

End of Day Tolerances

Topic Exploration

Tolerances : An interim step towards the Balancing Target Model

Presented at Launch Workshop 13 & 14 Dec 2011

The framework guidelines allow tolerances to be introduced as **an interim step** where network users **do not have access to a liquid short-term wholesale gas market or to sources of flexible gas** (including the associated infrastructure) to trade in order to be in a position to balance their portfolios.

The tolerances **shall reflect genuine system flexibility** and **user needs** and address in particular **the needs of small users and new entrants**. These tolerances may be **free of imbalance charges**.

The rules for the level of tolerances allocated to categories of network users shall be **approved by the relevant NRA**.

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Specific assumptions

tolerances in this section only apply to the end of day imbalance quantity

Development of the concept

The level of tolerances available for network users should meet the following criteria:

- Consistency with technical transmission system requirements
- Reflection of the level of risk assumed by network users
- Useful tool in order to evolve towards the BTM
- The tolerance level applied to each network users should not be too small to prevent the management of the initial risk, related to not having access to a liquid short-term wholesale market or to sources of flexible, and not too big to not support their adaptation to the BTM

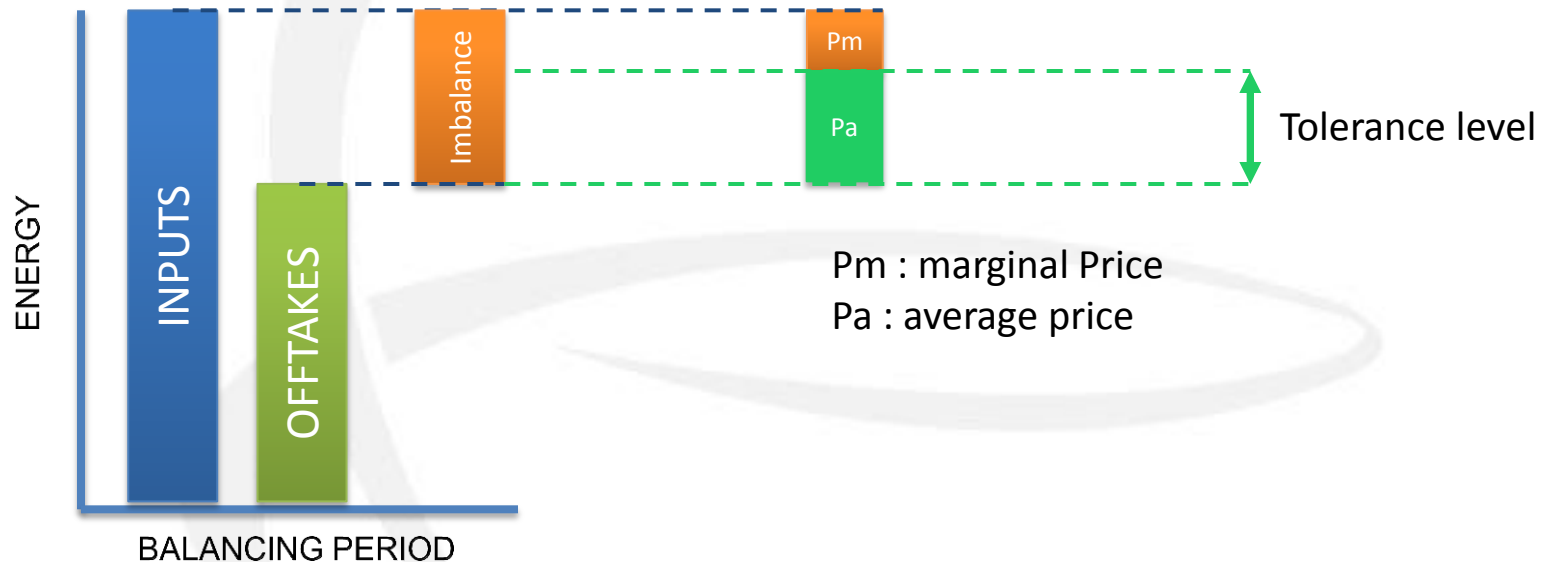
The framework guidelines state that tolerances should not discriminate in particular against network users with smaller gas portfolios.

Development of the concept of tolerances

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If a tolerance regime applies then the price for the imbalance quantity is treated differently considering the imbalance below the tolerance and the imbalance which exceeds the agreed tolerance.

Some examples of tolerance



Another option

Different multipliers can be applied to the price for different tranches of the imbalance quantity

Tolerances : Considerations for the Network Code

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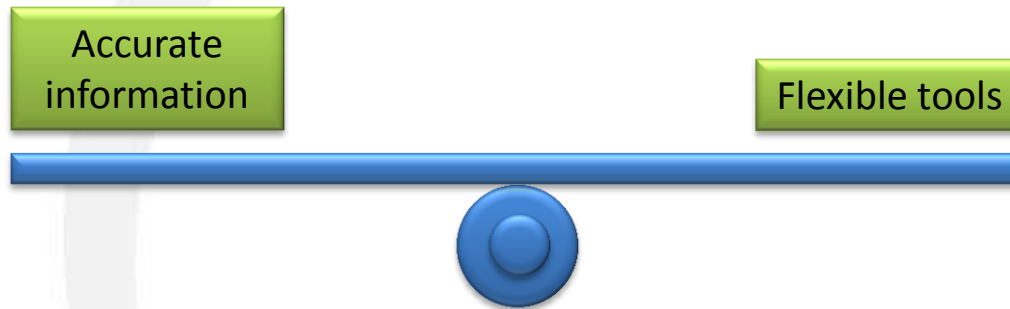
In preparing a section on the Network Code on tolerances several decisions will have to be made:

- Determination of the **rules for tolerances** (including how the level(s) / **threshold** is (are) **defined** and the **prices to be applied**) and whether different rules could apply to different categories of network users, especially **new entrants or small users**.
- The framework guidelines provide for tolerances where **network users do not have access to a liquid short term wholesale gas market or to sources of flexible gas**. The Network Code shall determine the **criteria for the use of tolerances**. TSOs that comply with these criteria can then discuss the use of tolerances, as an interim measure with the relevant NRA. While this is not expected to be the case it may be in the early years.

Tolerances as a trade off to balance the risks

Balancing target model

A network user is able to balance its portfolio according to this balance



- IDM
- DM
- NDM
- *Network information*
- *Marginal Price*
- *Agregate flows*

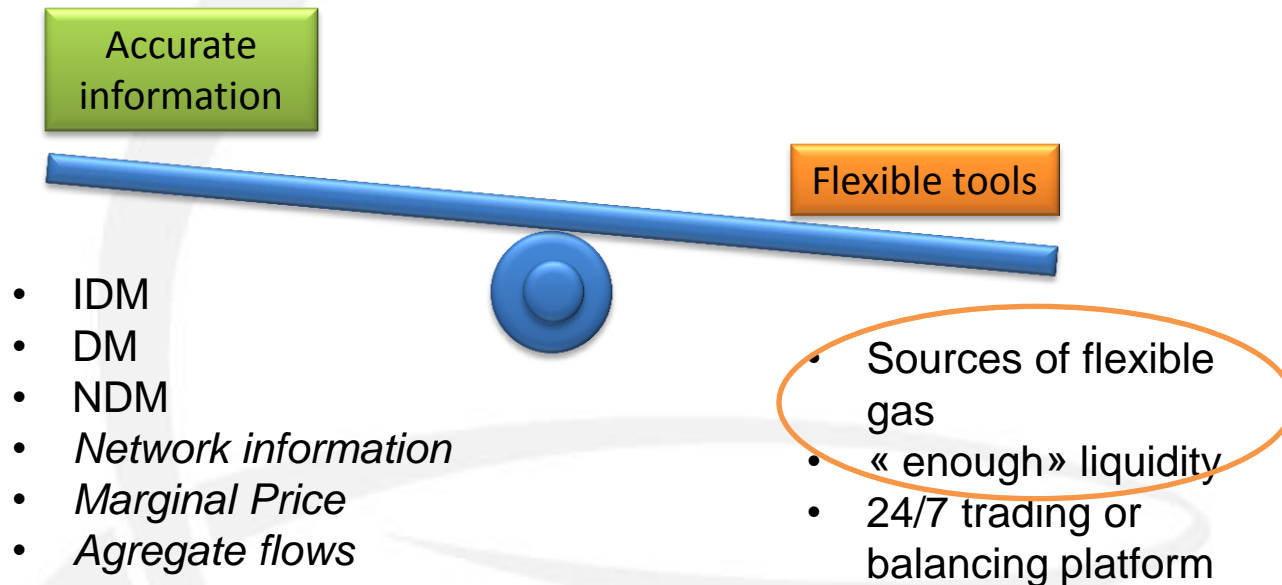
- Sources of flexible gas
- « enough » liquidity
- 24/7 trading or balancing platform

General comment : *if both sides of the balance are efficient enough, no tolerances will be provided to network users*

Other reasons for tolerances outside of criteria given

Framework guidelines

The FG opens the possibility to give tolerances if not enough liquidity or no access to sources of flexible gas



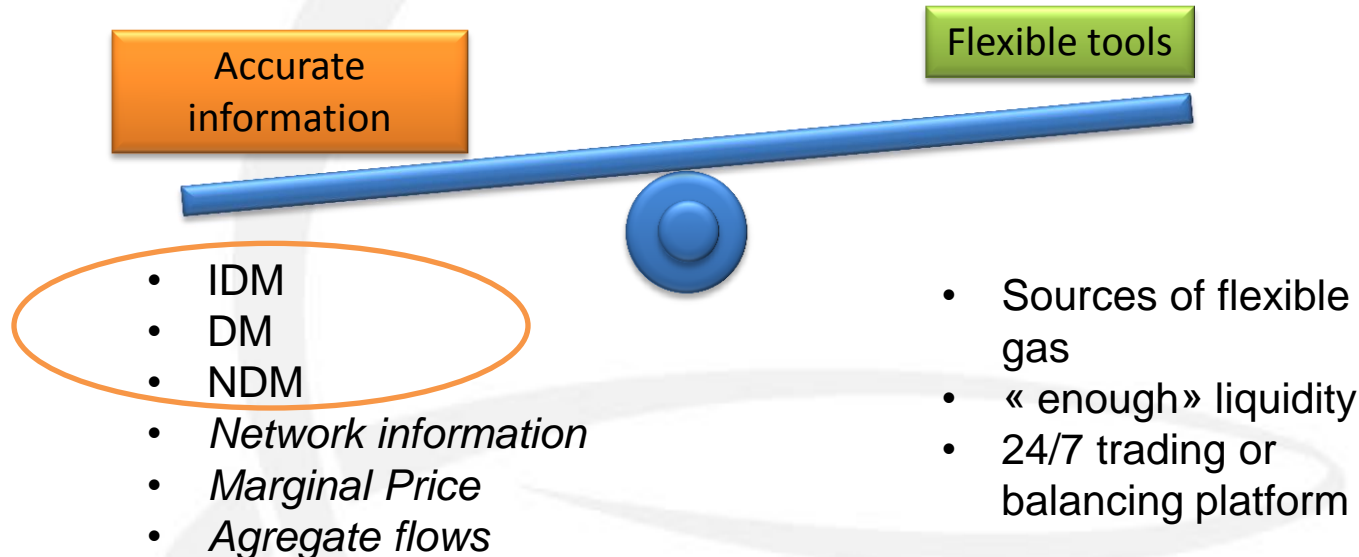
1st comment : *a wholesale market can be considered as liquid enough and still is not opened 24/7 (especially WE issues and evening/night) & balancing is a 24/7 issue*

2nd comment (not linked to tolerances but to Genuine System Needs) : *if no platform 24/7 => it can also justify balancing services for the TSO*

Other reasons for tolerances outside of criteria given

Information provision

The FG don't propose any tolerance options linked to information provision, but still it can be an issue for network users



3rd comment : Inaccuracy and absence of information at a portfolio level, especially in early stages, will be an issue in many countries

- No WD information for DM
- Accuracy of NDM forecasts

=> Consideration : tolerances should be an option for all these issues, as an interim measure in the network code

Tolerances

Exploring options for linking to system and users needs

Network user

Flexible tools

Accurate information

Principal reasons

- Not enough sources of flexible gas
- Not « enough » liquidity
- Not opened 24/7 trading or balancing platform
- No information (DM)
- Not accurate information (NDM)

Tolerances

System (TSO)

More balancing services (i.e. if not enough liquidity or not 24/7)

Possibly more frequent actions on the market (no information or inaccuracy at the portfolio level => more system imbalance to manage)

FG : The tolerances **shall reflect genuine system flexibility**

However, tolerances are more linked to balancing issues for the network user, which implies that the TSO finds temporary solutions to manage the system to keep it safe while tolerances will be offered (or keeps longer some current balancing services)

Tolerances

How to define sources of flexible gas in this context or wholesale market being liquid enough

The FG allow tolerances if not enough sources of flexible gas for the network user or wholesale market not liquid enough

What can be considered as not enough access to sources of flexible gas ?

- Number of entry/exit points in a balancing zone (3 at least ?) ?
 - The smaller the zone is, the less likely to have multiple sources of flexibility
- *How flexible is a source ?*
 - Linked to possibility of renominations, so about contractual rules at each source
 - Linked to possible non EU entry/exit points of the balancing zone ?

What can be considered as not enough liquid wholesale market ?

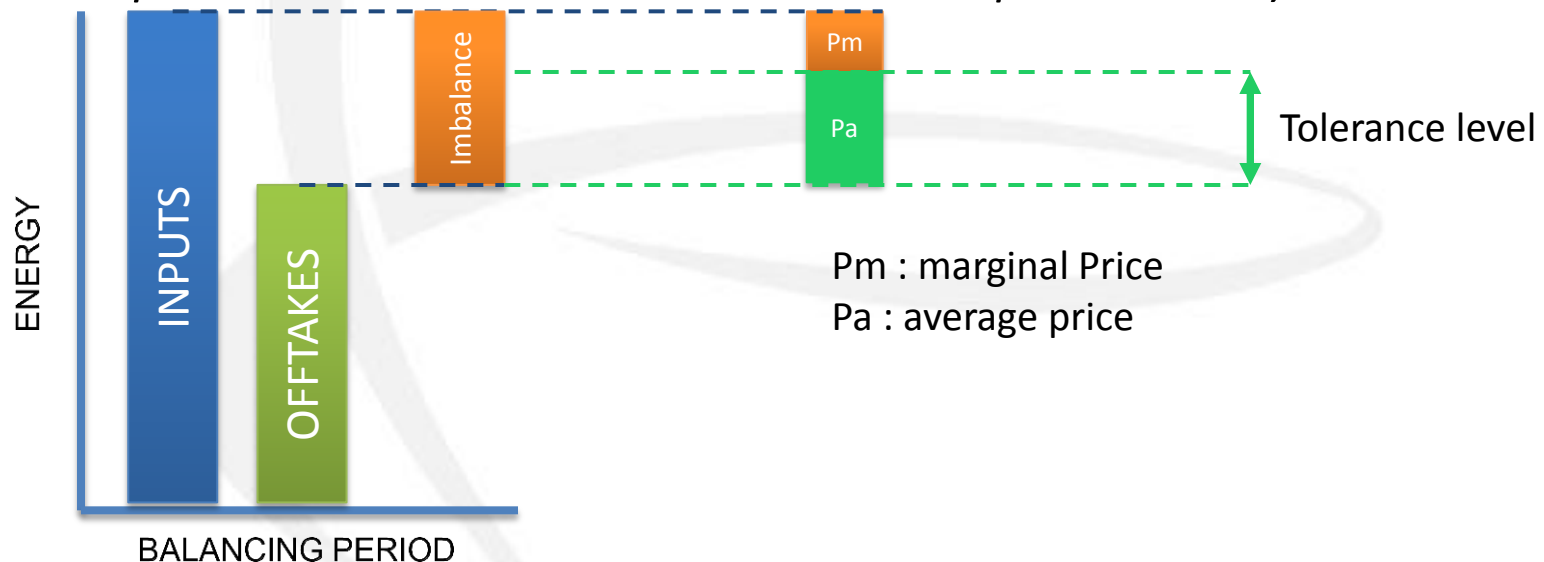
- *Following comments at SJWS, is it more a question of depth of the wholesale market or liquidity ?*

Rules for Tolerances (1/ 3)

Imbalance charges

Consideration :

- Do we want to develop many options for an interim measure (at least considering daily tolerances) ?
- Do we propose the following diagram as the base case (which doesn't mean other possibilities are ruled out but not developed in the nc) ?

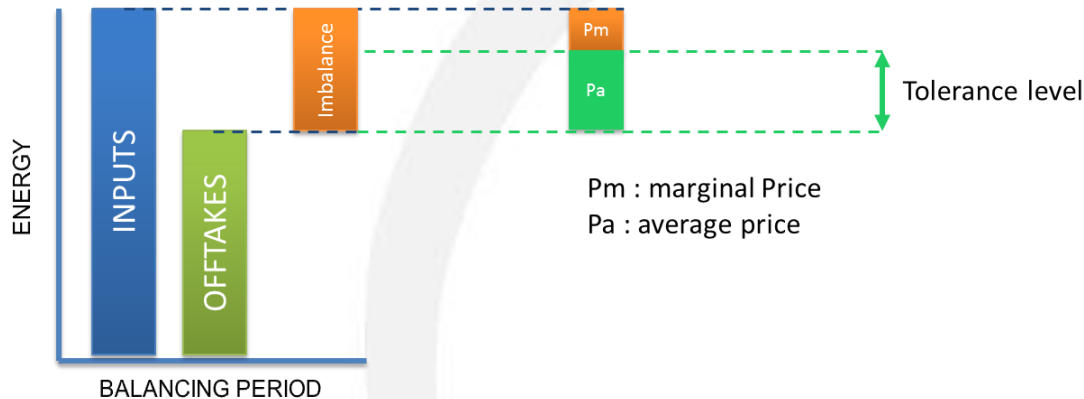


Rules for Tolerances (2/ 3)

Threshold

Network user level

System level



NU
1
NU
2
NU
3

The sum of the tolerances provided to each network user represents an envelope of the system imbalance the TSO will have to manage without the contribution of network users

Network user's point of view

Threshold linked to sources of flexible gas access, liquidity, accuracy of information

TSO's point of view

The bigger the threshold is, the less efficient the marginal price is. Which means balancing will remain the responsibility of the TSO.

As an interim measure

This threshold will be re-evaluated each X year(s) considering the evolution of liquidity (...) in order to be reduced to 0 when the interim measure is considered not useful anymore (max 5 years)

Rules for Tolerances (3/ 3)

needs of small users and new entrants

Considering the principal reasons to offer tolerances :

- Not enough sources of flexible gas
 - Not « enough» liquidity
 - Not opened 24/7 trading or balancing platform
 - No information (DM)
 - Not accurate information (NDM)
- The three first ones are a shared issue, whatever the size of the network user is
 - The last two ones will be a more prescient issue for small users and new entrants and are directly linked to portfolio's size and categories (IDM, DM, and NDM)

Considerations :

- Small users and new entrants could be considered regarding their delivery portfolio (offtakes)
 - a more important percentage of tolerances for delivery capacities (DM and NDM) not reaching XX MWh/d
 - Or a lower level of consumption than 2% of global consumption considering historical data of end-consumers in the portfolio of the new entrant or small user
- Limited to new entrants who have offtakes and inputs, i.e. not just virtual trading point activities?

Discussion points – Tolerances

- Special considerations for new entrants / small users?
- To address
 - Information inadequacy/inaccuracy (eg: NDM Derived Forecast v Allocations) ?
 - Illiquidity / poor access to flexible gas?
- To offer exposure reduction via price based tolerance



Appendix

Basic Worked Example

Worked Example

Scenario:

- A Network User called “G Gas” is provided with an imbalance tolerance of 200 units for Gas Day “D”
- For these 200 units G Gas is not subject to marginal pricing

Gas Day “D”

G Gas Outcomes	Market Outcome
<ul style="list-style-type: none">• Allocated Inputs of 2,000 units onto the Balancing Zone• Allocated Offtakes of 2,250 units off the Balancing Zone	<ul style="list-style-type: none">• Average Price = 35 c/unit• Marginal Buy Price = 40 c/unit• Marginal Sell Price = 30 c/unit

So what is “G Gas Daily” Imbalance Charge

$$\begin{array}{rclcl} \text{Inputs} & - & \text{Offtakes} & = & \text{Daily Imbalance Quantity} \\ 2,000 & - & 2,250 & = & -250 \end{array}$$

G Gas has a negative Daily Imbalance Quantity meaning it must buy gas at the Marginal Buy Price

If it had no tolerance:

$$-250 \text{ units} \times 40 \text{ c/units} = 10,000\text{c to be paid to TSO}$$

But with the tolerance.....

$$-200 \text{ units} \times 35 \text{ c/units} = 7,000 \text{ c} \quad (\text{tolerance applied})$$

$$-50 \text{ units} \times 40 \text{ c/units} = \frac{2,000 \text{ c}}{9,000 \text{ c}} \quad (\text{outside tolerance})$$

$$\text{Reduced exposure from tolerance} = 10,000 \text{ c} - 9,000 \text{ c} = 1,000 \text{ c}$$