

DELIBERATION

Deliberation by the French Energy Regulatory Commission of 15 December 2016 examining the ten-year development plan for GRTgaz and approving its investment programme for 2017

Participating in the session: Philippe de LADOUCKETTE, chairman, Christine CHAUVET, Catherine EDWIGE and Jean-Pierre SOTURA, commissaries.

The purpose of this deliberation is, on the one hand, to examine GRTgaz's ten-year plan, and on the other hand, to approve GRTgaz's modified 2016 investment programme and its 2017 investment programme.

1. LEGAL AND REGULATORY FRAMEWORK

Directive 2009/73/EC of 13 July 2009 concerning common rules for the internal market in natural gas and the French Energy code define the legal framework applicable to the investments of gas transmission system operators (TSOs).

Article 8 §3-b of Regulation No. 715/2009¹ provides that the European network of transmission system operators in gas (hereinafter called ENTSO²) shall adopt every two years a non-binding Community-wide ten-year network development plan (hereinafter "TYNDP³"), after an open and transparent consultation with all market participants. The Agency for the Cooperation of European Regulators (ACER) issues an opinion on that plan and monitors its implementation. The TYNDP contains different growth scenarios of the gas demand and development of networks in Europe. It includes cost-benefit analyses of projects that it contains, which must then be used to support the selection of Projects of Common Interest (PIC) laid down by the Regulation.

At national level, Article L.431-6-1 of the French Energy Code provides that the TSOs shall draft, after consultation of interested parties, a ten-year development plan for their networks (hereinafter ten-year plan), based on:

- the existing gas supply and demand;
- the reasonable medium-term forecasts for the development of gas infrastructures;
- reasonable medium-term gas consumption forecasts;
- reasonable medium-term forecasts for international exchanges;
- hypotheses and identified needs in the report relating to the planning of investments in the gas sector developed by the minister in charge of energy.

This plan must indicate the main transport infrastructures that must be built or upgraded over the following ten years, list the investment projects already decided, inventory new investments to be made within three years and provide a forecast schedule for all investment projects.

In application of the provisions of Article L. 431-6 of the Energy Code, TSO's ten-year plan to ten years is submitted each year for examination by the French Energy Regulatory Commission (hereinafter "CRE") so that it may ensure, on one hand, coverage of all the investment needs and, on the other hand, the coherence of the plan submitted with ENTSO's network development plan. If there are any doubts about the latter point, CRE has the possibility of consulting ACER.

CRE may, if it considers that these requirements are not met, ask the TSOs to modify their ten-year plans.

Furthermore, in application of the provisions of Article L.134-3, 2° and of II of Article L.431-6, the TSOs shall submit their annual investment programmes implementing the ten-year plan to CRE for approval. In this

¹ [Regulation No. 715/2009 of the European Parliament and the Council of 13th July 2009 on the conditions for access to the transport network of natural gas and repealing Regulation \(EC\) No. 1775/2005](#)

² [European Network of transmission operators in gas](#)

³ [Ten-year network development plan](#)

framework, CRE "ensures that the investments required for the proper development of the networks, and for transparent and non-discriminatory access to them are made".

2. FORECAST BALANCE AND TEN-YEAR PLAN FOR THE DEVELOPMENT OF GRTGAZ

2.1 Multiannual forecast balance of network operators in the energy transition

Law no. 2015-992 of 17 August 2015 relating to the energy transition for green growth (hereinafter "LTECV") has defined guidelines for fossil energy consumption and control of the demand for energy.

This law especially defines the guidelines concerning new uses of gas, in addition to the production of electricity from renewable energy sources or in the transport sector substituting for petroleum products. It sets the objective of 10% renewable energy in French consumption of natural gas from now to 2030.

The multiannual energy programming (PPE)⁴, which defines the guidelines and actions to reach the objectives of the energy policy set out in Articles L. 100-1, L. 100-2 and L. 100-4 of the Energy Code, was published on 28 October 2016. It especially defines the following objectives in the gas sector:

- reaching a reduction of the primary gas consumption of -9 to -16% in 2023 compared with 2012;
- reaching a share of the fleet of HGVs running on CNG (compressed natural gas for vehicle) of 3% in 2023 and 10% in 2030;
- developing the supply of (LNG) liquefied natural gas marine fuel in the ports, and the infrastructure of LNG/CNG for road fuel;
- reaching an annual production capacity of biomethane injected into the network of more than 8 TWh by 2023;
- supporting the development of bioGNV (renewable compressed natural gas for vehicle) to reach 0.7 TWh consumed in 2018 and 2 TWh in 2023, in the perspective that the bioGNV represents 20% of the consumptions of CNG in 2023, on additional segments to those of electric vehicles and rechargeable hybrid vehicles;
- continuing and finalize the conversion studies of L gas (low calorific gas) from the fact of the extinction of the Groningen field (Netherlands) by the end of 2029. Also finalising a back-up scenario if an accelerated conversion would be made necessary by a more rapid judgement than what was intended from operating the Groningen field.

In addition, Article L. 141-10 of the Energy Code as amended by the LTECV provides that "*natural gas transport network operators set out a forecast multiannual balance at least every two years under the control of the State. This balance considers developments of consumption, transport capacity, distribution, storage, regasification, renewable production and exchanges with the foreign gas networks.*"

GRTgaz and TIGF have worked in coordination with GRDF and the local DNOs to establish the first forecast multi-year balance up to 2035. The hypotheses used in the preparation of the document have been presented to the actors of the market, in the framework of a concertation meeting on 23 June 2016.

This document bearing the title "Prospects for natural and renewable gas: forecast multiannual balance for 2016⁵" has been published by the TSOs and DNOs on 27 October 2016. It presents different scenarios of the growth of the consumption of natural gas.

2.2 Construction of the GRTgaz ten-year plan

The GRTgaz ten-year plan:

- presents several scenarios of demand made by GRTgaz, taking the objectives of the PPE and the LTECV into account: GRTgaz retains three trajectories, leading over the period 2012-2023 to a decrease in the consumption of natural gas between 3.7% and 19.5% (excluding consumption of biomethane);
- identifies the main transport infrastructure of gas to build or strengthen over the period 2016-2025. It lists the decided investments or those under study, and presents a forecast timetable associated with all these projects:

⁴ [Multi-annual energy programming, adopted by Decree No. 2016-1442 of 27th October 2016 relating to multiannual energy programming.](#)

⁵ [Forecast multiannual balance](#)

- completion of the Val de Saône and Gascogne-Midi projects, necessary for the creation of a single market place in France at the end of 2018 (projects decided upon and approved⁶);
 - creation of reverse capacities in Oltingue (2016), allowing the 100 to 200 GWh/day entry capacities at the France-Switzerland interconnection (project decided upon and approved⁷);
 - completion of a power to gas pilot in 2018 (project decided upon and approved⁸);
 - conversion of the area served by L gas, to anticipate the depletion of the Groningen field (project decided upon);
 - creation of a countdown to Germany with a decentralised odorisation (not decided upon, pilot in progress on the decentralised odorisation technique);
- presents the forecasts of gas injection of renewable origin in the transport network for the next ten years: the projects in the portfolio will achieve 1 TWh of biomethane injected in 2020. Beyond this date, the reference scenario for GRTgaz provides for reaching 8 TWh per year in 2023.

GRTgaz has consulted with the operators of LNG terminals and underground storage during the construction phase of its plan. Also, on 23 June 2016, GRTgaz, TIGF and distribution network operators organised a consultation meeting with all the contract players, in accordance with the request made by CRE in its deliberations of 17 December 2015 relating to the review of the ten-year plans of GRTgaz and TIGF and approving their investment programs, in which it asked the TSOs to "*regularly submit the progress of the work on the development of [their] ten-year plan in gas consultation, without waiting for its finalisation*". GRTgaz also presented its draft ten-year plan in the framework of the Gas Consultation on 25 October 2016. Finally, GRTgaz published its ten-year plan on its website on 21 November 2016⁹.

2.3 Summary of the public consultation

CRE organised a public consultation from 23 November to 2 December 2016¹⁰. Three answers were received, from a shipper, an association and an infrastructure operator. The non-confidential answers are published on CRE's website.

2.3.1 Appreciation of the consultation procedures

An association expresses its satisfaction with the current consultation procedures. The coordination between the TSOs and DNOs for the production of a forecast common balance is welcomed.

However, a shipper considers that the presentation of the ten-year plan in the contract remains too late, which does not allow integrating all the remarks of stakeholders in the final version. Also, this shipper regrets that the next TYNDP of ENTSOG is based on the forecasts of consumption of the previous French TSOs development plan.

2.3.2 Hypothesis of the development of the consumption within the scope of the ten-year plans

The contributors to the consultation are watching the uncertain environment in which the exercise of forecasting the consumption is conducted, which they consider as particularly unstable. They highlight the uncertainties related to the regulation, especially with the objectives for reducing consumption. They also mention the high sensitivity of the consumption of gas with the development of the gas power plant sector and the uncertainties related to the dynamics of the global gas market (abundance of LNG, the currently low market price).

A shipper considers that the scenarios of GRTgaz are relevant and more realistic than in the previous development plans. It considers, however, that the consequences of each scenario in peak demand period would deserve to be looked into more deeply. An infrastructure operator considers that the forecasts of gas consumption for electricity production are conservative, because they are limited to the 2016 level.

2.3.3 Hypotheses of development of injections of gas from renewable sources in the transport network

⁶ See in particular the deliberation of the CRE of 7th May 2014 on the guidelines for the creation of a place of the single market in France in 2018 and the deliberation of the CRE of 30th October 2014 on the decision on the of incentive regulation mechanism of the Val de Saône and Gascogne/Midi projects.

⁷ See the deliberation of the CRE of 17th December 2016 relating to the examination of the ten-year development plan and approving the investment programme for 2015 of GRTgaz.

⁸ See the deliberation of the CRE of 22nd July 2015 relating to the achieved results of the 2014 investment plan and approving the modified investment programme for 2015 of GRTgaz.

⁹ http://www.grtgaz.com/fileadmin/plaquettes/fr/2016/Plan_decennal_2016-2025.pdf

¹⁰ [Public consultation of 23rd November 2016 relating to the ten-year plans for the development of GRTgaz and TIGF](#)

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A shipper shares the analysis of the TSOs and DSOs, who consider that the development of gas production of renewable origin and the achievement of the objectives established by the LTECV depend heavily on the support provisions which will be implemented.

Also, a contributor questioned the relevance of the development of infrastructures allowing reverse flows, seeing their high cost and encourages the study of the overall economy of injection of gas of renewable origin projects.

2.3.4 Development of capacities within the ten-year plans

2.3.4.1 Projects decided by the TSO

The contributors made few remarks concerning the projects decided upon. Their main remarks relate to:

- the creation of entry capacity in Oltingue in 2018: a shipper requests clarifying the link between the level of firmness of new capacities and those of Taisnières and Obergailbach;
- the *Power to Gas* project: a contributor, if he has no objection regarding the financing of the pilot project, is unfavourable to the financing by the transmission tariff of other projects of this nature.

2.3.4.2 Undecided projects

With regard to the interconnection between France and Spain, the three contributors to the public consultation consider that existing capacities are enough, and that a development of new capacities would not match need expressed by the market. They are unfavourable to these projects, both in their extensive (MidCat) and partial version (STEP), whose costs would weigh on the users of French networks without making a profit. A shipper stresses in particular that the STEP project only provides for interruptible capacities, which would be, after his analyses, interrupted in situations where it may be advantageous for the market to use them (the South-North flows in a context of abundant LNG would not be possible in the case of the high send out of the Fos terminal). A contributor recalls that in all the adopted scenarios, the demand for natural gas from now to 2035 is declining, which justifies a certain caution on the investments of the TSOs.

A shipper is surprised at the low level of detail contained in the plan of GRTgaz with regard to the programme of conversion from L zone, and would have liked a complete presentation. He also notes that big reductions in entry capacity of H gas and peak capacities of the conversion of H gas to L gas planned in 2021 and 2025 increase the specific risk of supply to the area. Finally, he wants a detailed analysis of the conditions of interruptibility of the conversion capacities of L gas to H gas from now to 2025. Another contributor emphasises the costs that will be at the expense of the storage operators at the occasion of the conversion to H gas, insofar as the Gournay storage is the only source of modulation for L zone outside the PIR. This contributor wants the establishment of a compensation mechanism for the storage operator costs.

Concerning the projects of reverse capacities to Germany and decentralisation of the odourisation, contributors share the preliminary analysis of CRE and consider that the development of new capacities may be implemented only in the framework of a cross-border costs allocation. An actor stresses that the decentralised odourisation is costly for the transmission network, without benefit to the French consumer, and that it would also entail very significant costs for the storage of natural gas.

In addition, a contributor asks more justification of the need for strengthening the AGU station on the Lussagnet storage site.

Finally, a shipper considers that the Eridan project is only necessary in the framework of the hypothetical developments of capacities and asks CRE to act on this point and ask for its removal from the list of Projects of Common Interest (PCI).

2.4 Analysis of the CRE

2.4.1 Consultation procedures

CRE notes that GRTgaz, in accordance with the request made in its deliberation of 17 December 2015, presented its guidelines during a consultation organized at the end of June 2016. It also welcomes the joint organization of this event by the two TSOs and DNOs.

It encourages GRTgaz to submit as soon as possible its consultation project, to allow sufficient time for the stakeholders to appreciate the details, and formulate their remarks as accurately as possible.

2.4.2 Hypothesis of the development of the consumption within the scope of the ten-year plans

CRE notes that GRTgaz has adopted the same development consumption trajectories in its ten-year plan only in the forecast balance developed with TIGF and DNOs:

- scenario A (central trajectory): decline in the consumption by 16% compared with 2015, by keeping the current trend in the development of new uses as well as in terms of the effects of measures in favour of energy efficiency. The scenario has two variants, "high" and "low", in function of the trajectory adopted for the production of electricity of the CCGC and cogeneration;
- scenario B (high trajectory): decline in the consumption by 2% compared with 2015, with a hypothesis of economic recovery and a strong penetration of gas in real estate and new uses;
- scenario C (low trajectory): decline in consumption by 27% compared with 2015, with low growth and regulations unfavourable to natural gas.

CRE observes that the scenarios presented by GRTgaz aim to consider the uncertainties on the development of gas consumption: production of electricity from gas, industrial consumption, new uses of gas, energy efficiency measures.

Over the period 2012-2023, these scenarios lead to a decline in the consumption of gas from 3.7% to 19.5% at the GRTgaz perimeter (excluding consumption of biomethane). With the exception of Scenario B, particularly proactive, the trajectories adopted by GRTgaz are consistent with the objective of reducing consumption from 9 to 16% by 2023 as intended by the PPE.

Finally, CRE notes that the GRTgaz hypothesis for electricity production from gas are consistent with the forecast balance of RTE.

2.4.3 Hypotheses of development of injections of gas from renewable sources in the transport network

2.4.3.1 Biomethane

GRTgaz has signed six connection and injection contracts with biomethane producers, four of which should be put into service in 2017. At the end of September 2016, a single site of injection was directly connected to the transport network of GRTgaz (methanisation plant of Chagny), and 24 biomethane injection sites were in service in France.

GRTgaz has developed its forecast for the period 2016-2019 by considering the injection projects already in the portfolio. Beyond this period, GRTgaz has built two trajectories based on the Trend scenarios (scenario A) and Proactive (scenario B) of the ADEME (corresponding respectively with 12 TWh and 30 TWh injected into French networks by 2030), as well as a third trajectory, more pessimistic (scenario C).

CRE observes that among the three scenarios for the injection of biomethane presented by GRTgaz in its ten-year plan, only scenarios A and B allow meeting the objective of 8 TWh injected in 2023 provided for by the PPE. Moreover, scenario B, more proactive, is the only one which can achieve the objective of 10% of renewable gas in the national consumption up to 2030 which figures in the LTECV.

2.4.3.2 Power to gas

CRE observes that GRTgaz emphasises the *Power to gas* as the axis of development within the ten-year plans. GRTgaz anticipates a massive development of intermittent energies up to 2050, which could represent a surplus of electricity production of about 50 TWh per year. In this perspective, GRTgaz and TIGF consider that the *Power to gas* technology could represent a park of 100 *Power to gas* installations in 2030, able to ensure the management of a surplus of electricity production of 2.5 to 3 TWh_e per year.

CRE welcomes the involvement of the TSOs in the problem of intermittent renewable energy sources, and encourages synergies between the gas and electricity networks, which can be a source of savings for their users. However, it notes that the hypotheses of energy storage contained in the GRTgaz plan are not taken into account in the decennial schema for the development of RTE. Considering the possible synergies, and the involvement of RTE in the *Power to gas* sector by its financial participation in the Jupiter 1000 project, CRE asks GRTgaz to share these hypotheses with RTE during the next annual yearly forecast.

2.4.4 Development of capacities within the ten-year plans

2.4.4.1 Developments of capacities on the GRTgaz network

CRE observes that, in accordance with its deliberation of 17 December 2015, GRTgaz has indicated for each project whether it was decided or not decided.

CRE recalls that over the last ten years, GRTgaz and TIGF have significantly developed their networks, by the creation of new interconnection capacities with the neighbouring countries, and the development of input

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capacities from LNG terminals and the strengthening of the national network to remove congestion and reduce the number of balancing zones. These developments have enabled consumers to benefit from diversified sources of supply and have strengthened the integration of France within the European gas market. In view of the level of transport tariffs, the existing interconnection capacities, national objectives and European prospects for reducing the consumption of gas, it is appropriate for the TSOs to limit their investments, in the years to come, to the projects for which it has been demonstrated that they generate a real benefit for the community.

Concerning the study project for creating 100 GWh/day of reverse capacities to Germany at the point of interconnection between Obergailbach and the decentralised odourisation, CRE considers that, if the demand of market players is insufficient, and considering the absence of profits for France in terms of security of supply, this project could not be implemented in the framework of a cross-border costs allocation as laid down by the European Regulation n° 347/2013¹¹ (if the benefits in terms of security of supply for the benefit of other Member States were identified and, where appropriate with European subsidies).

With regard to the Midcat project (in its full version or in its partial version), CRE has stressed in its Report 2016 on the interconnections¹² that, considering the capacity of the French system to face crises of supply, additional interconnection capacities with Spain (*a fortiori* if they are interruptible) are not necessary to ensure security of supply from France. CRE also considers that the current interconnection capacities allow meeting the needs of the market, as evidenced by the existence of unsubscribed capacities in both directions, as well as the non-use of a significant share of the subscribed capacity, in particular in the Spain to France direction. Accordingly, unless it is to make consumers assume unjustified expenditure, the developments of interconnection capacities between France and Spain could be considered only in the context of a cross-border allocation of costs, as laid down by the European Regulation no. 347/2013 and, where appropriate with European subsidies.

Finally, as regards the conversion project of L zone into H gas, CRE, so as not to delay the project, approves the investment expenditure related to forecast charges of the pilot for 2017. It will lead in 2017 a technico-economic analysis of the conversion plan proposed by GRTgaz and the adjacent operators.

2.4.4.2 Developments of the network related to biomethane

In accordance with the deliberation of CRE of 17 December 2015, GRTgaz and TIGF have studied the consequences of the development of the biomethane chain on the needs for investment of transport operators. The TSOs anticipate no decline in investment linked with the development of injections of biomethane and observe the possible emergence of new investment needs.

In particular, the TSOs anticipate the need to invest in solutions allowing the reverse of gas flows from the distribution network to the regional transmission network, or the regional transport network towards the main transport network, to feed back the surplus production in the cases where the injection would be more than local consumption.

CRE finds that a preliminary study of GRTgaz assesses the need for investment throughout the plan to about €100 M and stresses that the distribution of the financing of these installations between the TSOs, the DNOs and the project carriers is not stopped at this stage.

CRE furthermore observes that GRTgaz has not evaluated, in its development plan, the costs of development on the transmission networks that could be avoided through the injection of gas of renewable origin. It asks GRTgaz to deepen its analysis on this point, to provide an estimate in its next plan.

2.4.5 Consistency of the ten-year plan of GRTgaz with that of ENTSOG

The development plan (TYNDP) 2015¹³ of ENTSOG was published on 13 April 2015, and submitted to the ACER on 23 July 2015. The ACER published its opinion on the document on 13 October 2015¹⁴.

ENTSOG is currently working on the development of its TYNDP 2017, which it will submit for public consultation in December 2016.

None of the contributors in the public consultation of CRE has reported any inconsistency between the ten-year plan of GRTgaz and the ENTSOG development plan with respect to the projects for the development of networks. With regard to the forecasts of consumption, a contributor regrets the existing gap between the financial years.

2.4.5.1 Hypotheses on the development of the consumption of natural gas in Europe

ENTSOG has not published any new TYNDP compared with what was examined in 2015. In its deliberation of 17 December 2015, CRE had stressed that GRTgaz had provided ENTSOG, in the framework of the work of TYNDP

¹¹ Regulation (EU) No. 347/2013 of the European Parliament and the Council of 17th April 2013 concerning guidelines for Trans-European energy infrastructures

¹² [The electrical and gas interconnections in France - A tool at the service of the construction of an integrated European market](#)

¹³ [The 2015 Development Plan of the ENTSOG](#)

¹⁴ [Opinion of the ACER on the 2015 Development Plan of the ENTSOG](#)

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2015, with two scenarios of annual consumption forecasts, reflecting the favourable and unfavourable economic and financial conditions.

In its work on the TYNDP 2017 project, ENTSOG envisages four scenarios¹⁵, corresponding with differentiated levels of growth and penetration of gas. ENTSOG presented these scenarios in May and July 2016:

- These scenarios provide, over the period 2017-2035 an increase of European consumption in the "Vision 3" scenario and a decline of 2% to 12% in the other scenarios;
- the demand for gas in the production of electricity increases in three scenarios out of four.

In accordance with the deliberation of CRE of 15th December 2015, the scenarios presented by the TSOs in their ten-year plans have been sent to ENTSOG in the framework of the work of the 2017 Plan. The TYNDP will be submitted for consultation in December 2016.

2.4.5.2 Hypotheses on the development of the injection of gas of renewable origin

CRE notes that the data displayed by ENTSOG for the TYNDP 2017 are derived from ten-year plans 2015-2024 of the TSOs. The plans of ENTSOG and the TSOs highlight an important development of the sector in biomethane in accordance, for France, with the dynamics introduced by the law on energy transition.

2.4.5.3 Projects for development of capacities

As regards the characteristics of the projects for the development of capacities, the noted differences concern implementation dates and can be explained by the schedule developments of projects from the launch of the work of the most recent plan of ENTSOG.

CRE considers that the ten-year plan of GRTgaz is consistent with the development plan of ENTSOG.

3. THE INVESTMENT PROGRAMME OF GRTGAZ

GRTgaz has sent CRE in September 2016 its investment programme for 2017 as well as its revised programme for 2016.

The investment costs of GRTgaz are broken down into seven major purposes: debottlenecking of the main network, safety/obsolescence, connections, Public service obligations (routing and quality of the gas), environment, information systems, support.

3.1 Observations of the CRE on the balance of the implementation of the 2015 investment programme

The investment programme as amended for 2015 and approved by CRE in its deliberation of 22 July 2015 amounted to € 671 M. The implementation review of the investment programme of GRTgaz for 2015 amounts to €624 M, a decrease of 7% compared with the approved programme.

This decline is partly a result of the decrease in safety investments and obsolescence (-€18 M in relation to the approved programme), mainly due to the postponement of several projects (Valensole, Grand Quevilly, Etrez, etc.) and the decline of some of the needs related to the obsolescence of the PLCs.

The debottlenecking investments are also down by €10 M against the approved programme, due, on the one hand, to the postponement of expenditures related to the Val de Saône project (without consequence on the forecast commissioning date) and to the Pitgam interconnection, and, on the other hand, the decrease in the cost of completing the Arc de Dierrey project.

The investments in information systems are up slightly compared to the approved programme (+€3 M), because of the occurrence of new needs of the commercial information system of GRTgaz.

The investment costs related to the Environment purposes, Public service obligations and Connection, are in total decline of €11 M against the approved program, mainly due to schedule shifts (delay of the Beynes and Landivisiau projects).

Finally, the real estate investments are down by €7 M against the approved amount, due, on the one hand, to the postponement of projects in 2016, and on the other hand, to the decrease in the cost of some real estate projects.

CRE has verified that the differences between the expenditures of investments made and the investment programme approved for 2015 are predominantly related to savings on purchases of materials and work of

¹⁵ TYNDP 2017 scenarios

installing or to carry-overs of work and that they are without consequence on the schedule and the successful completion of projects.

3.2 Observations of CRE on the state of fulfilment of the 2016 investment programme

The investment programme approved for 2016 by CRE in its deliberation of 17 December 2015 amounted to €667 M. GRTgaz presented the implementation review of this programme at the end of November 2016, which shows a decrease of €84 M, the new estimated budget of investments for 2016 amounting to €583 M.

This decline is due largely to the debottlenecking expenditure of €70 M lower than the approved budget, due, on the one hand, to the decrease in the cost on completion of the Val de Saône project and the revision of the chronicle of project expenditures and, on the other hand, the postponement of finishing the Arc de Dierrey project in 2017.

The investments for connection and public service obligations are also down against the approved program (-€18 M) from the fact of the delay of several projects (Landivisiau, Carling, Tersanne, Ile-de-France tramways).

The investments related to the environment purpose are up by €4 M against the approved program, due to the postponement of the expenditure initially planned in 2015 for the Beynes project and rising costs on completion of this project.

The other expenses of GRTgaz investments are in line with the approved programme.

CRE has verified that the differences between the revised programme and the investment programme approved for 2016 are predominantly related to savings on purchases of materials and work of installing or to carry-overs of work and that they are without consequence on the schedule and the overall cost of the projects.

3.3 Main elements of the GRTgaz investment programme for 2017

The investment programme presented by GRTgaz for 2017 amounts to €640.3 M, an increase of 9.9% compared to the revised budget for 2016 of €583 M. In relation to the three-year plan sent to CRE at the end of 2015, investment spending planned for 2017 are down 12%, due to a decrease, on the one hand, of the estimated expenditure of the debottlenecking of the main network (particularly linked to the decrease in the cost on completion of the Val de Saône project) and, on the other hand, investments of connection and public service obligations, in particular because of the delay by the gas plant in Landivisiau.

The amount asked for by GRTgaz for 2017 considers the first investment expenditure of the GRTgaz 2020 company project (€43 M), which aims to involve GRTgaz in the energy transition and adapt its activities to the trends in the energy market in future years.

The breakdown by purpose of the investment for 2017 is the following:

| Purpose | 2017 programme (M€) |
|---|---------------------|
| Fluidisation of the main network | 312 |
| Safety, obsolescence | 171 |
| Support | 48 |
| Connections | 37 |
| Public service obligations (routing, quality) | 36 |
| Information systems | 30 |
| Environment | 6 |
| TOTAL | 640 |

Table 1: breakdown by purpose of the request for GRTgaz for 2017

Also, the budget of the investment program for 2017 corresponds with the amount of expenditure planned for 2017 by the tariff deliberation ATRT6¹⁶.

3.3.1 Fluidisation investments of the main network

Expenditure relating to projects of debottlenecking of the main network amounted to €312 M in the GRTgaz investment programme.

¹⁶ Deliberation of the CRE of 17th November 2016 on the draft decision rate for using the natural gas transport networks of GRTgaz and TIGF
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The vast majority of these expenditures result from infrastructure development projects necessary for the creation of the single market place: the Val de Saône project (€269 M in 2017) and the Gascogne-Midi project (€8 M in 2017, for the GRTgaz part).

GRTgaz also anticipates forecast expenditure especially related to the leftovers of the North-east network project (Arc de Dierrey), to the PIR Olingue capacity creation project (€11 M for the creation of reverse capacities) and the leftovers related to the Pitgam interconnection (creation of 270 GWh/day of capacity from France to Belgium).

3.3.2 Expenditures related to regulatory obligations and connections

Most of the expenditure related to the regulatory obligations focuses on the safety and obsolescence of the networks. In 2017, they represent €171 M in the forecast programme of GRTgaz. These amounts are mainly related to the renewal of installations on the network, especially pipes.

The expenses related to the public service obligations of GRTgaz (continuity of routing and quality of the gas) are significantly up against the revised programme 2016 (+€22 M). This increase is justified mainly by the pilot project for the conversion of L zone to H gas, the strengthening of the Macon antenna and projects of metering upgrading. The forecast amounts are however lower than those reported in the triennial plan 2016-2018, due to the deferral of investments in the strengthening of the Brittany network and metering investments.

The connection investments are up against 2016, and are related to forecast connections of biomethane injection projects in the natural gas transport network and stations of compressed natural gas (CNG) for vehicles directly connected to it, to the *Power to gas* Jupiter 1000 pilot, but also the first expected benefits from GRTgaz's programme for the promotion of the uses of natural gas. The investment costs related to benefits for third parties, which represent €20 M in the 2017 programme, are up by 35% compared to 2016, due to the Canal Seine Nord project¹⁷, which will lead GRTgaz to move some of its works, and to the Tersanne project.

3.3.3 Other investment expenses

The forecast investments in the industrial information systems (Supply and Industrial System) and in support functions (information systems of support functions, real estate, vehicles) of GRTgaz are estimated by the TSOs at approximately €78 M. They take particular account of expenditure on the evolution of the information system to prepare for the creation of the single market place and the implementation of real time metering.

3.4 Analysis of CRE on the GRTgaz investment programme for 2017

3.4.1 Debottlenecking investments of the main network

CRE observes that the last stretch of the Arc de Dierrey (between Cuvilly and Voisines) was commissioned in 2016, in accordance with the project schedule. The cost on completion of the Arc de Dierrey is of €773 M, slightly higher than the target budget of €768 M. The cost of completion in November 2016 of the entire connection project of the terminal of Dunkirk and strengthening the network amounts to €1,119 M, down by 6% compared with the target budget of €1,185 M fixed by the deliberation of 22 December 2011¹⁸.

CRE notes that GRTgaz and TIGF provide a commissioning of the Val de Saône and Gascogne-Midi projects on 1 November 2018, in coherence with the forecast schedule for the establishment of the single market place adopted by CRE in its deliberations of 7 May 2014 and 30 October 2014¹⁹. CRE also notes that the cost on completion of the Val de Saône project, which comes to €692 M at the end of 2016, is down compared with the budget of €727 M²⁰ decided by GRTgaz in September 2015, and in relation to the budget of €744 M originally presented by GRTgaz. However, it remains higher than the target budget of €650 M adopted by CRE in its deliberation of 30 October 2014. The Gascogne-Midi project budget (GRTgaz part) remains in line with the target budget (€22 M).

3.4.2 Expenditures related to regulatory obligations and connections

CRE observes the decline of renewal expenditures on certain works.

¹⁷ The Seine North Europe canal will link the Oise to the Dunkirk-Escaut canal, from Compiègne to Aubencheul-au-Bac, near Cambrai (about 100 km).

¹⁸ [Deliberation of the CRE of 22nd December 2011 regarding the decision on the conditions of connection of the LNG terminal of Dunkirk to the network of GRTgaz](#)

¹⁹ [Deliberation of the CRE of 7th May 2014 on the guidelines for the creation of a place of the single market in France in 2018](#) et [Deliberation of the CRE of 30th October 2014 on the decision on the of incentive regulation mechanism of the Val de Saône and Gascogne/Midi projects](#)

²⁰ GRTgaz has decided the project, in its investment committee, for an amount of €727 M. In 2014, GRTgaz foresaw a budget of €744 M: this amount has been audited by the CRE, which has retained a target budget of €650 M.

Translated from the French: only the original in French is authentic

For the particular case of the project for the conversion of L zone to H gas, CRE has limited its review to the forecast charges of the pilot for 2017, so as not to cause delay in the project. The decision to approve this amount, which represents €9 M in 2017 on an estimated budget of €42 M for the pilot phase, does not call into question the approval of the project in its whole: this last will be studied at the end of the technico-economical analysis of the conversion plan proposed by GRTgaz and the adjacent operators, which will be conducted by CRE in 2017.

CRE notes that the developments of the investments of connection and services for third parties are consistent with the delays by some connection projects and with the major projects for the development of the territory anticipated for 2017.

4. DECISION OF CRE

4.1 Examination of the GRTgaz ten-year development plan

CRE observes that the ten-year plan of GRTgaz correctly reflects the needs expressed by the stakeholders, and is consistent with the development plan of ENTSOG.

Concerning the forecasts of renewable origin gas injection into the natural gas networks, CRE asks GRTgaz:

- to study the decreases in investment costs of in the development of networks which could result from these injections;
- to share with RTE its hypotheses of energy storage by means of the assets of the *Power to gas* sector during the next forecast financial year.

4.2 Decision concerning the investment programme for 2015

CRE notes that the implementation of the investment programme for 2015 is consistent with the approved programme.

| Category | Programme approved 2015 | Programme revised 2015 | Programme completed 2015 |
|---|-------------------------|------------------------|--------------------------|
| Fluidisation of the main network | 367 | 326 | 315 |
| Safety, obsolescence | 199 | 207 | 189 |
| Support | 18 | 23 | 16 |
| Connections | 29 | 24 | 21 |
| Public service obligations (routing, quality) | 25 | 22 | 18 |
| Information systems | 43 | 39 | 42 |
| Environment | 19 | 31 | 23 |
| TOTAL | 700 | 671 | 624 |

Table 2: breakdown by purpose of approved programmes, revised and completed by GRTgaz for 2015

4.3 Decision concerning the investment programme as amended for 2016

CRE notes that the state of implementation of the GRTgaz investment programme is consistent with the approved programme. It notes that the investment programme was reassessed by GRTgaz for 2016 and approves this amendment.



DELIBERATION

15th December 2016

Accordingly, the budget approved by CRE of GRTgaz expenditures for 2016 amounts to €583 M, distributed as follows:

| Category | Programme approved 2016 | Programme revised 2016 |
|---|-------------------------|------------------------|
| Fluidisation of the main network | 343 | 273 |
| Safety, obsolescence | 197 | 196 |
| Support | 23 | 31 |
| Connections | 33 | 23 |
| Public service obligations (routing, quality) | 21 | 14 |
| Information systems | 38 | 29 |
| Environment | 13 | 18 |
| TOTAL | 667 | 583 |

Table 3: breakdown by purpose of approved programmes approved and revised by GRTgaz for 2016

4.4 Decision concerning the investment programme for 2017

CRE approves the investment programme for 2017 which was submitted to it by GRTgaz. The breakdown by purpose of approved investments is the following:

| Purpose | 2017 programme (M€) |
|---|---------------------|
| Fluidisation of the main network | 312 |
| Safety, obsolescence | 171 |
| Support | 48 |
| Connections | 37 |
| Public service obligations (routing, quality) | 36 |
| Information systems | 30 |
| Environment | 6 |
| TOTAL | 640 |

The approval of the investment programme does not call into question the tariff treatment of these expenditures. In particular, it does not change the trajectory of "off-network" CCN adopted in the ATRT6 tariff decision.

Any modification of the investment programme will have to be submitted to CRE for approval.

CRE asks GRTgaz to submit, before July 2017, a balance of intermediate execution of this decision, including a point of progress of the main projects committed.

Paris, 15th December 2016.

For the Energy Regulatory Commission,
The Chairman,

Philippe de LADOUCKETTE

5. ANNEXES

5.1 Project put in service in 2016

| Project | Date of the deliberation | Initial budget | Cost on completion | Date of commissioning |
|----------------|--------------------------|----------------|--------------------|-----------------------|
| Arc de Dierrey | 22nd December 2011 | €768 M | €773 M | 2016 |

5.2 Main development projects of the network commissioned from 2017

| Project | Date of the deliberation | Initial budget | Cost on completion | Date of commissioning |
|---|--------------------------|------------------------------------|--------------------|-----------------------|
| Val de Saône | 30th October 2014 | €727 M* (target budget: €650 M) | €692 M | 2018 |
| Gascogne-Midi | 7th May 2014 | €22 M (target budget: €21 M) | €22 M | 2018 |
| Creation of 100 GWh/day up to 200 GWh/day of input capacity in Oltingue | 17th December 2014 | €12 M | €17 M | 2018 |
| Project for the conversion of area B to gas H - Pilot Part | to come | €42 M | €42 M | 2018-2020 |

* GRTgaz has decided the project, in its investment committee, for an amount of €727 M. In 2014, GRTgaz foresaw a budget of €744 M: this amount has been audited by the CRE, which has retained a target budget of €650 M.

