it must immediately comply with the actions that correspond to this order.

⁵ The *system services* cover the means that certain players – mainly producers – make available to RTE in order to maintain frequency and voltage on the network. Setting is performed automatically via production units with possibilities of quickly changing their active or reactive power.

- 2) **same daily consumption programme:** the site chooses to maintain the daily consumption declared in its initial programme. At the same time, the site applies to its initial operating programme an X% reduction factor imposed by GRTgaz. This reduction factor is identical for all of the sites with strong flexibility needs. This option can only be applied if the site's minimum operating flow is above zero;
- 3) **programme with rebalancing of resources:** the site chooses to change the daily consumption declared in its initial programme. At the same time, the site applies to its initial programme an X% reduction factor imposed by GRTgaz. This reduction factor is identical for all of the sites with strong flexibility needs. This option can only be applied if the site's minimum operating flow is zero.

The sites with strong flexibility needs must transmit to GRTgaz the changed programme before 9:30 p.m. on D-1.

If the modified programme does not comply with the corrections requested, GRTgaz requests the site at fault to come into line before 10:30 p.m.

2.4. Forthcoming work

With a view to continuously improving the intraday flexibility service, Concertation Gaz's work has underlined new work avenues for which GRTgaz has proposed the following schedule:

- **from 1 April 2011 to 1 April 2012:** gradual availability of four courtesy periods based on the schedule below (intermediate deadlines given for illustrative purposes):

Estimated date of availability for Customers	Affected area
01/04/2011	Provence
01/07/2011	Lyonnais
01/10/2011	Lorraine
01/01/2012	Nord
01/04/2012	Paris Est & Paris Normandie
01/04/2012	Bretagne

- **as at 31 August 2011:** update by GRTgaz of the technical and economic study on the ability of gas infrastructure to meet intraday flexibility needs⁶ in order to give medium- and long-term visibility into the availability of intraday flexibility;
- **end 2011:** feasibility study for the implementation of semi-quantitative indicators giving visibility on D-1 into the availability of intraday flexibility for D+1 and D+2;
- **second half 2011:** study of competitive procurement conditions for intraday flexibility sources.

3. Feedback from the public consultation

Eleven companies, including seven suppliers of gas powered electricity and an association representing them, contributed to the consultation conducted by CRE from 16 February to 1 March 2011.

3.1. Procedure for transmitting hourly operating programmes a day ahead and within the day

Procedure for transmitting data a day ahead

⁶ Study completed by GRTgaz and TIGF in January 2010 at CRE's request (deliberation of 30 April 2009). It considered among other things, the balance between supply and demand of intraday flexibility in the short, medium and long term.

Most players considered that the time at which GRTgaz communicates the feasibility of programmes (8:30 p.m.) is too late. Arguments put forward were as follows:

- if the programme requested is not feasible, the site with strong flexibility needs can only redeclare its modified programme to RTE at the 11 p.m. window since the previous planning window closes at 4:30 p.m.;
- suppliers from electricity production sites with strong flexibility needs have fewer means of balancing gas and electricity in the event of programme modification at the request of GRTgaz, since markets close at 8:30 p.m.;
- sites with strong flexibility needs must provide for the late presence of teams, which generates additional management costs.

Process for modifying programmes within the day

On a whole, participants were satisfied with GRTgaz's proposal:

- some participants requested more visibility and a contractual commitment from GRTgaz concerning the length of the courtesy period based on the network's situation (minimum and maximum courtesy periods or time slots possible depending on the status of the network);
- one of them specified that the change proposed by GRTgaz concerning the introduction of four courtesy periods will improve coordination between electricity and gas systems;
- one electricity producer requested that GRTgaz study the implementation of tiered courtesy periods (differentiated for the sites).

Moreover, RTE recalled that it wished for the implementation of an optimal courtesy period specifically for balancing orders, particularly in the case of intraday flexibility shortage in which the courtesy period communicated by GRTgaz is 24 hours.

3.2. Conditions for the interruption of the intraday flexibility service

Most participants requested the implementation of quantitative indicators to give three-day visibility (percentage of reduction in the event of flexibility shortage):

- some participants requested that GRTgaz commit contractually to a maximum frequency of interruption of the flexibility service;
- one player suggested the implementation of indicative one-month visibility;
- two other players requested that the indicators calculated by GRTgaz be made public.

Most participants also underlined the need for an annual update of the 2010 technical and economic study and requested that this study be used to review the tariff for the use of the intraday flexibility service.

3.3. Rules for distributing intraday flexibility in the event that GRTgaz is unable to meet all demands

The participants who expressed their opinions on this matter were favourable to the three options proposed by GRTgaz if it is unable to satisfy all of the programmes of sites with strong flexibility needs. Once this situation arises, one player requested that GRTgaz commit to informing its network users of the length and cause of the interruption of the intraday flexibility service.

3.4. Forthcoming work

Market players globally approved the programme proposed by GRTgaz but found that the implementation time frames were too long and wished for the schedule to be tightened.

Some participants made other proposals:

- recording by GRTgaz of feedback on the application of the intraday flexibility service;
- a dynamic study by GRTgaz of the flexibility available within the day;

- revision of the process for confirming the feasibility of the hourly programme and the process for nominating the gas system, in order to ensure consistency with RTE's planning processes and the opening periods for organised electricity and gas markets.

4. CRE observations

GRTgaz's proposal takes into account the requests expressed within the framework of Concertation Gaz on the operating rules, within the scope of the tools available to GRTgaz and the time necessary to develop them.

In that regard, GRTgaz's proposal may be completed later on depending on the progress of consultation work and the automation of GRTgaz's tools.

Moreover, CRE is very favourable to the work launched by GRTgaz within the framework of Concertation Gaz, to build a reference, the operating code of the network, which aims to provide a transparent and organised outline of its network's access conditions. The formalisation of the operating conditions of the intraday flexibility service in this reference will provide greater clarity and transparency with regard to market players. This formalisation work must be pursued by GRTgaz within the framework of Concertation Gaz.

4.1. Procedure for transmitting hourly operating programmes a day ahead and within the day

a) Consistency between gas and electricity systems

CRE has noted the coordination efforts made by GRTgaz and RTE to ensure consistency of the operating rules for gas and electricity systems. This coordination is essential for implementing an optimum operating framework for the gas power plants concerned by the intraday flexibility service.

Therefore, the specific conditions defined for electricity producers in GRTgaz's proposal will take into account the constraints of these sites that are related to the operation of the electricity system.

CRE also takes note of the experiment proposed by RTE following the work conducted within Concertation Gaz, in order to allow electricity producers concerned by the intraday flexibility offer on the GRTgaz network not to be activated by RTE under the balancing mechanism in the 3 a.m. to 6 a.m. time slot. In fact, shippers supplying these sites with gas are unable to balance themselves on the gas transmission network between 3 a.m. and 6 a.m. As from 1 May 2011, RTE will observe the implementation of these practical conditions for three months. At the end of this three-month period, RTE will submit a report to CRE and propose the course to follow further to this experiment.

Lastly, CRE requests GRTgaz and RTE to work on optimising the process for transmitting hourly programmes of sites with strong flexibility needs by analysing all the room for manoeuvre that can be generated at the level of their respective planning cycles. In particular, it requests that they study, within the framework of Concertation Gaz, the following work avenues:

- optimisation by GRTgaz of the deadline for confirming the feasibility of the programme communicated on D-1, currently set at 8:30 p.m., which is too late according to players;
- analysis by RTE of the opportunity of adding a redeclaration between 8 p.m. and 11 p.m. in order to anticipate the taking into account of any change in the operating programme of sites with strong flexibility needs.

b) Declaration of a courtesy period

The implementation of four courtesy periods by GRTgaz complies with market players' request within the framework of Concertation Gaz. CRE takes note of GRTgaz's proposal to gradually provide these four courtesy periods, based on the deployment of its dynamic simulation information system on the entire network. It requests GRTgaz to implement these four courtesy periods for all parts of its network by April 2012 at the latest.

Moreover, in order to respond to the request for visibility into the length of the courtesy periods expressed during the public consultation, CRE requests GRTgaz to:

- publish on its website the history of courtesy periods for each part of its network ;
- study within the framework of Concertation Gaz the definition and implementation as early as possible of the minimum and maximum values for the courtesy periods of each part of its network.

Lastly, CRE considers that GRTgaz and RTE must capitalise on their system's margins in order to limit constraints deferred to the other system. In that regard, the implementation of a courtesy period of 24 hours at the level of GRTgaz's network makes, for the days concerned, gas power plants unavailable for RTE balancing. This unavailability could make balancing of the electricity network more difficult. Under these conditions, CRE requests GRTgaz to study within Concertation Gaz, the possibility of implementing a courtesy period adapted to RTE's balancing orders. Pending the finalisation of this work, if the courtesy period communicated by GRTgaz is 24 hours, GRTgaz will spare no effort to handle any RTE balancing needs.

4.2. Conditions for interrupting the offer

Pursuant to Article 21 of law No. 2003-8 of 3 January 2003 on gas and electricity markets and the energy public service, GRTgaz, as a gas transmission operator, must "*ensure at all times the safety and effectiveness of its network and the balance of natural gas flows taking into account technical constraints on the latter. It is responsible for the availability and implementation of services and reserves required for the operation of the network*".

Since the balancing obligation on shippers is daily, GRTgaz is responsible for making optimum use of available intraday flexibility resources in order to ensure balancing of its network within the day.

The supply of intraday flexibility to users of its transmission network is part of GRTgaz's missions. If the intraday flexibility offer is interrupted, GRTgaz must provide to CRE in the month that follows this interruption, a detailed report explaining the reasons for this limit on flexibility capacity.

Moreover, it is important that GRTgaz provides visibility into the availability of intraday flexibility on its network and the feasibility of the programmes of sites with strong flexibility needs connected to its network.

CRE considers that GRTgaz's proposal is a first stage in providing visibility into the availability of intraday flexibility.

With a view to strengthening this visibility, GRTgaz must pursue work to quantify, assess and if necessary, improve the reliability of the indicators used to forecast the availability of intraday flexibility on its network.

In addition, CRE requests GRTgaz to publish on its website:

- the indicators related to the feasibility of the hourly operating programmes of sites with strong flexibility needs for the three following days;
- the percentage of reduction in hourly operating programmes of sites with strong flexibility needs, for the days in which a reduction applies.

4.3. Competitive procurement of flexibility sources

In accordance with the tariff for the use of the gas transmission network applicable as from 1 April 2011, GRTgaz will have to propose to CRE for approval, after consultation with RTE and players within the framework of Concertation Gaz, the competitive procurement conditions for intraday flexibility sources.

In its proposal, GRTgaz intends to work on these conditions within the framework of Concertation Gaz in the second half of 2011.

Within this context, CRE requests GRTgaz to communicate to it at the end of 2011 an initial proposal concerning the competitive procurement conditions for intraday flexibility sources.

4.4. Forthcoming work

The work programme proposed by GRTgaz complies with the avenues identified within the context of Concertation Gaz.

Moreover, CRE requests GRTgaz, within Concertation Gaz, to complete this programme with the elements from the half-yearly feedback on the operation of sites with strong flexibility needs, the availability and use of intraday flexibility and the operating rules.

5. Decision

CRE approves the operating conditions proposed by GRTgaz (see Annex A and Annex B).

With a view to supervising work that must be conducted to define the operating conditions of the intraday flexibility service, CRE requests GRTgaz:

- to study in coordination with RTE within the framework of Concertation Gaz:
 - the means of aligning day-ahead planning of gas and electricity systems;
 - the possibility of implementing by mid-2012 a courtesy period adapted to RTE's balancing orders.
- Pending the finalisation of this work, if the courtesy period communicated by GRTgaz is 24 hours, GRTgaz shall spare no effort to handle any RTE balancing needs.
- to implement these four courtesy periods for all parts of its network by April 2012 at the latest;
 - to define by end 2011 and implement by end 2010 at the latest the minimum and maximum values for the courtesy periods of each part of its network;
 - to study the visibility that may be given to sites with strong flexibility needs into the application conditions for the intraday flexibility service, starting from the study phase for the connection of these sites to the GRTgaz network;
 - to present, within the work of Concertation Gaz, half-yearly feedback, as from April 2011, on the operation of sites with strong flexibility needs, the availability and use of intraday flexibility and the operating rules;
 - to annually update, in connection with the other infrastructure operators, the technical and economic study on the ability of gas infrastructure to meet intraday flexibility needs.

GRTgaz shall publish on its website, with a history record, at least the following data:

- the indicators related to the feasibility for the three following days of hourly operation programmes of sites with strong flexibility needs;
- the percentage of reduction in hourly operating programmes of sites with strong flexibility needs, for the days in which a reduction applies;
- the courtesy periods.

If the intraday flexibility offer is interrupted, GRTgaz shall transmit to CRE, in the month that follows the interruption, a detailed report explaining the reasons for the interruption.

Moreover, CRE requests GRTgaz to communicate to it at the end of 2011 a proposal concerning the competitive procurement conditions for intraday flexibility sources.

Paris, 24 March 2011,

Annex A: Operating conditions

Annex B: Definitions

Annex C: Schedule of expected developments