Market Based Balancing –
A Target Model for Gas Balancing

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“Balancing shall be market based”
We suggest five core principles for a harmonised regime

1. **Daily balancing.** The balancing period is a day.

2. **Primary balancing by Network Users.** The users aim collectively for the network to be physically balanced. There is a commercial responsibility on each individual user to balance their own portfolio, but not an obligation to achieve a physical balance.

3. **Integration with trading markets.** The TSO procures balancing energy on the spot trading markets, primarily within-day.

4. **Cost reflective cash-out.** Cash-out prices reflect the TSO costs incurred: marginal TSO buy/sell action determines cash out of short / long positions. This leads to efficient actions by the TSO and network users.

5. **Information provision.** The calculation of imbalances is based on within-day information provided by the TSO.
How the future model will operate: keeping the system in balance

- TSO buy/sell actions will trigger within-day market activity
- Network users will put in gas/take off gas in response to within-day prices.
- Physics don’t change, flexibility is still available, but more efficiently managed
- Economic net effect will be positive: TSOs procure lower cost flexibility due to portfolio effect and enhanced competition on trading market.
- Locational or temporal products might increase efficiency.

System balance = $\sum$ network users' portfolios

- System sell
- System buy

TSO operational limits

TSO comfort zone

Gunnar Steck
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How the future model will operate: adjusting flows within-day

End of day balancing means lower transactional cost for network users.

Information on your individual portfolio is key: the better your forecast for e.o.d. volumes the less transaction needed.

Individual network user load curve (forecast)

- Network user nominations d-1
How the future model will operate: adjusting flows within-day

Individual network user load curve (forecast adjusted)

- End of day balancing means lower transactional cost for network users.
- Information on your individual portfolio is key: the better your forecast for e.o.d. volumes the less transaction needed.
- Network users need information on individual balance and system balance, updated within-day.
- Forecast deviations for end of day volumes will bring network users to act on the within-day market.
There is a need for transitional measures in most networks.

1. **Balancing period.** The balancing period may be one hour or any symmetrical multiple thereof within a day. The minimum length of the balancing period has to be consistent with the frequency of TSO information provision.

2. **Procurement of system energy.** Until market liquidity is deemed sufficient, the TSO shall have the option to procure balancing energy through a (≤ yearly) tender process on a balancing platform separate to the trading market.

3. **Cost reflective cash out.** Until market liquidity is deemed sufficient to provide a system reference price, the cash-out prices may be derived from a price basket of correlated liquid gas trading markets as a proxy.

4. **Tolerances.** Tolerances shall be granted until the target model is implemented.

→ Transitional” means, that these measures have to end! NRAs to monitor, assess and consult development each year.
The most efficient way to balance supply and demand is through market mechanisms.

Daily balancing is less operationally complex for network users. It therefore encourages new entrants and market liquidity, making wholesale gas markets more competitive and hence efficient.

Every European network is ultimately able to implement daily balancing. Expanding balancing zones to their economic limits helps to provide sufficient linepack.
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