

Unbundling of transmission activities and the ITO model



European regulatory evolution in the last 20 years

Before 1998

1998 1st directive 2003 2nd directive 2009 3rd directive

- Gaz de France, a fully integrated company with two main divisions
 - One division in charge of the operation of the high pressure grid, including purchase, storage, transmission and sale of gas to industrial clients and distributors
 - One division in charge of operation of the low pressure grid, including distribution and sale of gas to final customers

- ☐ Gradual market opening to competition
- ☐ Unbundling of accounts in order to prevent cross subsidies and distortion of competition
- ☐ Third party access to distribution and transmission networks

- □ Acceleration of market opening (complete on 1st July 2007)
- Legal unbundling in order to ensure independence of transmission activities from production and supply activities
- No communication of commercially sensitive information between TSO and VIU

- Reinforcement of regional cooperation
- ☐ European

 harmonization of rules

 for network access
- ☐ Ten year network development plans
- ☐ Reinforcement of the powers of regulators
- Reinforcement of TSO independence





Unbundling of Transmission Activities

Third Directive foresees three different options to ensure full independence of transmission activities and fair competition

OU: Ownership Unbundling

Supplier Producer

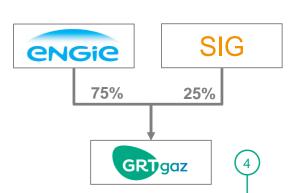


ISO: Independent System Operator





GRTgaz is certified as in ITO. This option allows companies to remain vertically integrated but sets up strong constraints to ensure effective independence of the TSO from network users, notably from incumbents.



ITO model – GRTgaz' experience

ITO model sets up strong constraints to ensure effective independence of the TSO

Corporate governance :

- The minority of the board members (half 1) must be independent from the VIU
- The board is not allowed to decide on day-to-day matters or on infrastructure development projects
- Nomination or dismissal of the CEO must be approved by the NRA
- The main executives must comply with special independence rules
- The directors and employees of the TSO may not own any interests, hold responsibilities, or directly or indirectly receive any financial advantage from the VIU

> Shareholding:

- Holding shares in another TSO certified as OU or ISO is prohibited
- Holding shares of a VIU's subsidiary involved in production or supply is prohibited

Commercial & Financial :

- Principle: rendering of services to and from any other parts of the VIU is prohibited → No common services
- Exception: TSO may render services to the VIU as long as :
 - provision of those services does not discriminate between system users, is available to all system users on the same terms and conditions, and does not restrict, distort or prevent competition in production or supply
 - the terms and conditions of the provision of those services are approved by the NRA
- Commercial & financial relations between the VIU and the TSO (including loans) must comply with market conditions and have to be approved by the NRA
- No common staff and no common communication

Compliance :

 TSO must set up a compliance programme which is monitored by a "Compliance Officer" whose nomination is subject to the NRA's validation

Unbundling and investments





Considerable investments by GRTgaz under ITO model (1/2)

The new regulatory framework has been a strong driver for market integration

Regulatory framework for investments improved by the 3rd package:

- National TYNDP by TSO (first 3 years are binding) and European TYNDP by ENTSOG, ensuring coordination in the development of transmission capacities
- Specific support via infrastructure package: PCI status, CEF funds

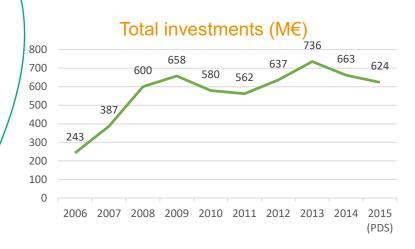
ITO model ensures that TSO makes investments requested by the market and approved by the NRA:

- No possibility for the VIU to influence the preparation of the TSO's TYNDP
- Financial resources for new investments have to be made available by the VIU to the TSO

Market opening triggered significant investments in new capacities enabling shippers to arbitrate between different producers.

Regardless of the unbundling model, investments have to be based on market demand (open seasons) or on security of supply reasons, and properly remunerated.

Considerable investments by GRTgaz under ITO model (2/2) The new regulatory framework has been a strong driver for market integration



Investments for the development of interconnection capacities

Entry capacities:

0 2009 : 2 740 GWh/d

2016: 3 345 GWh/d (+22%)

Exit capacities:

2009: 548 GWh/d

2016: 888 GWh/d (+62%)

Investments for the merger of zones, decided by the NRA after public consultations:

















Today, there is enough transmission capacity in France and shippers are becoming more and more reluctant to book capacities on a long-term basis.

The upcoming 4th directive should primarily focus on fostering green gases and enabling TSOs to play a key role in the energy transition. GRTgaz is already working to increase injection of biomethane, adapt its network for future hydrogen injections, enable sector coupling via Power to Gas...



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List of acronyms

- TSO: transmission system operator
- VIU: vertically integrated undertaking
- NRA: national regulatory authority
- TYNDP: ten year network development plan
- PCI: project of common interest
- CEF: connecting Europe facility