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Gas Target Model Review and Update

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GTM update



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1. Security of supply and upstream competition

- Objective, status quo, recommendations

2. Wholesale market functioning

- Objective
- Updated criteria, status quo, self-evaluation process
- Recommendations

3. The role of gas in complementing RES electricity generation

- Objective, status quo, recommendations

4. New uses of natural gas

- Preliminary description of topic, ACER study

GTM recommendations

Security of supply and upstream competition

IEM as precondition for enhanced security of supply

- Priority of **market**-based measures
- Intervention only in specific cases (limited)

We maintained the criteria developed in the original GTM (2011)

- all Member States should try to reach a position in which their Residual Supply Index (RSI) exceeded 110% for more than 95% of days/year; and
- 3 supply sources

→ 13 Member States do not meet the GTM target. These include almost all Eastern European states.

Member State	Number of sources	RSI
Austria	3	143%
Belgium	8	279%
Bulgaria	2	13%
Croatia	5	125%
Czech Republic	3	159%
Denmark	2	22%
Estonia	1	0%
Finland	1	0%
France	13	137%
Germany	4	116%
Greece	9	131%
Hungary	4	60%
Ireland	2	8%
Italy	12	108%
Latvia	1	0%
Lithuania	1	0%
Luxembourg	4	0%
Netherlands	6	189%
Poland	3	56%
Portugal	6	93%
Romania	4	104%
Slovakia	2	369%
Slovenia	5	74%
Spain	12	159%
Sweden	1	0%
United Kingdom	11	142%
GTM target	≥ 3	≥ 110%

Updated GTM recommends considering measures to



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- Increase the extent to which existing sources can replace any existing source that is lost
 - Ensure that accessibility of existing gas sources is more geographically widespread
 - Infrastructure investment decisions to adequately reflect value of improved SoS + upstream competition
 - physical reverse flow, spare capacity
- Make the most appropriate use of gas storage / LNG facilities
 - Priority of market based measures and signals
 - » Unbundling of storage products; system balancing prices to reflect value of lost load; entry-exit tariffs to recognise role of storage
 - In addition, regulatory intervention in the event of politically motivated physical supply interruption may be justified
 - Associated interventions, e.g. through funding of PCIs
- Increase the diversity of upstream supply sources
 - Incentivise European TSOs to jointly develop highly complex projects bringing gas from relatively distant / new geographies
 - As last resort in case of overdependence on a particular source of gas legal limitation of the share taken from that source should be considered
- Possible measures to ensure that Member States cooperate fully in a supply emergency and do not restrict cross-border flows to protect national interests

GTM Recommendations

Wholesale market functioning – review of GTM1 criteria



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Criteria	Target
Churn rate <ul style="list-style-type: none">Volume of gas traded relative to physical volume	> 8
Market zone size <ul style="list-style-type: none">Consumption of gas by consumers within a market zone	> 20 bcm (215 TWh)
Number of supply sources <ul style="list-style-type: none">We interpret this to be the number of countries imports are originating from	3
HHI (Herfindahl Hirschman Index) <ul style="list-style-type: none">Measure of concentration amongst suppliers based on energy measured by firm	< 2,000
RSI (Residual Supply Index) <ul style="list-style-type: none">Share of consumption which can be met without largest supplier based on supply capability, i.e. capacity (again on firm level)	> 110 %

Wholesale market functioning

Conclusion of GTM1 criteria assessment



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Large western European gas markets

- Except UK and NL, liquidity below target churn rate and uncertainty regarding further evolution of liquidity
- But existing and transparent gas trading in large market zones
- Pluralism of supply sources, also thanks to LNG, and diverse market structure with imports from multiple firms and production by multiple firms (where applicable)
- But dependence on large suppliers may increase again should gas demand pick up
- **Many consumers (in largest markets) already benefit from wholesale gas competition**

Central and Eastern Europe

- Most gas markets without transparent hub trading and – according to CEER criteria – relatively small to develop into competitive wholesale markets
- Often high concentration on the supply side
- Potential competition in some Central European member states
- But often large reliance on largest supplier, i.e. Gazprom
- **Lack of competition in smaller member states should not be ignored**

GTM recommendations

Wholesale market functioning – new metrics



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'Market participants' need' metrics

Pre-transactional liquidity

1. Order book volumes
2. Bid-offer spread
3. Order book price sensitivity

Transactional liquidity

4. Number of trades

'Market health' metrics

6. Herfindahl-Hirschmann Index
5. Number of supply sources
7. Residual Supply Index
8. Market concentration for bid & offer activities
9. Market concentration for trading activities

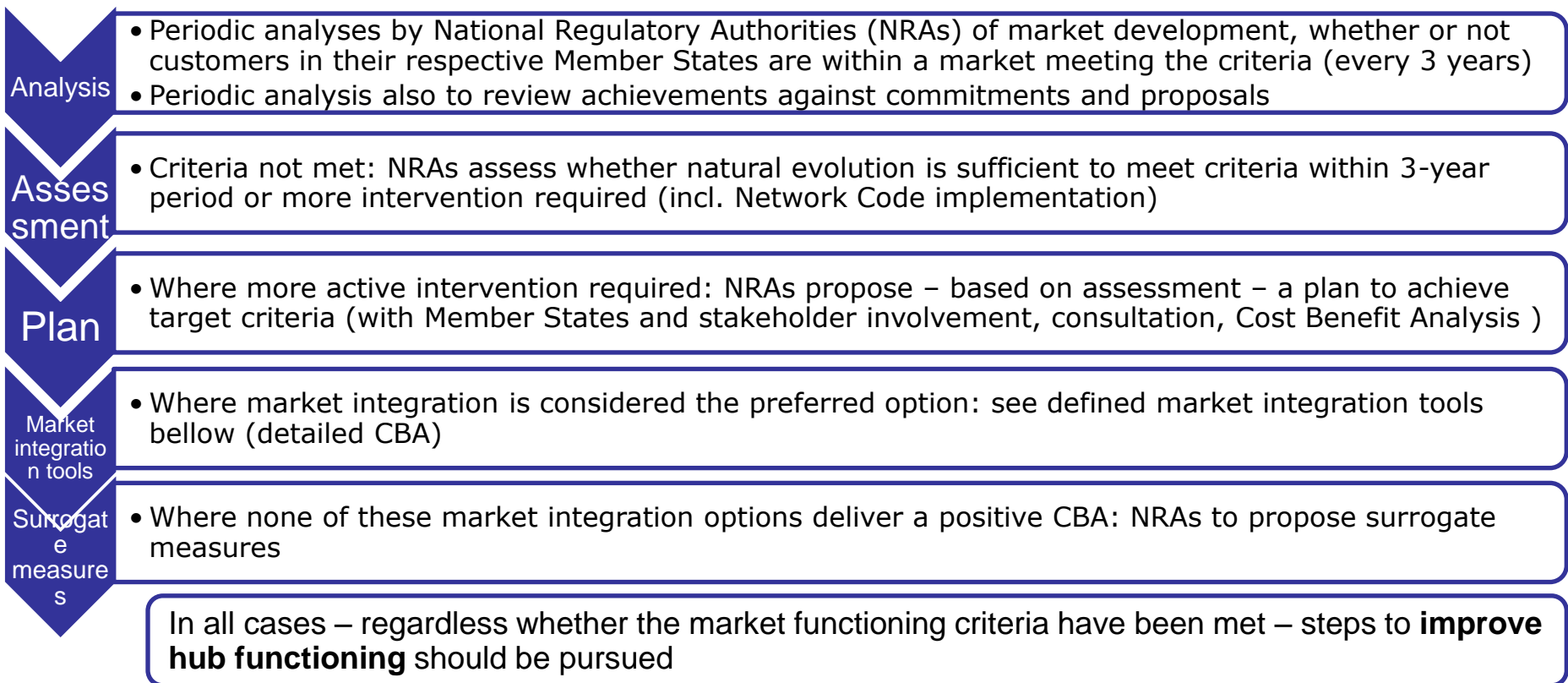
NBP and TTF to serve as yardstick

GTM Recommendations

Wholesale market functioning

Self-evaluation process

Process designed to ensure that in all Member States a regular review of the progress made towards fully functioning gas wholesale markets is undertaken.



Transparent, objective, inclusive process, in close cooperation with Member States and with stakeholder involvement

GTM Recommendations

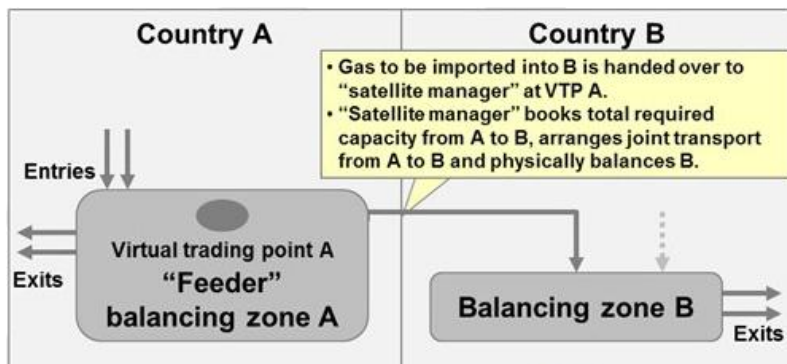
Market integration tools



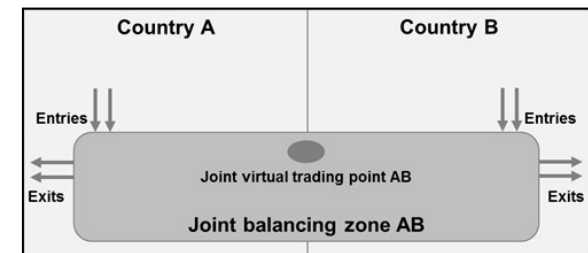
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- As a result of the self-evaluation, if Member States is unlikely to have a functioning wholesale gas market by 2017, structural market reform to be evaluated
- All such measures should be designed to further „market health“ and „meeting participants needs“
- Subject to rigorous CBA
- Options include (but not limited to):

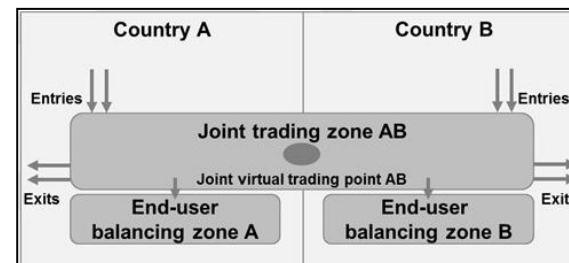
Satellite market



Market merger



Trading region





Market integration in SSE region

- Need for action is recognised by many stakeholders to reap benefits in the form of
 - lower gas prices for end users and
 - improve security of supply
- Different initiatives are ongoing (GRI SSE work plan 2015-2018)
 - Common regional V4 gas market
 - Market integration in CEE (based on CEETR)
- Joint approach to...
 - assessing the options for implementation of a closer integration of the SSE gas markets

GTM Recommendations

Role of gas in complementing RES electricity generation



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- Review of existing arrangements with a view to minimising the extent to which – given existing infrastructure – gas consumers, most notably gas-fired power plants, are artificially dis-incentivised from operating when it would be efficient for them to do so. This review to focus on:
 - Capacity products offered on the domestic exit points
- Measures for full efficient use of gas storage for all shippers (esp. serving unpredictable loads)
 - Incl. full unbundling of storage products
- Improve the joint working of the gas and electricity sectors: obligation on gas and electricity TSO to cooperate → better joint optimisation of both sectors
 - Improved information flows
 - Cooperative review of e.g. industry timelines
 - Potential for improved coordination in developing TYNDPs
- Not to pick winners (in terms of technology) but to enable removing unnecessary barriers which are not addressed through NCs

GTM Recommendations

New usage of gas



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ACER undertook a study to analyse the potential of several new uses for natural gas and to identify the regulatory reforms required to support their further development

- **Examined technologies** include:
 - use of gas in the **transport sector**
 - storage of gas with non-conventional means (**Renewables-to-Gas** applications or conversion of **gas to hydrates**)
 - **virtual pipeline applications** for Liquefied Natural Gas (**LNG**) and Compressed Natural Gas (**CNG**)
- These developments:
 - create new prospects for the increase of gas consumption
 - may facilitate the achievement of the internal EU market objectives

ACER has requested the elaboration of a study to the consultancy company Kantor with the objective to:

- ✓ assess the forecast potential of the new uses of gas
- ✓ assess whether the current/planned regulatory framework promotes or hinders new uses for gas
- ✓ recommend adaptations that may be required

The study's results and recommendations fed into the Gas Target Model



Conclusions Paper ‘Energy Regulation: A Bridge to 2025’ on the ACER website:

<http://www.acer.europa.eu/Events/Presentation-of-ACERs-Conclusions-Paper-Energy-Regulation-A-Bridge-to-2025/default.aspx>

GTM on the ACER website:

<http://www.acer.europa.eu/Gas/Gas-Target-Model/Pages/default.aspx>

Next step:

GTM launch workshop – 16 January 2015, Brussels



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