

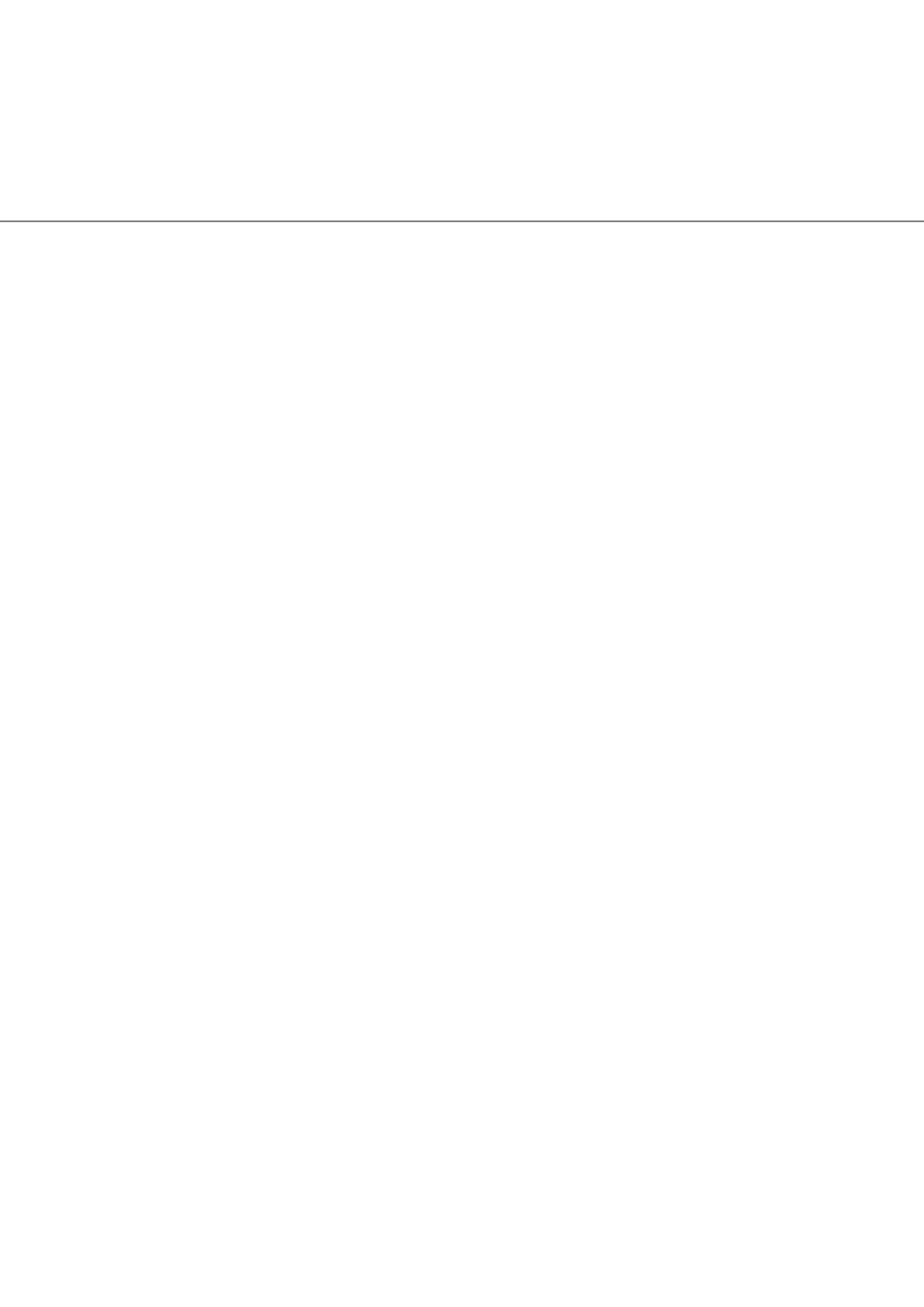
gas transport services

Services, balancing, tariffs
july 2009

Services included

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1. Gas Transport Services

Gas Transport Services B.V. (GTS) is the operator of the national gas transmission grid in the Netherlands. GTS's mission is: the autonomous provision of gas transport services to promote a well-functioning liberalised gas market. The company performs its activities fully independently, as required by law. The N.V. Nederlandse Gasunie, sole shareholder of GTS, is the owner of the transmission grid and provides asset management and maintenance of the grid.

GTS is responsible for the management, the operation and the development of the national transmission grid and performs its activities on an economic basis. GTS ensures that there is sufficient transport capacity, it balances the grid and establishes connections to other grids and networks. GTS also has special responsibilities for public tasks regarding the small fields policy and security of supply. In addition to these tasks and ensuing from the provisions of the Gas Act, GTS has a provisional task with regard to providing flexibility services.

This brochure

This brochure is intended for all GTS business relations and other parties specifically interested in gas transport. It provides a survey of the services offered by GTS for 2009 and also explains the balancing regime. The provisions of the official documents (Gas Act, decisions made by the NMa (the Dutch Competition Authority) and contract documentation) shall be decisive in the determination of the exact rights and obligations.

More –and more detailed– information on these subjects can be found on the GTS website, www.gastransportservices.nl. This site also lists transport conditions and tariffs, and contains all documents relating to these matters. GTS will organise information meetings for its customers several times a year.

2. Market and market access

2.1. Regulated access

A liberalised gas market means, for instance, that all parties must have non-discriminating access to the national gas transmission grid and the distribution grids of the local distribution companies (LDCs). Since July 2004, all end users in the Netherlands have been free to choose their own gas provider. In the Netherlands a system of regulated access applies. This means that an independent supervisor establishes conditions and tariffs, and tests them against the provisions of the Gas Act.

In the Netherlands this responsibility has been assigned to the NMa (Dutch Competition Authority), Office of Energy Regulation (Energiekamer). The NMa is an autonomous government body entrusted amongst other things with the regulation of the gas and electricity sectors in the Netherlands.

Based on the provisions of the Gas Act, the main conditions for access to the gas transport grids, including the GTS grid, have been drawn up in the TarievenCode and the Gasvoorwaarden (Tariff Code and Gas Conditions). The contents of these documents were established on the proposals that were submitted for that purpose by the Joint Grid Operators, the combination of the local distribution companies and the national transmission system operator (GTS). Next to and in addition to the conditions established by the NMa, contracts between market parties and GTS also apply.

In addition to the Tariff Code and the Gas Conditions, GTS has elaborated the conditions for the national gas transmission grid in the Transmission Service Conditions (TSC). Furthermore, GTS offers services that are not included in its legal tasks. These non-regulated services and their corresponding conditions have also been drawn up in the TSC. The TSC, a document having the status of contractual general provisions, is part of the bilateral contract between GTS and its customers.

Further conditions and elaborations involving the system connection between the national gas transmission grid and the end user of the gas, a local distribution company (LDC), or a foreign grid company (neighbouring network operator) are also drawn up in a bilateral contract. This will be a Connection Agreement in case of an end user or a local distribution company, and a Grid Connection Agreement in case of a foreign neighbouring network operator or a gas storage company.

3. Services

3.1. Gas transport services

3.1.1. The entry-exit system

GTS uses an entry-exit system, in which the gas enters the grid at entry points and leaves the grid at exit points. Shippers can book capacity at entry points and at exit points. Before awarding capacity to a shipper, GTS performs an availability and a technical transport test. Tariffs have been set for all individual entry and exit points. Entry capacity gives the right to inject a specific volume of gas per hour into the national gas transmission grid at an entry point; exit capacity gives the right to extract a specific volume of gas per hour from the national gas transmission grid at an exit point. A directly connected party can book exit capacity at its connection linked to the GTS network. The exit capacity needs to be transferred to a shipper when the gas will actually flow.

GTS accepts gas that is offered at entry points, transports it and makes it available at exit points. A shipper has a free choice of a combination of entry and exit points. The combined entry and exit contracts of one and the same shipper are called a portfolio. A shipper can have several portfolios. A shipper does not have to book the entry and exit capacity at the same time. However, he is obliged to ensure that his portfolio balances the volume of gas that he injects into the system and the volume that he extracts from it. To achieve this, GTS has introduced a balancing regime (see Chapter 4).

There is a handling period of a maximum of 10 working days between submitting the request for entry and/or exit capacity and the actual transport. This is the maximum period needed by GTS to complete the request in time. In practice the turnaround time for bookings is generally much shorter.

3.1.2. Firm and interruptible capacity

Entry and exit capacity can be booked both firm and interruptible. When a shipper books firm capacity, he will have the certainty that this capacity will be available to him. Interruptible capacity runs a chance of being interrupted. Interruptible capacity is offered in tranches, whereby the amount of capacity available in each tranche has been determined on the basis of past performances, including the most recent year. The amount of interruptible capacity that is offered in the tranches is re-determined every year.

Interruptible capacity will not be offered until firm capacity is sold out. Capacity with a higher chance of being interrupted will not be sold until all capacity with a lower interruption chance is sold.

Whenever capacity becomes available at a network point, interruptible capacity is upgraded, if desired, to released firm capacity or to interruptible capacity with a lower chance of interruption, based on the time stamp of booking.

3.1.2.a Exit capacity at regional network operator exit points

The total exit capacity in respect of exit points that form the connection between the national gas transmission grid and a regional distribution network is booked by those shippers with LB licences (see paragraph 5.1). This exit capacity is contracted on a firm (non-interruptible) basis.

GTS distributes the exit capacity on a monthly basis among the shippers with LB licences on the basis of data from the connection registers of the regional network operators, taking into account, among other things, the reference temperatures and the profile fractions.

Capacity and tariffs

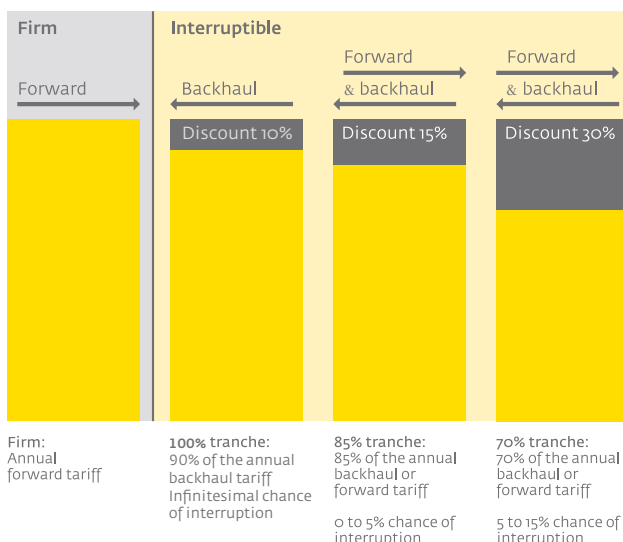
Forward / physical direction of the flow

Capacity in the physical direction of the flow can be booked both firm and interruptible. The interruptible capacity which has a 0% to 5% chance of interruption on the basis of past performances, is appointed a tariff of 85% of the standard forward tariff. This is known as the 85% tranche. The interruptible capacity in the 70% tranche has, on the basis of past performances, a 5% to 15% chance of interruption and has a tariff of 70% of the standard forward tariff.

Backhaul / counterflow

At Dutch border points it is also possible to book capacity in the opposite direction of the physical direction (backhaul or counterflow). This capacity is offered in three tranches. On the basis of past performances, the capacity in the 100% tranche has an infinitesimal chance of interruption. However the tariff is 90% of the standard backhaul tariff. Similar to interruptible capacity in the physical direction of the flow, the capacity in the 85% and 70% tranches have a chance of interruption of 0% to 5% and 5% to 15% respectively, based on past performances, and are charged at 85% and 70% respectively of the standard backhaul tariff.

Capacity and tariff



3.1.3. Cancellation

Contracted capacity can be cancelled in the event of bankruptcy or closing down of a directly connected party. A tariff equal to 50% of the tariff valid at the time when the contract is terminated will be applied to the cancelled capacity for the entire duration of the contract.

3.1.4. Reduction of booked capacity

This service is applicable to contracted inland industrial exit capacity for a period of at least 2 years in advance. This means it is necessary to apply for this 24 months in advance. A shipper/directly connected party with exit capacity can reduce the contracted capacity by 20% free of charge if a payment is made. 1/10th of the exit tariff applies for the next 20% and 1/5th for the remainder.

3.1.5. Connection

In addition to the tariff for exit capacity, a so called connection fee is charged at domestic exit points for maintaining the system connection. The system connection between the national gas transmission network and the network operated by the LDC or between the national gas transmission network and the gas installation of an end user is known as a GOS ('gasontvangstation'; gas delivery station). A GOS is a complex of installations that are needed to make the gas available at the connection in a safe and controlled way. For industrial locations, where GTS has concluded a Connection Agreement with an end user, the connection fee will be settled with the directly connected party. For other connections, including those with LDCs, the connection fee will be settled with the shipper contracting the exit capacity.

3.1.6. Contract terms and tariffs

The starting point for all tariffs is the annual tariff. Annual tariffs apply to flat bookings (a contract with a flat capacity profile for a period of 12 months). An annual contract may start in any month. Long-term contracts may be concluded in multiples of 12 months. Contracts may also be concluded for periods of single days or months or several days or months. A monthly contract will always expire on the last day of the calendar month.

If a shipper books capacity for a period of less than 12 months, a tariff system will apply that includes 'monthly factors'. The value of the monthly factor is a percentage of the annual tariff and can be different for each month.

In case of a contract of 12 months or less the tariff for the entire period for which forward transport capacity is booked will be calculated as follows:

The sum of the monthly factors for the individual months (which can never exceed 100%) multiplied by the annual tariff, or, if this is lower (81.25% plus 3% times the number of winter months plus 1.5% times the number of shoulder months plus 0.75% times the number of summer months) times the annual tariff. For backhaul capacity, the tariff for a contract that is equal to or less than 12 months will be calculated by multiplying the minimum of the sum of the monthly factors and 76% plus 2% times the number of months with the backhaul annual tariff.

	Months	Monthly factor percentage of annual tariff
Forward	Winter months January, February, December	30%
	Shoulder months March, April, October, November	15%
	Summer months May to September	7.5%
Backhaul	January to December	12.5%

3.2. Quality conversion

If a shipper books capacity for a period of 12 months in which the capacity varies from month to month (a profile), the monthly factors will apply as well. In that case, the capacity will be divided into horizontal capacity 'ranges' or 'slices', whereby the monthly factor system will be applied to each individual range or slice.

A daily contract can be booked three months at most before the starting date of the contract. The tariff for daily contracts is 1/15 times the monthly factor multiplied by the annual tariff.

3.1.7. Delivery period

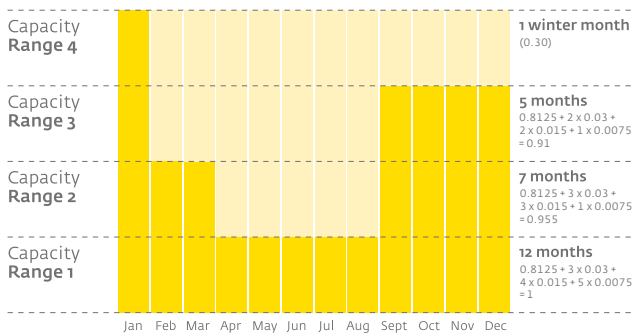
Transport capacity can be booked online. This makes it possible to book capacity in the short term for most entry and exit points. In many cases this can take place up to one day before the contract must be submitted. However, there are also entry and exit points which are subject to manually checked requests and a delivery period of a maximum of 10 working days applies in respect of these.

Registering a transport capacity deal can also be processed in the short term. A transfer can be performed up to one day prior to the contract date and GTS can still be notified.

Gas from production fields that is injected into the national gas transmission grid may be different in composition and, consequently, may have a different calorific value as expressed in the Wobbe index. Sometimes gas of a higher calorific value needs to be physically converted to gas of a lower calorific value. GTS will do this by means of the service quality conversion. Conversion of gas of a lower calorific value to gas of a higher calorific value is physically (almost) impossible. However GTS offers this conversion in the service quality conversion as well by swapping high and low calorific gas between different parties (until the physical limit).

During the past years GTS offered the service quality conversion as a paid service. In 2008 GTS sent a change proposal to the Dutch regulator to socialize the cost of quality conversion. The regulator decided upon this proposal in December 2008. From 1 July 2009 the quality conversion is a socialized service.

Example: tariff calculation profiled booking



Overall tariff = (Capacity 1 x 1 + Capacity 2 x 0.955 + Capacity 3 x 0.91 + Capacity 4 x 0.30)
° annual tariff

3.3. Other services

3.3.1. Balancing service

The balancing service involves the shipper transferring the use of a flexible source to the network operator of the national gas transmission grid. Imbalance in the shipper's portfolio is compensated for on a subsequent basis within the limits of capacity and volume applicable for this source. Use of the balancing service will precede the application of the tolerances in accordance with the balancing regime as well as any booked combiflex. For further information, see TSC 2009-1 Appendix 7.

3.3.2. Wheeling

Wheeling allows the transmission of gas from an entry point to a very nearby exit point against a 'combination tariff' that is lower than the sum of the regular transport tariffs for the individual points, that is if the gas quality is the same. This is possible because the transport grid is not actually physically burdened. Basically, wheeling is considered transport over a distance of zero kilometres. In a wheeling portfolio it is not allowed to use the quality conversion service or the possibility to transfer gas on TTF. Separate portfolios are created for wheeling contracts. This service is possible for a limited number of by GTS pre-determined combinations of entry and exit points, which are stated below.

Wheeling is subject to an annual tariff. The conditions and terms for the duration of the contract, the monthly and daily systems applicable to entry and exit capacity also apply to wheeling. The tariff for interruptible wheeling is expressed as a percentage of the firm wheeling tariff and will be applicable if firm capacity is not available on either one or both points in the wheeling combination.

3.3.3. Diversion

Diversion allows the transfer of transport capacity contracted for a particular entry point or exit point to a different entry point or exit point in the same location without the need to utilise extra transport capacity. Diversion is possible at a number of by GTS pre-determined combinations, which are stated below. Diversion is subject to a fixed administration fee per period for which the service is contracted.

3.3.4. Customised services: shift of capacity

In consultation with GTS and a shipper and after evaluation by GTS a shift of capacity can be booked as a customised service.

A shift of capacity allows capacity that was booked for a particular domestic exit point to be transferred to another exit point for a specified period. The shift tariff depends on the distance between the two exit points and the tariffs that apply to these exit points.

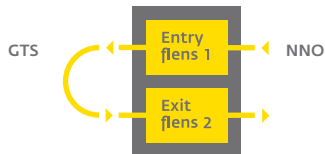
Wheeling and diversion combinations 2009

MP	Entry wheeling/ original entry	Exit wheeling/ diverted entry	MP
301112	Emden NPT (Gassco)	Emden EPT (Gassco)	301113
301113	Emden EPT (Gassco)	Emden NPT (Gassco)	301112
300147	OSZ H Wingas	OSZ H Ruhrgas	300145
300145	OSZ H Ruhrgas	OSZ H Wingas	300147
300147	OSZ H Wingas	OSZ H GUD (BEB)	300146
300146	OSZ H GUD (BEB)	OSZ H Wingas	300147
300145	OSZ H Ruhrgas	OSZ H GUD (BEB)	300146
300146	OSZ H GUD (BEB)	OSZ H Ruhrgas	300145
301185	OSZ H Dgas	OSZ H Ruhrgas	300145
300145	OSZ H Ruhrgas	OSZ H Dgas	301185
301185	OSZ H Dgas	OSZ H Wingas	300147
300147	OSZ H Wingas	OSZ H Dgas	301185
301185	OSZ H Dgas	OSZ H GUD (BEB)	300146
300146	OSZ H GUD (BEB)	OSZ H Dgas	301185
301361	OSZ H EWE	OSZ H Ruhrgas	300145
300145	OSZ H Ruhrgas	OSZ H EWE	301361
301361	OSZ H EWE	OSZ H Wingas	300147
300147	OSZ H Wingas	OSZ H EWE	301361
301361	OSZ H EWE	OSZ H GUD (BEB)	300146
300146	OSZ H GUD (BEB)	OSZ H EWE	301361
301361	OSZ H EWE	OSZ H Dgas	301185
301185	OSZ H Dgas	OSZ H EWE	301361
300144	OSZ G GUD (BEB)	OSZ G EWE	300136
300136	OSZ G EWE	OSZ G GUD (BEB)	300144
301184	Zandvliet Fluxys-H	Zandvliet Wingas-H	301312
301312	Zandvliet Wingas-H	Zandvliet Fluxys-H	301184
301198	Enschede Essent-UGS Epe	Enschede Nuon-UGS Epe	301309
301309	Enschede Nuon-UGS Epe	Enschede Essent-UGS Epe	301198

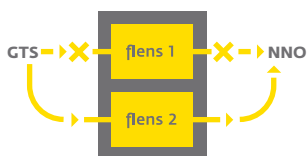
3.3.4. Start-up service for industry

Where they are building up or expanding an industrial connection, a shipper or directly connected party with exit capacity can book the start-up service for industry. With this service, an estimate can be given for the capacity required during the trial period for a maximum of four months (not including winter months). GTS will consider this to be a provisional booking and will not impose any fines for surpluses, provided that the estimate is reasonable in GTS' opinion. During this period the shipper / directly connected party can determine how much capacity they will actually require in the future. The final booking for capacity used during the start-up period will be determined afterwards on the basis of realised amounts.

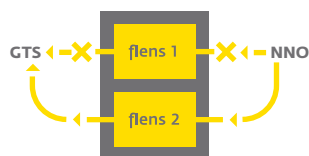
Wheeling



Exit diversion



Entry diversion



3.4. Title Transfer Facility (TTF) and the gas exchange

The Title Transfer Facility (TTF) is a virtual market place where GTS offers market parties the opportunity to transfer gas that is already present in the GTS system ('entry-paid gas') to another party. Using TTF, gas that is brought into the national gas transmission grid via an entry point can easily change ownership before it leaves the national gas transmission grid at an exit point. TTF serves to promote gas trading.

TTF can serve as a virtual entry point in the portfolio of a shipper or trader who buys gas on TTF, or as a virtual exit point in the portfolio of a shipper or trader who sells gas on TTF.

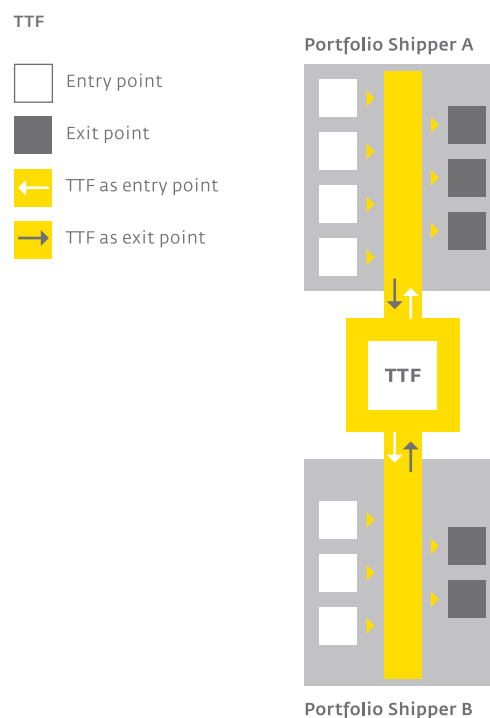
GTS registers the title transfers of gas via TTF by means of a 'nomination'. This is an electronic message stating the volumes of gas transferred, the period, and the purchasing and selling parties.

GTS-admitted shippers and traders with a TTF subscription are permitted to trade on TTF. A fixed monthly fee is charged for subscriptions. Apart from the subscription, the traded volume of energy is also subject to a variable tariff. The variable tariff consists of a tariff per kWh for volumes between 0 and 4 billion kWh and a tariff for volumes exceeding 4 billion kWh. The tariff will be charged to both buyer and seller at TTF.

It is possible for a recognised shipper to enter into a balancing relationship on TTF with another recognised shipper. A balancing relationship is a relationship between two shippers on TTF, facilitated by GTS, whereby both parties agree that a previously unspecified quantity of gas will be transferred on TTF from the offering shipper in the balancing relationship to the receiving shipper in the balancing relationship. The quantity of gas is subsequently determined on the basis of the allocations of the receiving shipper. See TSC 2009-2 4.A.5. for details.

The existence of TTF makes it simpler for a gas exchange to operate. Via a gas exchange a shipper or trader can buy gas or offer it for sale anonymously on TTF without the other party in the gas transfer being known to the shipper. The gas exchange operator is responsible for bringing together the gas required or being offered for sale, and for the financial transaction. If the gas is traded via a gas exchange, the gas exchange operator will register TTF nomination for the shippers concerned. The balance of transactions between the gas exchange operator and the shipper or trader will also be nominated. A TTF subscription with GTS is required for trade via the gas exchange on TTF.

At the moment two gas exchanges have been appointed by the Ministry of Economic Affairs for the Dutch gas market, i.e. APX Gas NL B.V. and ENDEX N.V. APX Gas NL B.V. operates as a physical, short-term exchange with delivery on TTF. Future contracts are traded on Endex, also with delivery on TTF.



3.5. Transfer of services

Entry capacity, exit capacity, wheeling and combiflex (cf. 4.5) are tradable. Hourly tolerance and cumulative tolerance (cf. 4.2) included in the transport can also be traded separately.

GTS offers the transfer of services by two types of transfer: transfer of capacity rights and transfer of usage rights. In the case of transfer of capacity rights, all rights will be transferred from the seller to the buying shipper, i.e. the entire contractual position including the usage rights. The capacity becomes part of the portfolio of the buying shipper. In the case of transfer of usage rights, the selling shipper will retain his contractual position and right to the capacity; only the usage rights and all related agreements will be transferred from the seller to the buying shipper. Thus the usage rights remains dependent upon the continued existence of the capacity rights from which it is separate. In both forms of transaction, the tolerance is automatically transferred to the purchasing shipper, in that the traded capacity is included in his portfolio.

In the separate trading of the hourly tolerance and cumulative tolerance included in the transport (only via the transfer of user's rights), a temperature-dependent tolerance quantity will be traded. The daily margin is not tradable.

A transfer (of capacity, of user's rights to capacity or to tolerance) will be reported to GTS via the online booking system GEA Click & Book (see 3.6.3) or via a form signed by both parties. This form can be found on the GTS website. Transfers are subject to a fixed fee per transfer. The fee will be charged to the selling party.

3.6. Information

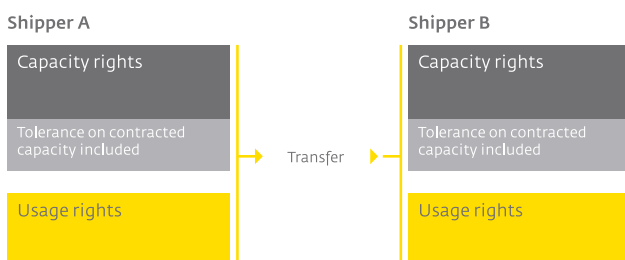
3.6.1. OTIS

Parties can obtain online information about their deliveries/withdrawals by using the Online Transmission Information Service (OTIS).

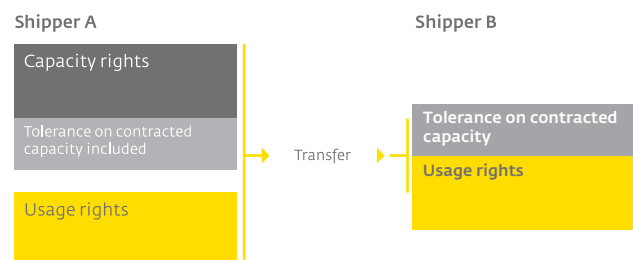
GTS provides real-time (to 5 minutes) non-audited measurement data, allocations and estimates of hourly volumes and the gas composition. A shipper can obtain this information in respect of all points for which he has contracted entry and exit capacity. For end users this relates solely to the measurement data of their 'own' measuring point and for suppliers solely to measuring points where they supply gas. The information is only available at measuring points where sufficient data are available in order to be able to make the final allocation for an individual shipper at this point. This is the case for most gas delivery stations connected to an end user. In addition to this, the total measurement per point to RNB distribution networks is available on a real-time basis to shippers with an LB licence. If a shipper knows his own market share at an RNB point, he can use this to estimate his share of the gas withdrawn. GTS also supplies historical data of volumes and gas qualities at the measuring points for which the party has booked transport capacity. This last-mentioned data ultimately form the 'fiscal data', the data which form the basis for the invoice that GTS sends to its shippers.

Any party wishing to make use of OTIS can apply to GTS via the application form on the GTS website and will then receive the necessary information to download an access certificate for OTIS from the internet.

Transfer of capacity rights



Transfer of usage rights



3.6.2. Website GTS: www.gastransportservices.nl

The GTS website offers a large amount of information, which is accessible to everyone. This site shows, for instance, data on transport capacity that is still available at many entry and exit points as well as the transport capacity already booked. The website also contains data on nominations, confirmations and allocations at border points.

Information on entry and exit points at which a maximum of two shippers are active is not included, due to the commercially sensitive nature of this information, if an exemption is obtained for this from the NMa.

3.6.3. GEA Click & Book

The internet application GEA Click & Book allows a shipper to book online capacity at most entry and exit points. Feedback takes place directly via Click & Book, except for special cases where the booking is assessed manually. In this case feedback will take place via Click & Book a little later. Click & Book can also be used to process firm wheeling and other transactions; shippers and directly connected parties with exit capacity can also give a third party the authority to book transport capacity or to trade. Other interested parties can check available capacity online.

A user certificate is required for access to GEA C&B. The procedure for gaining access to GEA C&B is explained on the GTS website. Standard services, which are not supported by Click & Book, can be requested via an application form. These forms are available on the GTS website.

3.6.4 Bulletin Board

GTS has a bulletin board so that shippers can be brought into contact with each other in an easily accessible manner and so that the trade in gas transport services can be facilitated. Parties can log in to the bulletin board for this purpose. There is also the potential for submitting anonymous reports. These should be sent to the following general address:

t-t.backoffice@gastransport.nl

The actual trading of services can then take place via GEA Click & Book (capacity trading) or via our application forms (other services).

3.6.5. EUCABO

GTS and Gasunie Deutschland Transport Services GmbH (GUD) jointly operate an internet platform for booking short-term cross-border transport capacity for gas: EUCABO (European Capacity Booking). EUCABO offers shippers the opportunity to obtain transport capacity through one transaction between TTF and the virtual trading point of

GUD: with one click shippers can purchase at Oude Statenzijl exit capacity with GTS and entry capacity with GUD or exit capacity with GUD and entry capacity with GTS. This service is offered on a 'day-ahead' basis and applies to both low calorific and high calorific gas. The 'day-ahead' capacity purchased via EUCABO has a tariff of 1/20 times the standard monthly tariff.

The cooperation between GTS and GUD is an important step towards an integrated European gas market. EUCABO gives an interpretation to market parties' requirements for booking cross-border transport capacity for gas easily and for making unused capacity available to the market.

3.6.6. Platform for trading entry and exit capacity

GTS supports both the APX and the Trac-X platforms for trading secondary capacity. APX and Trac-X operate as platforms where capacity can be traded, based on the transfer of the usage right. Transfers on these platforms can be concluded up to 11 a.m. and shall be registered by GTS no later than 1 p.m. in order to make 'day-ahead' transfers possible.

No transaction fee is charged for the transfer of 'day-ahead' capacity.

3.7. Peak supply

In order to guarantee the supply of gas to household consumers during cold periods, GTS is responsible for peak supply by virtue of the 'Security of Supply of Gas Decree' ('Besluit leveringszekerheid gas'). This means that, on any given day with an average effective daily period temperature in De Bilt (NL) of lower than -9°C, GTS will deliver gas to the suppliers of household consumers, insofar as the delivered quantity of gas exceeds the maximum quantity of gas that would have been delivered on a day with an average effective daily period temperature of -9°C. The suppliers of household consumers do not have to buy this gas from their regular supplier. GTS charges the suppliers of the household consumers for the costs of the peak supply.

4. The balancing regime until 2010

4.1. Basic balancing

For the national gas transmission grid to operate in a stable and reliable manner, the entry gas and exit gas should be sufficiently in balance. GTS is responsible for the balance in the whole system. To be able to perform this task, GTS has developed a set of rules. Shippers who are active on the national transmission grid must comply with these rules. This so-called balancing regime is aimed at a system in which each individual shipper ensures that the entry gas and the exit gas within his portfolio are balanced. There is a balance when the difference between the entry gas and the exit gas stays within specified tolerance limits. A time shift standard of two hours will apply here between gas realised at the entry point and gas realised at the exit point. This time delay is the result of the buffer effect of the transmission grid: a change in the exit time is absorbed in the first instance by the grid, the entry should be adjusted to reflect this change shortly thereafter. This means that the required balance will be achieved when, within a portfolio, the difference between the sum of the realisations at the exit points during hour t (for example 08:00 hrs – 9:00 hrs) and the sum of the realisation at the entry points during hour $t+2$ (in this example: 10:00 hrs – 11:00 hrs) lies within the allowed tolerance limits.

GTS will check the 'hourly difference' determined in this manner against two tolerance limits (also refer to 4.2.):

1. Hourly tolerance
2. Cumulative tolerance and a daily margin

When the hourly difference exceeds the hourly tolerance, this will be considered an hourly imbalance. When the aggregate hourly differences exceed the cumulative tolerance, this will be considered a cumulative imbalance. When the cumulative hourly difference at the end of the gas day exceeds the daily margin, this will be considered a daily imbalance.

4.2. Tolerance

Hourly and cumulative tolerance

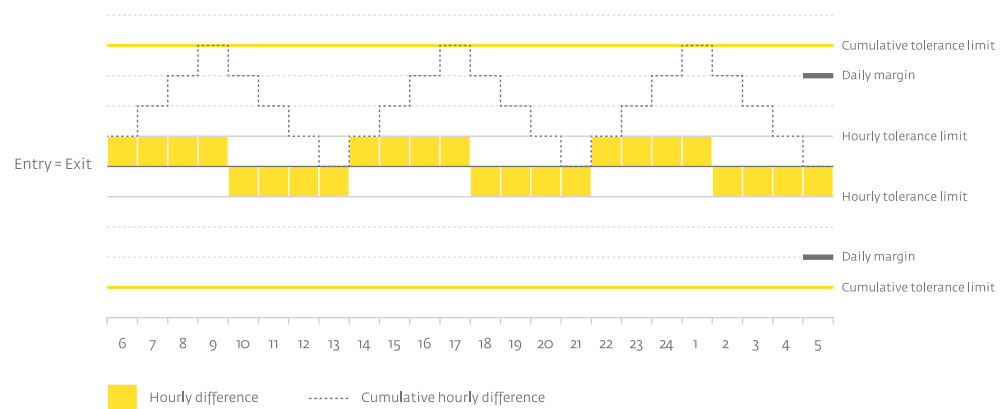
A specific amount of hourly and cumulative tolerance will be awarded to every transport portfolio. Hourly and cumulative tolerance will be assigned on the basis of the contracted transport capacity. The tolerance will be assigned for both firm and interruptible capacities as well as for backhaul. No tolerance will be assigned at virtual entry or exit points, such as TTF. Both hourly and cumulative tolerance are temperature-dependent. At temperatures below 0° Celsius they will decrease in a linear line to 2% for hourly tolerance and to 4% for cumulative tolerance at -17° Celsius (effective daily period temperature in De Bilt (NL) for a gas day). The cumulative tolerance is, incidentally, equivalent to four times the hourly tolerance.

Daily margin

Daily margin is temperature-independent and equals a volume of 2% of the contracted capacity (monthly average).

The daily margin is 10% from 1 July 2009 to 1 January 2010. The daily margin will be 2% for 2010 and thereafter.

Example: tolerance limits



4.3. Procedure for the assignment of tolerance

Every year GTS will determine the maximum amount of tolerance from the national gas transmission grid that can be assigned to shippers. This fixed amount of tolerance is divided among the various shippers as hourly and cumulative tolerance. Hourly and cumulative tolerance are assigned to portfolios on the basis of a system of three tolerance brackets. The switch-points between the brackets are at portfolio sizes of 250,000 m³/h and 1,000,000 m³/h respectively. The determination of the tolerance percentages for the brackets is based on the uncertainties for the various portfolios in connection with the size of a portfolio and the uncertainties that the market faces as a aggregate. The size of a portfolio is defined as the contracted entry plus exit capacity within a portfolio divided by two. Interruptible and backhaul capacity are included in the determination of the size of a portfolio by a weighted factor that equals the percentage of the firm tariff applicable to the interruptible and backhaul capacity.

Example of calculation of portfolio size

firm entry	100,000 m ³ (n;35.17)/h
interruptible for 70% of the entry tariff	100,000 m ³ (n;35.17)/h
firm exit	200,000 m ³ (n;35.17)/h
Portfolio size: (100,000 + 70,000 + 200,000) / 2 =	185,000 m ³ (n;35.17)/h

A tolerance percentage will be assigned to portfolios based on passing through the tolerance brackets. Portfolios of sizes of up to 250,000 m³(n;35.17)/h will have the tolerance percentage of the first tolerance bracket; for any transport capacity contracted above this quantity and up to 1,000,000 m³(n;35.17)/h, the tolerance percentage from the second tolerance bracket will apply; for portfolios of sizes above 1,000,000 m³(n;35.17)/h, the tolerance percentage from the third tolerance bracket will apply to the part of the capacity up and above the first two tolerance brackets.

The tolerance percentages are determined on the basis of capacity booked on a monthly basis. When tolerance percentages are assigned to a portfolio, all relevant portfolios of the shipper and (any) affiliated companies will be taken into account. The portfolios will be combined to determine the tolerance percentage for the joint portfolios. The (joint) hourly and cumulative tolerances that have been determined in this manner will then be assigned to each of the individual portfolios.

The standard tolerance percentages per bracket will be determined at least once a year. The last definitive tolerance

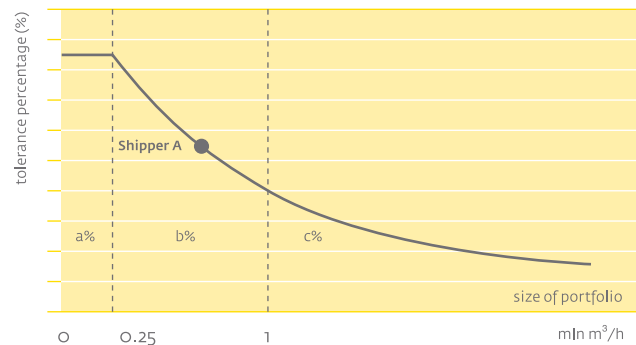
Tolerance brackets

Bracket 1: a%; bracket 2: b%; bracket 3: c%

Bracket 1	Up to and including 250,000 m ³ /h
Bracket 2	From 250,000 up to and including 1,000,000 m ³ /h
Bracket 3	Over 1,000,000 m ³ /h

percentage have been established on January 2009. In principle this percentages also apply for the remaining months of 2009 unless GTS observes drastic changes during the monthly control in the number of portfolios or portfolio sizes. In that case GTS will publish adjusted percentages for the standard hourly tolerance and standard cumulative tolerance prior to the month concerned.

Assignment of (hourly and cumulative) tolerance percentages to a portfolio



Shipper A

Entry 0.6 mln m³/h (firm) } size of portfolio 0.55 mln m³/h
Exit 0.5 mln m³/h (firm)

1st bracket: a% x 0.25 = Vol 1; 2nd bracket: b% x 0.3 = Vol 2
Tolerance volume = Vol 1 + Vol 2

Resulting tolerance percentage for portfolio = (Vol 1 + Vol 2) / 0.55 x 100

Wheeling

Wheeling portfolios are assigned a temperature-independent hourly tolerance, cumulative tolerance and daily margin of 2%, 4%, and 2% of the contracted capacity respectively.

4.4. Imbalance: surcharges and commodity settlement

4.4.1. Energy balance

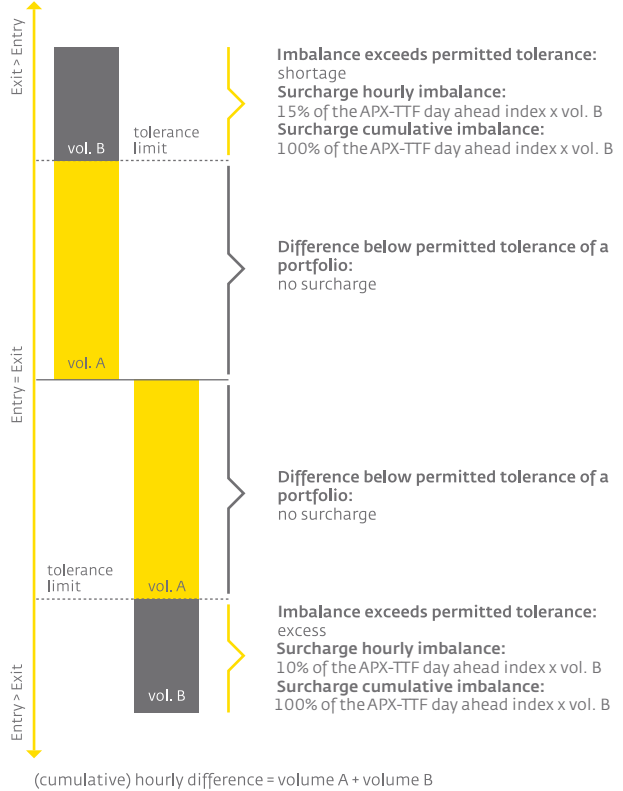
There is an imbalance when the (hourly) difference between the realised entry and the realised exit exceeds the permitted hourly tolerance, cumulative tolerance or daily margin. GTS will charge a surcharge for imbalance that will reflect the costs to GTS to rectify the imbalance.

The surcharge for exceeding the hourly tolerance limit will be 10% of the APX-TTF day ahead index multiplied by the hourly imbalance volume B for a excess in a portfolio (i.e. the volume of entry gas exceeds the volume of exit gas) and 15% of the APX-TTF day ahead index multiplied by the hourly imbalance volume B for shortage in portfolio. The hourly imbalance surcharge will be applied to each hour of imbalance during a gas day. The imbalance surcharge for exceeding the cumulative tolerance limit for both an excess and a shortage will be 100% of the APX-TTF day ahead index multiplied by the cumulative imbalance volume B. The surcharge will be applied to the largest positive imbalance and the largest negative imbalance during a gas day.

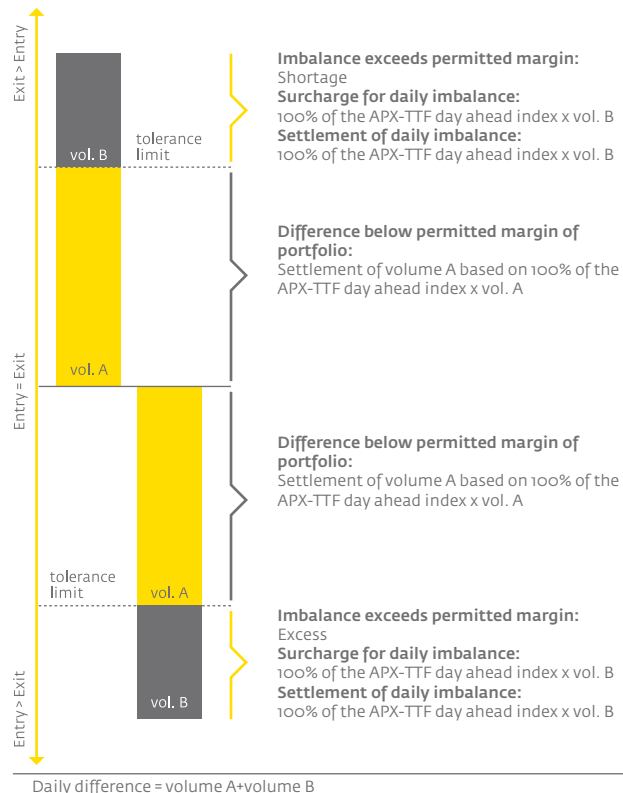
At the end of each gas day, the daily imbalance, the difference between entry gas and exit gas outside the daily margin will be surcharged. This surcharge will be 100% of the APX-TTF day ahead index multiplied by the daily imbalance volume. The total difference in volume between entry and exit will also be calculated on a daily basis. This calculation will be based on the relevant gas price for an excess or shortfall (see 4.4.2.). Surcharges for exceeding hourly tolerance limits, cumulative tolerance limits, and the daily margin are accumulated. If both the excess cumulative imbalance and the excess daily imbalance occur in one gas day, only the largest of the two imbalances will be surcharged. The cumulative difference is settled at the end of each gas day. The same principle counts on the shortage side.

Imbalance surcharge:	Shortage	Excess:
percentage of APX-TTP Index		
Hour	15%	10%
Cumulative	100%	100%
Day	100%	100%

Hourly imbalance and cumulative imbalance



Daily imbalance



4.5. Flexibility

4.4.2. Exchange- related gas prices

GTS will use the prices listed on the gas exchange as a basis for the settlement of the imbalance volume between entry and exit. From July 2008 the APX-TTF day ahead index will be used for the settlement of the imbalance volume (both inside and outside the daily margin). Both the excesses and shortages will then be settled on the basis of the same prices.

Balancing service

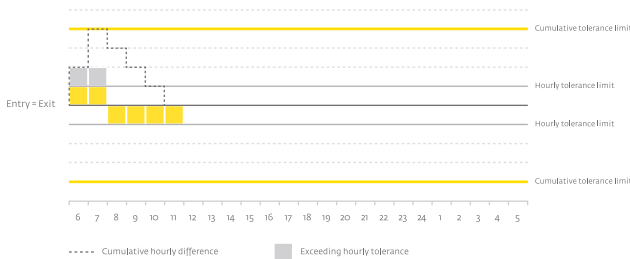
In addition to the standard tolerance described in 4.1, GTS provides two paid services for balancing:

- ▶ The balancing service, where a shipper transfers the use of a flexibility source to GTS. In the allocation process, GTS will allocate flows to this source in such a way that the cumulative position is minimized.
- ▶ Combiflex, where a shipper asks for and GTS orders flexibility from a provider. In the allocation process, GTS will allocate flows to the Combiflex source if the standard tolerance is exceeded, avoiding (or reducing) imbalances surcharges.

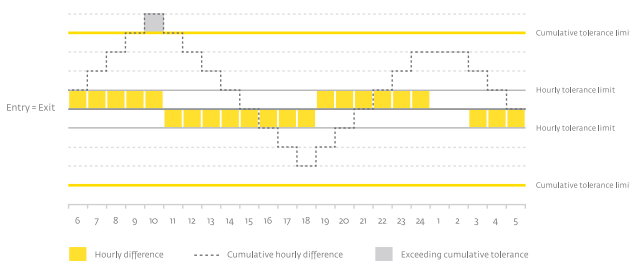
Combiflex

Shippers can obtain extra flexibility by contracting the Combiflex service. With the combiflex service a shipper can increase the hourly-, cumulative and daily tolerance of the basic balancing regime. Combiflex can be contracted on a quarterly basis. This service consists of three elements: production capacity, injection capacity and volume. There are two kinds of Combiflex services with different ratios between production and injection capacity. By contracting 1 m³ (n;35.17)/h production capacity a volume of 168 m³ (n;35.17) is available. The increase of tolerance applies subject to the availability of sufficient volume. The use of Combiflex will be determined afterwards, based on realised imbalances.

Example: surcharge on hourly imbalance, no cumulative imbalance



Example: no hourly imbalance, surcharge on cumulative imbalance



4.6. Other

Different time-shift: $t_{\text{entry}} = t_{\text{exit}}$

Shippers may (on a calendar year basis) opt for balancing a portfolio without time-shift in accordance with the $t_{\text{entry}} = t_{\text{exit}}$ principle: (entry at hour t) = (exit at hour t). In such cases, the tolerance established in accordance with the tranche method is reduced by 25% in order to determine the tolerance to be allocated to the portfolio.

Within a $t_{\text{entry}} = t_{\text{exit}+2}$ portfolio, an application may be made for the $t_{\text{entry}} = t_{\text{exit}}$ principle for every selected entry and exit point. The selected points are in appendix 8 of the TSC 2009-1. Shippers may, in respect of these points, make an application to use the $t_{\text{entry}} = t_{\text{exit}}$ principle without any implications as regards the tolerance to be allocated.

The $t_{\text{entry}} = t_{\text{exit}}$ principle will apply to wheeling portfolios and portfolios consisting exclusively of the TTF subscription.

TTF

The TTF is linked to the entry time in a portfolio. Purchases and sales at the TTF are made at equal time basis.

Shifted hour settlement

In the basic balancing regime ($t_{\text{entry}} = t_{\text{exit}+2}$) the first and last two hours of a month will be settled. The volume of the first two hours entry gas of a gas month and the volume of the last two hours exit gas of the month are balanced. The difference in volume is settled at the monthly average APX-TTF price, based on the day ahead APX-TTF indices.

Exceeding capacities

When entry capacity, exit capacity or quality conversion capacity is exceeded by a margin of more than 2%, a surcharge will be charged for exceeding the transport capacity or.

Where there is a surplus in entry/exit capacity, this amount is determined on the basis of the greatest excess on one day multiplied by the monthly factor for the month of the excess multiplied by the tariff for the calendar year.

If, with a wheeling contract, the average realised capacity – i.e. the realised entry volume plus the realised exit volume divided by two – exceeds the contracted wheeling capacity by more than 2%, a surcharge will be charged for exceeding the capacity. This amount is determined in accordance with the method used for excesses in entry/exit capacity.

Incentive days

On cold days the optimal buffer capacity of the national transmission grid is reached when shippers balance their portfolios at $t_{\text{entry}} = t_{\text{exit}+1}$. GTS offers shippers the opportunity to register a $t_{\text{exit}+2}$ portfolio for the so-called incentive days programme (valid per calendar year). The shipper will receive a broader hourly tolerance range on the so-called incentive days. The incentive days will be announced in advance (previous day, 11:00 hrs LET). In exchange for this broader tolerance range the shippers will commit to balance their portfolios to $t_{\text{entry}} = t_{\text{exit}+1}$.

4.7 Looking ahead

Market parties, the Ministry of Economic Affairs and the NMa are all contributing towards the creation of a new balancing regime. The efforts of external parties and of GTS are aimed at introducing a new balancing regime as at 1 April 2011. Legislative amendments are being prepared for this purpose.

Under the new balancing regime, market parties (those responsible for the programme) remain responsible for coordinating supply and demand on an hourly basis. What is new is that the proposed changes to the Gas Act interpret this responsibility by the introduction of a programme. This programme involves a statement by market parties, the day before the gas flows, of the way in which they plan to harmonise gas withdrawals and injections with each other. GTS will continue to offer flexibility services to those who need it to set up their programme. In the new balancing regime, supply (injection at entry) will be cushioned to a certain extent with regard to demand (withdrawal at exit). GTS will set up transparent rules for this.

The essence of the new balancing regime is that all shippers (parties responsible for balancing the system) and also connected parties such as market gardeners or owners of storage facilities (those responsible for the programme) will get an active role in keeping the gas transmission grid in balance. They can also fulfil this active role because GTS will provide the control information necessary for this near real time.

The main focus of the task of balancing will be placed with market parties who will be put in the position of not only being able to actively monitor their own portfolio balance but also to actively assist in the recovery of the system balance. If this does not fully succeed, GTS will try to recover the system balance in cooperation with market parties. A bid price ladder will be used for this on which GTS purchases or sells gas in order to recover the system balance. Prices on the bid price ladder come into being via a transparent market mechanism. Costs incurred or revenues earned by GTS for the purchase or sale of gas will be allocated to market parties who have contributed towards the imbalance or who have kept the system in balance. Therefore it is important that the allocation of these costs and gas quantities concerned is based on the imbalance information programme as supplied by GTS.

Only as a last resort, if the net integrity is at risk, GTS shall take control and intervene autonomously by issuing instructions in respect of the programmes. The draft amendment to the Gas Act offers the potential to do this.

5. Operational aspects

5.1. Licensing

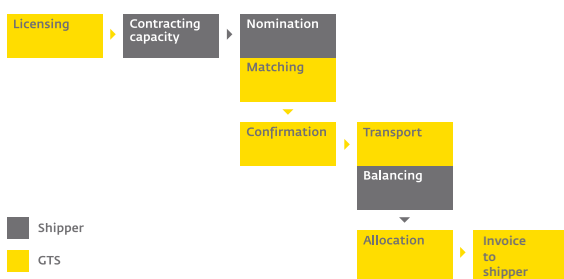
To use the services of GTS, a party must have been recognised by GTS as an admissible (licensed) party. There are two types of licenses. The conditions to gain access to the national gas transmission grid are more extensive for shippers who want to book capacity at an exit point connected to a local distribution grid than for shippers who only transport for end users with a direct connection to the GTS grid. The former will require an LB licence, whereas an LA licence will suffice for the latter.

A trader should have an LA licence.

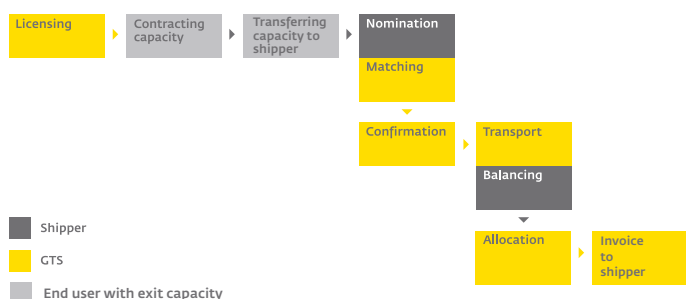
End users (directly connected parties) who want to contract exit capacity at their own system connection to the GTS grid, but who do not want to act as shippers themselves, do not need to be certified by GTS but do have to satisfy creditworthiness requirements. End user should also transfer the usage or capacity rights of this exit capacity to a shipper before use.

GTS publishes a list of parties on its website that are active on the national gas transmission grid including the licences of these parties.

Process overview



Process overview end user with exit capacity



5.2. Nomination, matching and confirmation

A shipper will indicate to GTS how much gas he intends to transport at an entry point or exit point at any given hour of the gas day by submitting nominations. Nominations are required at entry and exit points wherever GTS needs nominations for technical transport reasons or for the purpose of calculation of the assignment of interruptible capacity. Nominations are also obligatory at points where they are needed to determine allocations.

Nominations need to be submitted to GTS on the gas day before 2 pm preceding the gas day on which the gas will flow. In principle, renominations are allowed at the latest up to 2 hours before the hour to which the renomination refers.

Nominations on TTF are governed by the “lesser rule” principle. This means that if there is a difference between the nominated volumes of the two shippers or traders who report a gas trade, the lesser volume will be confirmed to both parties by GTS. (Re)nominations at TTF points can be made at the latest up to 30 minutes before the hour to which the nomination refers.

GTS will check the (re)nominations of the shippers.

The matching procedure involves:

- Checking the (re)nomination to the conditions of the relevant contract (check whether capacity will be exceeded);
- Matching the (re)nomination to the (re)nominations of other shippers or to information received from neighbouring network operators.

As soon as the matching procedure has been completed, GTS will send a confirmation to the shipper. If the nominated capacity exceeds the booked capacity, and no (re)nomination is made within the limits of the booked capacity, GTS will confirm zero. If the check shows that the volume of nominated gas is allowed (sufficient capacity) and possible (no transport bottlenecks), the confirmation will be identical to the nomination. In all other cases, the confirmation will be different from the nomination.

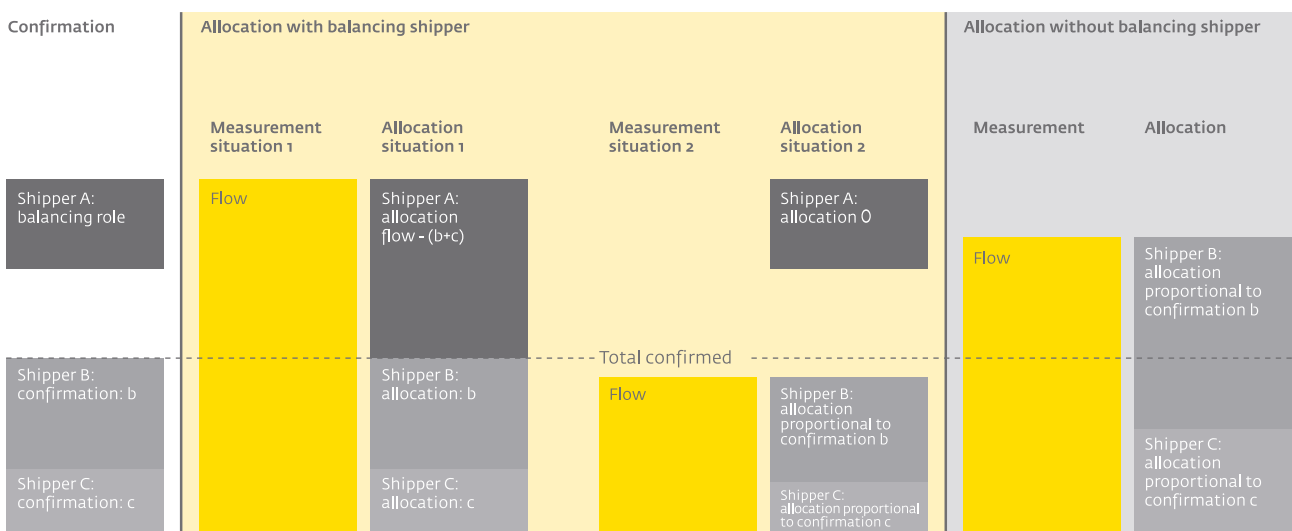
Interruptions of interruptible transport capacity must take place in time stamp sequence. Interruptions of interruptible quality conversion capacity will be effected on a pro rata basis.

Confirmation at TTF points will be given after matching the nominated volumes of the two parties transferring gas to one another, in accordance with the “lesser rule” principle. Both parties will receive a confirmation with the status ‘settled’ in case the nominations match. A (re) nomination by one of the parties will not lead to an adjustment of the confirmation with the status ‘settled’. Not until both parties send new matching nominations, will a new confirmation with the status ‘settled’ follow for the new matching volume.

5.3- Allocation

GTS allocates the use of the gas transmission grid to shippers on the basis of allocations for each hour for each entry and exit point. For exit points connected to a local distribution grid, the allocation data are determined by LDCs and sent to GTS and the shippers. For all other national exit points (industry), the allocations are determined by GTS. GTS does this on the basis of the 'allocation roles'. With regard to the remaining points, the shippers are to send the allocations (or have them sent) to GTS, for instance by the producer or the foreign network operator.

For each relevant entry or exit point a shipper is assigned an allocation role. The main roles are the proportional role and the balancing role. A shipper with a proportional role will in principle be allocated the confirmed volume. A shipper with a balancing role will have the volume allocated that equals the difference between the measured volume and the sum of the confirmations to the shippers that have a proportional role. A further role - the max balancing role – was introduced on 1 January 2007. The max balancing role is a special form of the balancing role. With the max balancing role a shipper will have the difference between the measured volume and the sum of the confirmations to the shippers with a proportional role, up to a certain maximum allocated. The confirmed quantities on TTF are always the same as the allocations on TTF.



Epilogue

This brochure gives an overview of the services offered by GTS. GTS will, in consultation with market parties, continue to reflect on and work on the development of new services, improvements to services or incentives for both GTS itself and market parties in order to make more efficient use of the national gas transmission grid.

This brochure provides a snapshot at a given time. Please also refer to our website to check on situations which will change during the course of the year: www.gastransportservices.com

Contact

For more information or additional questions please contact:

Gas Transport Services B.V.

P.O. Box 181
9700 AD Groningen

Telephone

+ 31 50 521 2250

Fax

+ 31 50 360 3036

E-mail

info@gastransport.nl

Internet

www.gastransportservices.nl

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