Bundesnetzagentur

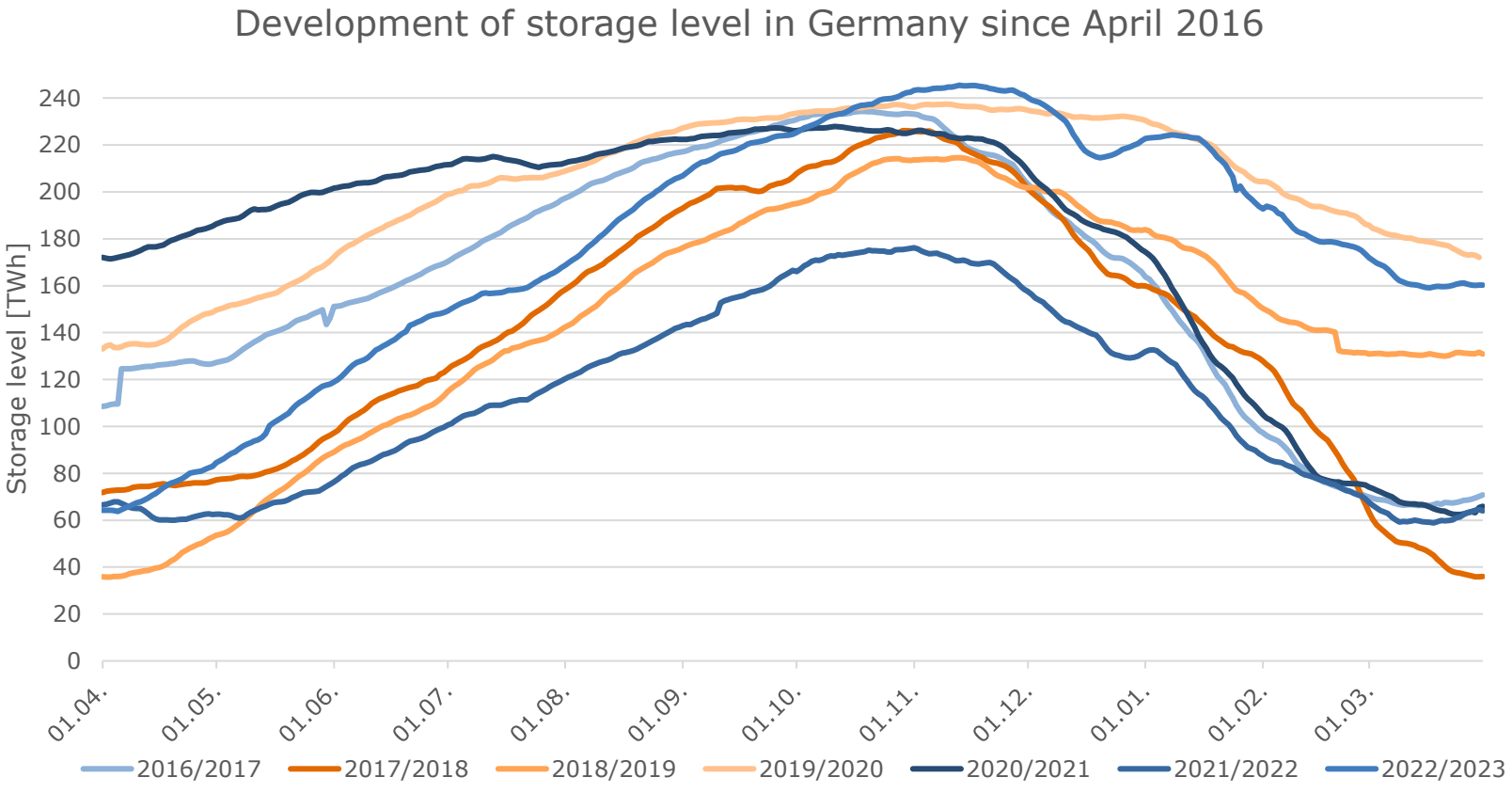
Energy rationing: An efficient way of administering possible gas shortages

Dr.-Ing. Niklas Vespermann

ERRA Annual Meeting

27.04.2023

In the course of 2021, a significantly lower storage level than in previous years had materialized.



Angriff auf die Ukraine

Russland hat den Krieg begonnen

Stand: 24.02.2022 09:51 Uhr

Putin Announces Start to 'Military Operation' Against Ukraine

"The invasion has begun," Ukraine's Interior Ministry said. Putin says he seeks "demilitarization" of Ukraine but has no plans to occupy it.

Nach Putins Einmarsch

Präsident Selenskyj ordnet allgemeine Mobilmachung in Ukraine an

Wegen der »militärischen Aggression« Russlands werden in der Ukraine binnen 90 Tagen Reservisten und Wehrpflichtige aus dem ganzen Land mobilisiert. Das kündigte Präsident Selenskyj an.

25.02.2022, 11.15 Uhr

Timeline: Putin attacks Ukraine – how it happened

Explosions have been heard across Ukraine, with Kyiv saying military sites targeted by Russia in the eastern Donbas region.

The remains of a shell are seen on a street in Kyiv on February 24, 2022 [File: Sergei Supinsky/AFP]

24 Feb 2022 | Updated: 24 Feb 2022 11:01 AM (GMT)

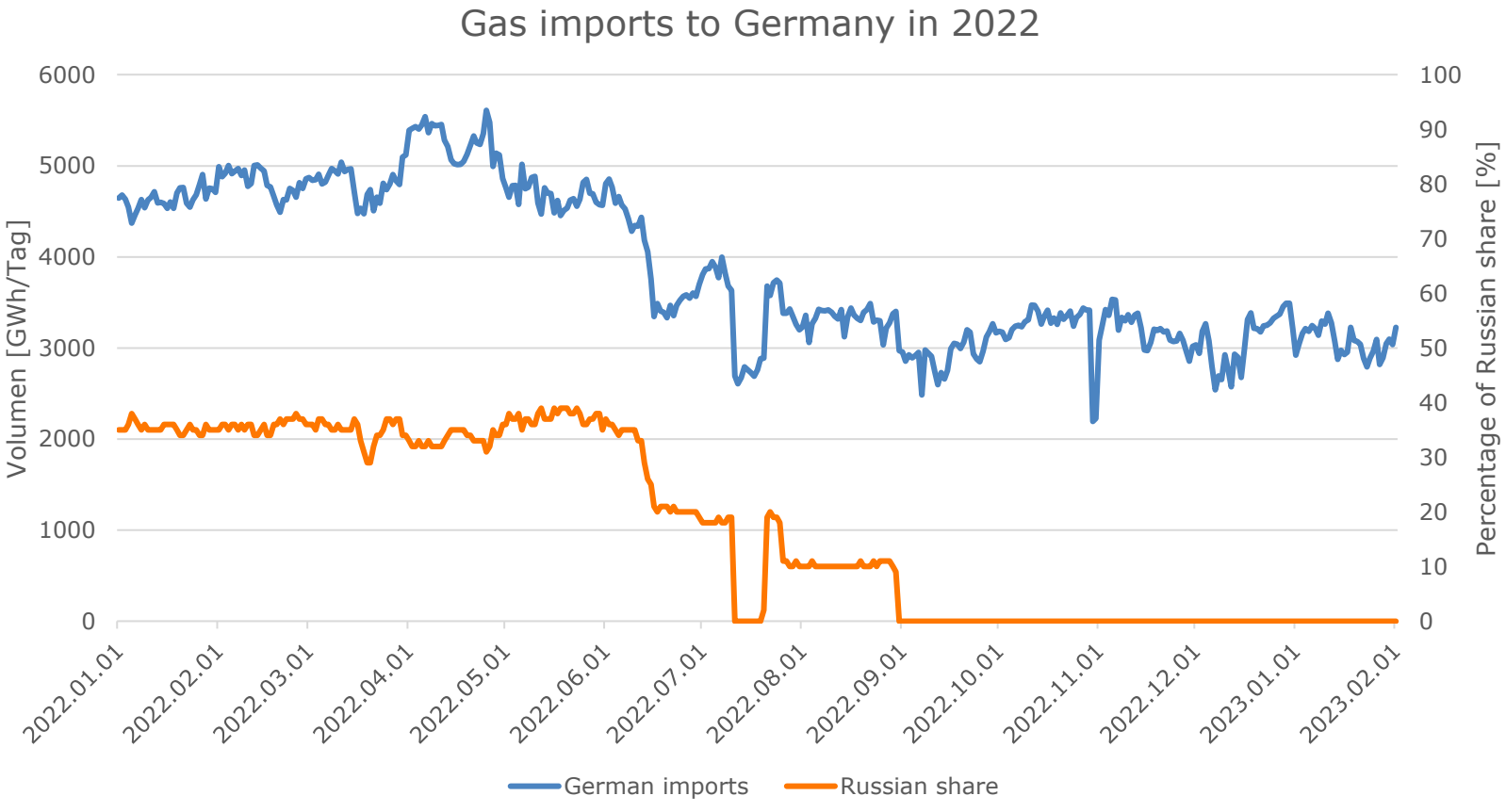
11:40 p.m. ET, February 24, 2022

Top US general speaks with European allies on Russian invasion of Ukraine

From CNN's Ellie Kaufman

Source: https://www.tagesschau.de/ausland/europa/ukraine-bombardements-101.html; https://www.spiegel.de/ausland/russland-ukraine-krieg-wolodymyr-selenskyj-ordnet-allgemeine-mobilmachung-in-ukraine-an-a-b3ac0fc4-9b5a-4b88-91e4-bb70640c73ea; https://edition.cnn.com/europe/live-news/ukraine-russia-news-02-24-22-intl/index.html; https://www.nytimes.com/2022/02/23/world/europe/ukraine-russia-invasion.html; https://www.aljazeera.com/news/2022/2/24/timeline-putin-attacks-ukraine-how-it-happened

… and, in consequence, the complete suspension of gas imports from Russia to Germany.



What would a gas crisis look like?

Market perspective

- High and probably volatile day-ahead and intraday prices
- Insufficient liquidity of traders and retailers
- Production shut downs

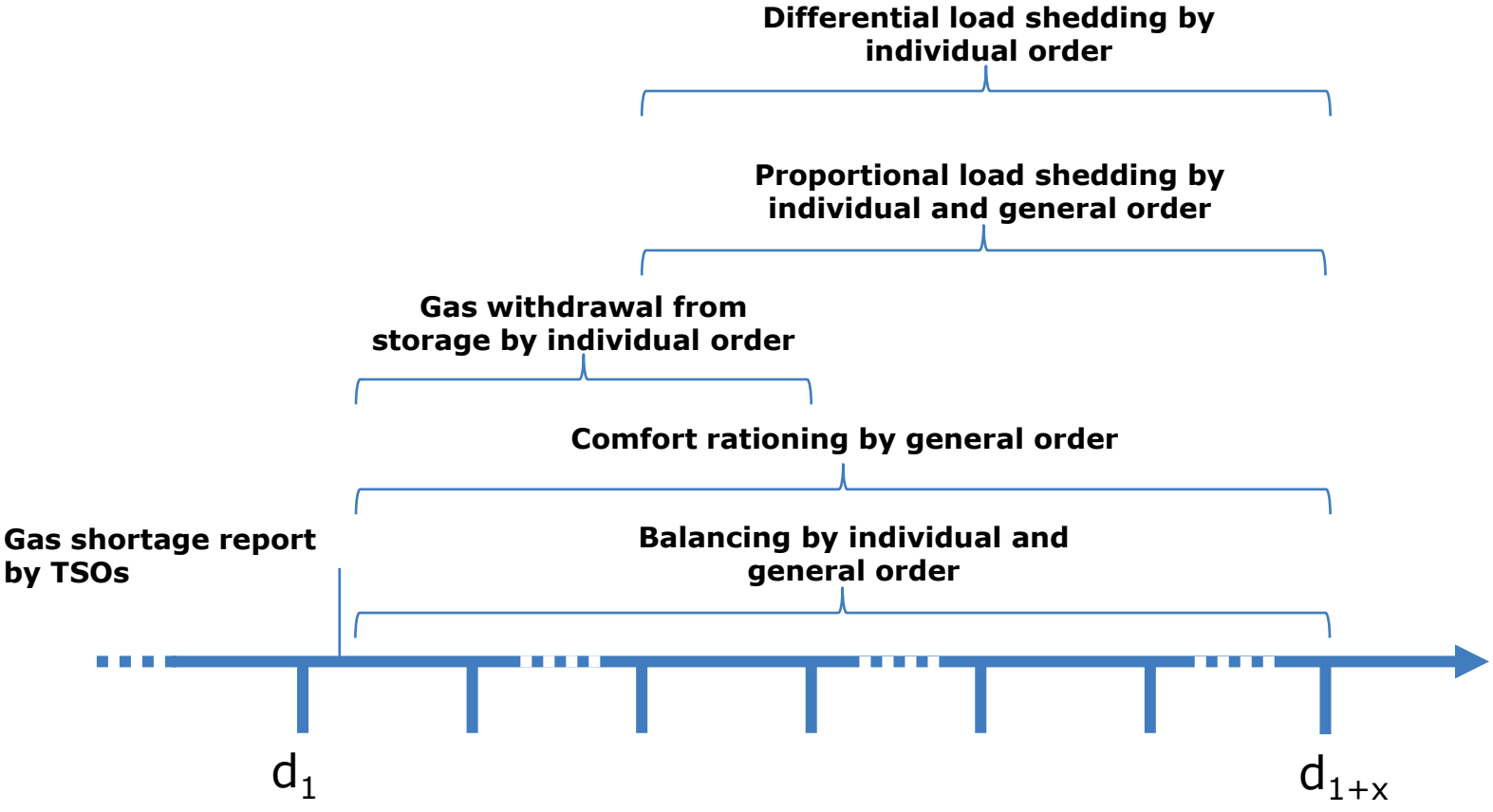
Physical perspective

- Insufficienct balancing power
- Threat of pressure drop along with network collapse

Measures

- Network operators ensuring system stability (EnWG)
- Federal load balancer administring gas budget (EnSiG)

Bundesnetzagentur has developed a detailed and targeted concept of mandatory measures in close cooperation with all relevant stakeholder groups.



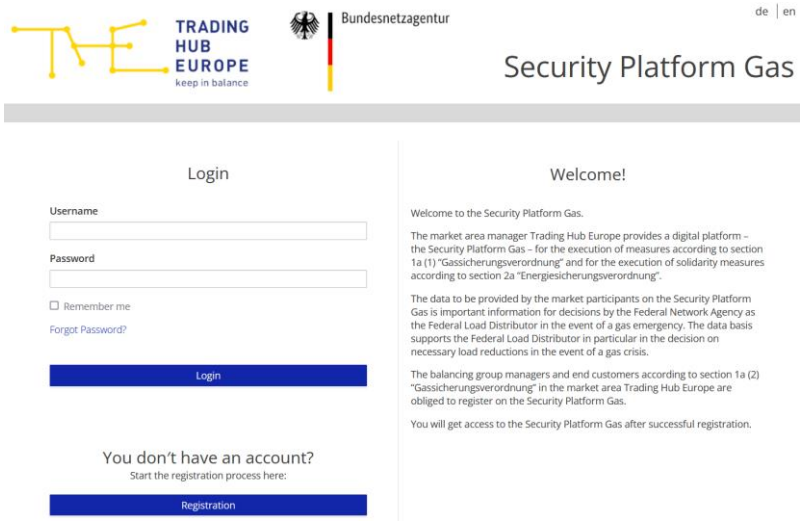
In the context of the SoS regulation, BMWK, THE and BNetzA have already been developing the Security Platform Gas since the beginning of 2021.

Application areas

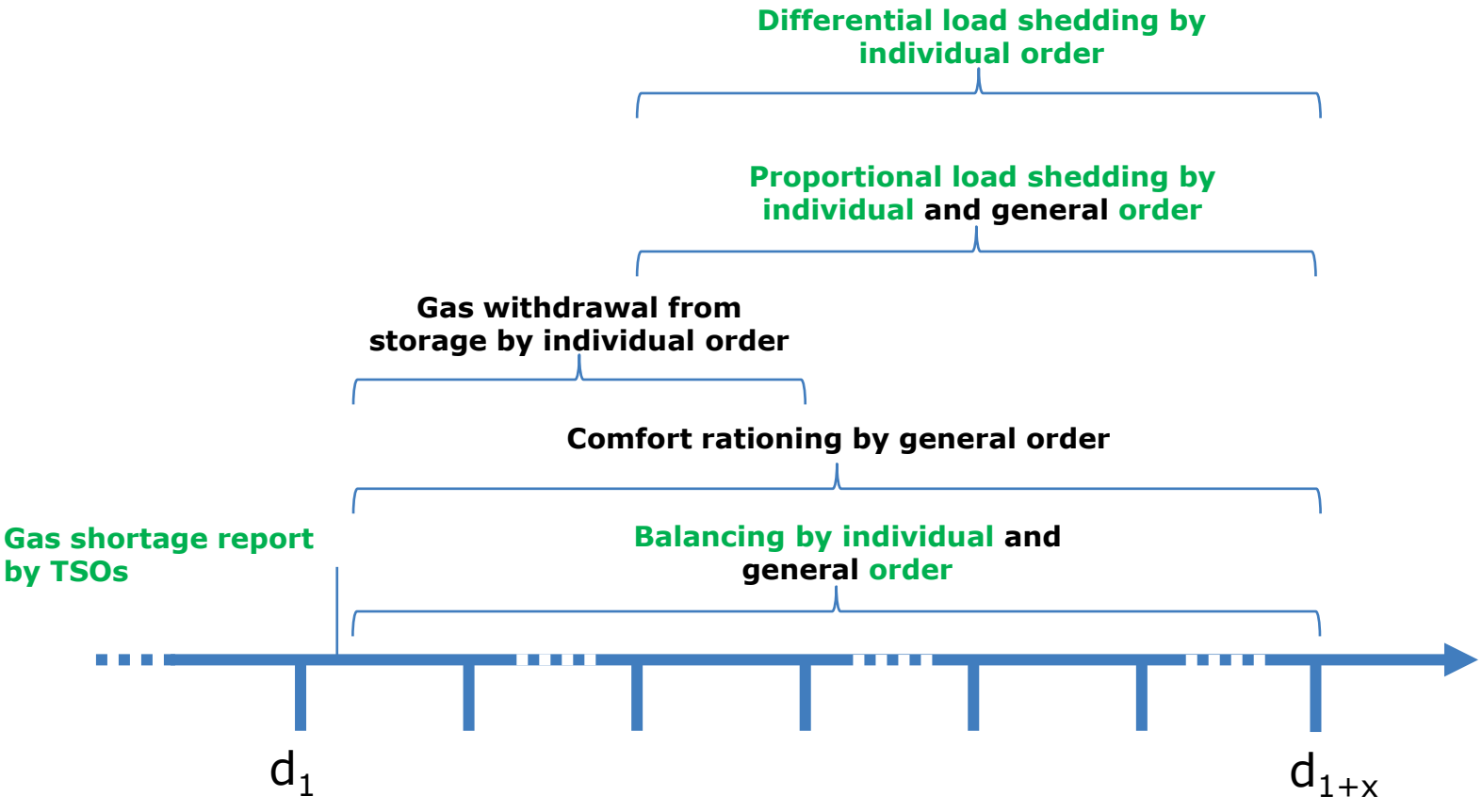
- Identification and procurement of gas volumes in a **national gas shortage situation**
- Administering market-based and non-market-based **solidarity measures**
- Legal basis: **§1a GasSV**

Functions

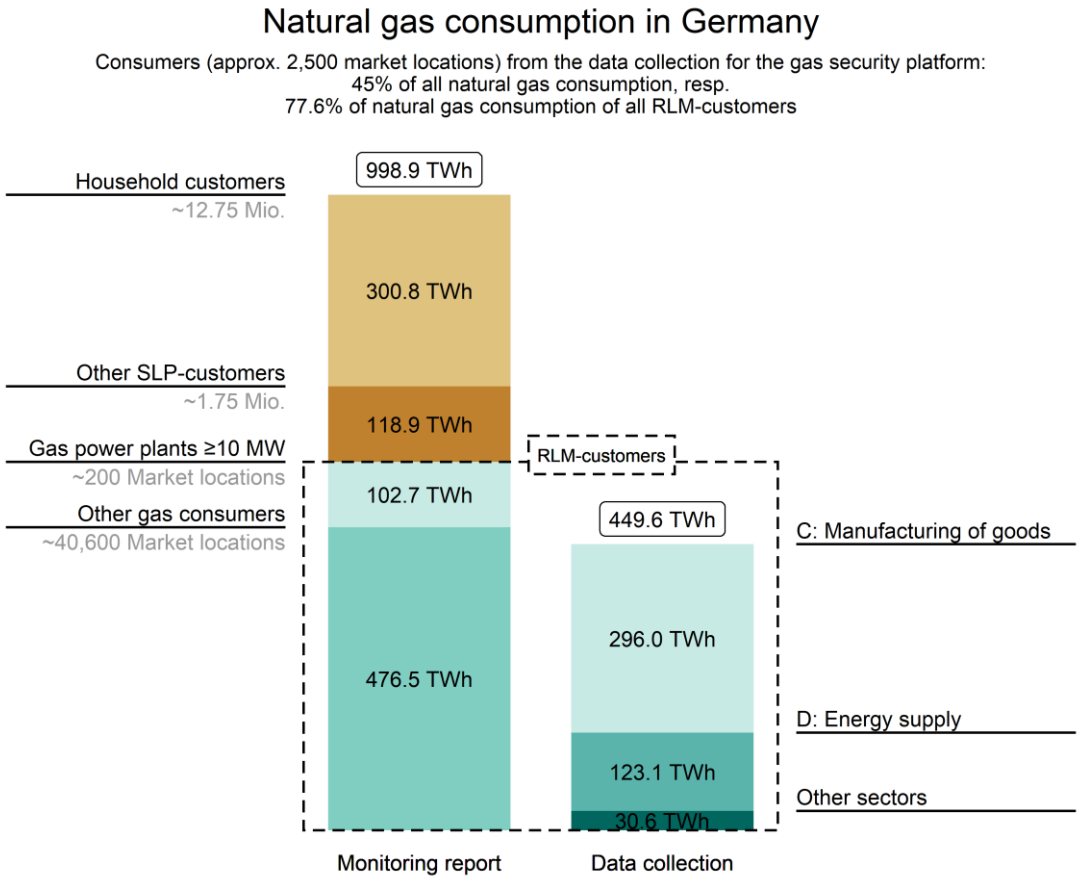
- **Communication** and **data exchange platform** among all relevant stakeholders
- **ICT-supported** identification of load shedding potentials along with its market impacts among end customers ≥10 MWh/h
- Enables an **efficient "resolution"** of a gas shortage situation
- Today, about **3.000 entities** are active on the platform



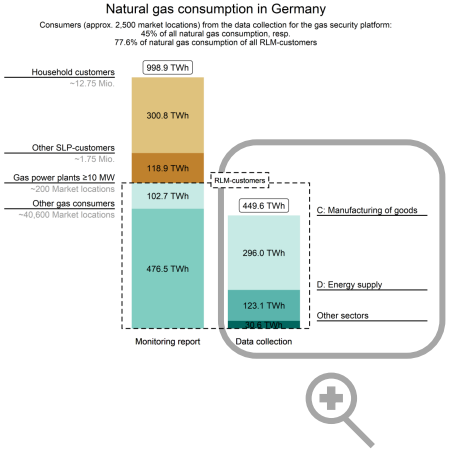
Already today, most of the processes can be completed via the Security Platform Gas.

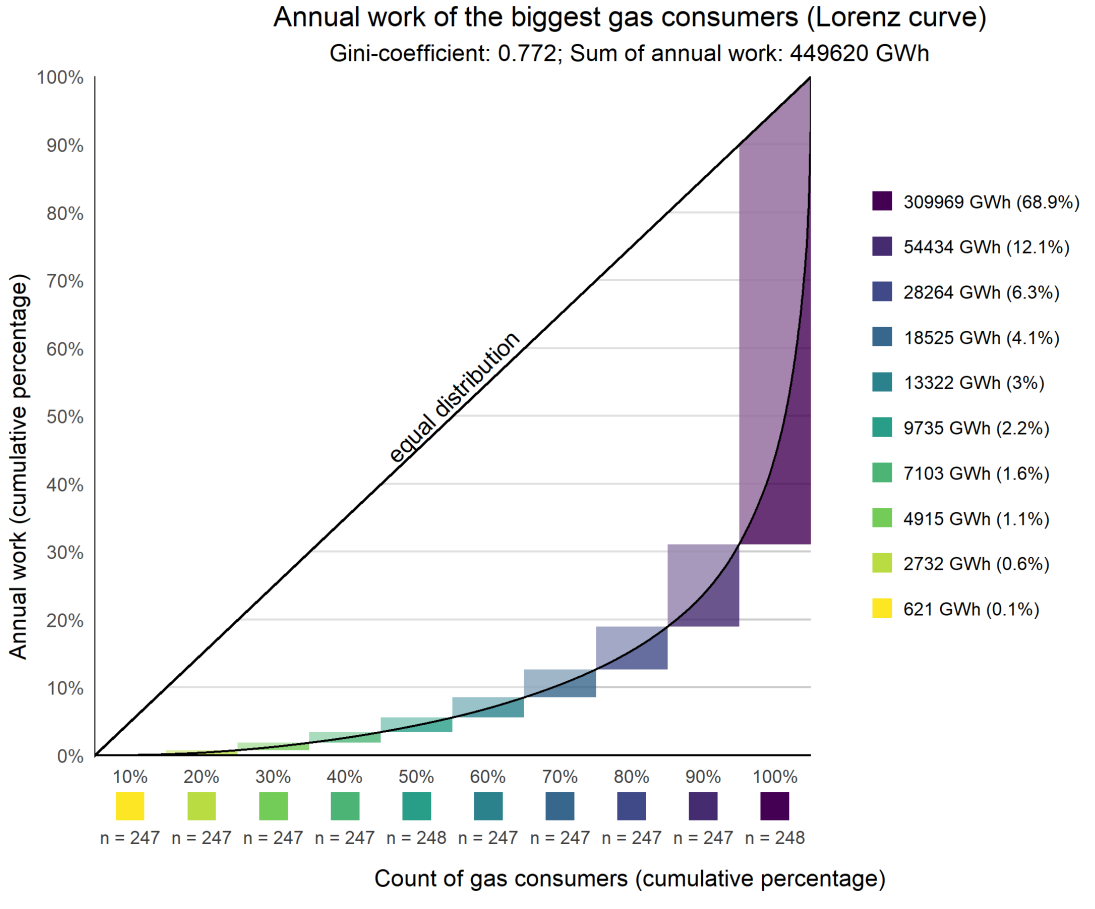


The 2500 largest gas end customers demanded 45% of total natural gas consumption in 2021.

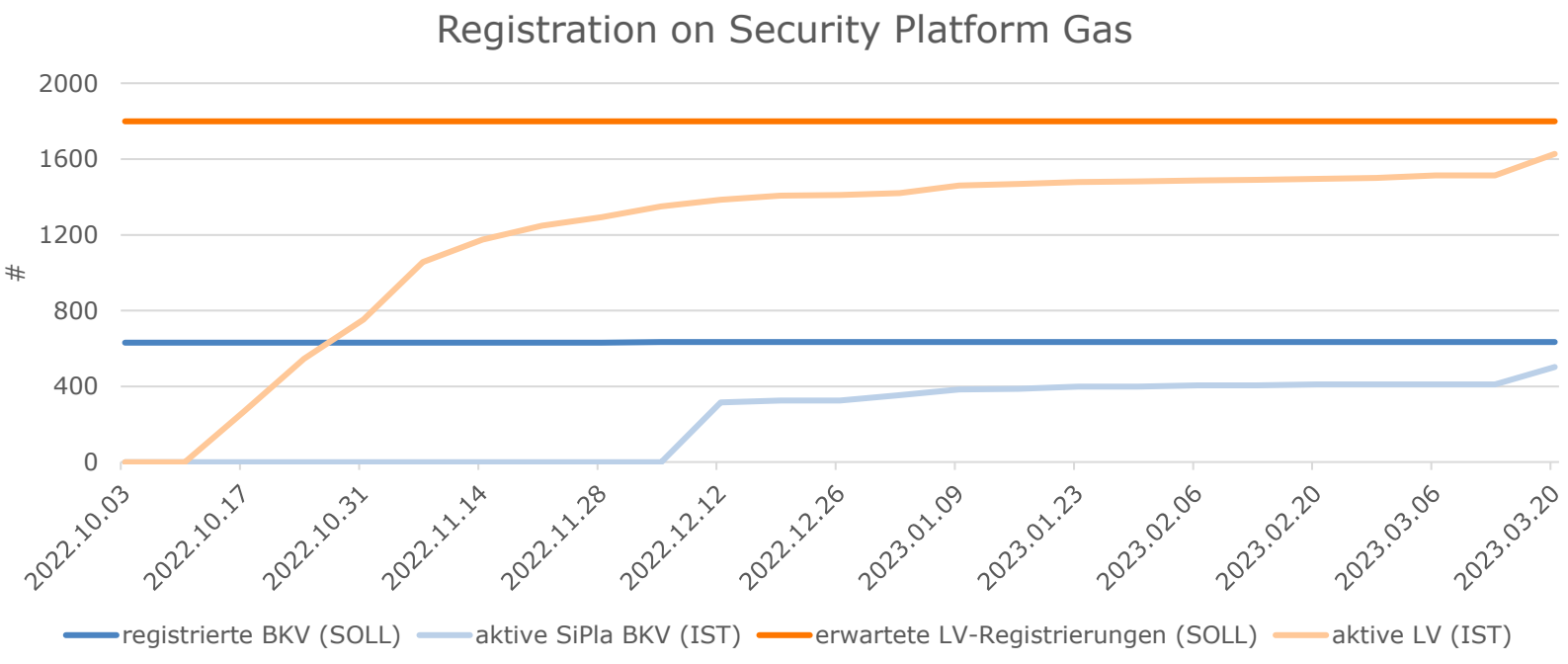


Natural gas consumption in Germany is excessively unevenly distributed and concentrated among the largest gas end customers.





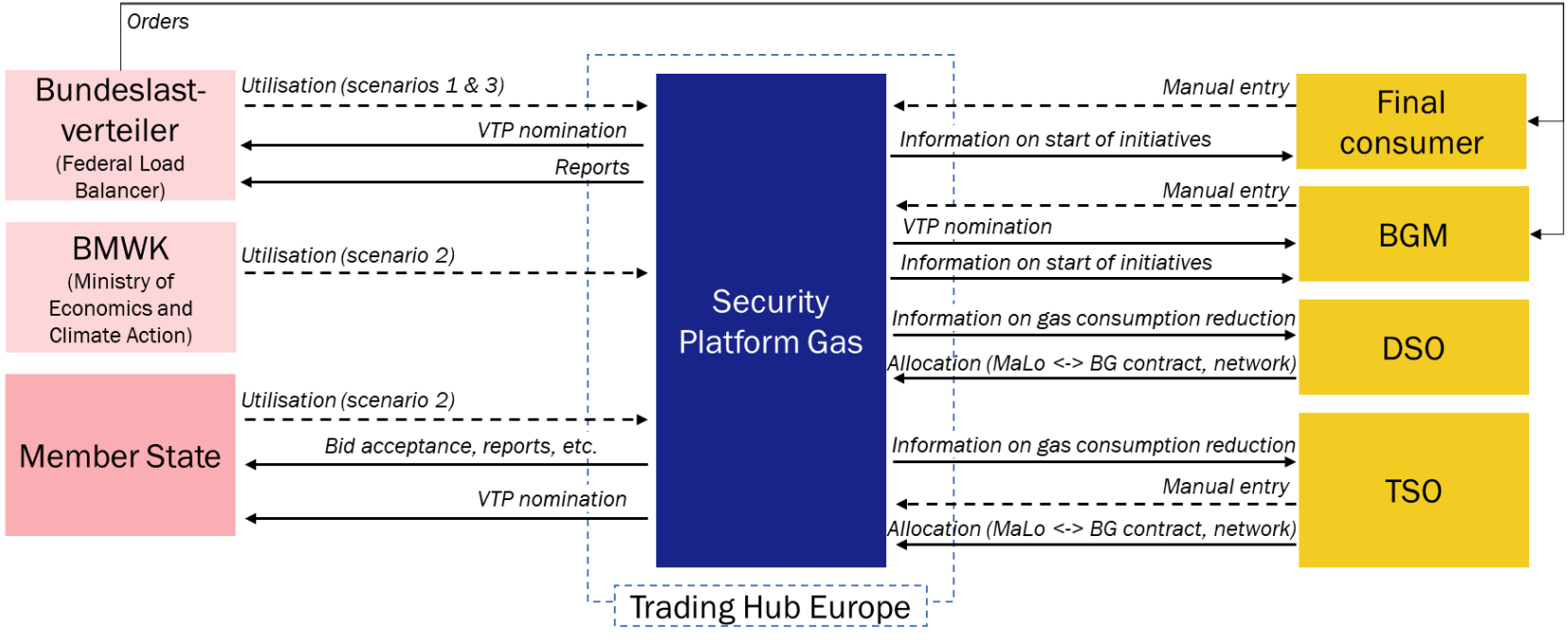
A large number of the players required to register are already registered and have entered data on the Security Platform Gas.



Ongoing administrative proceedings

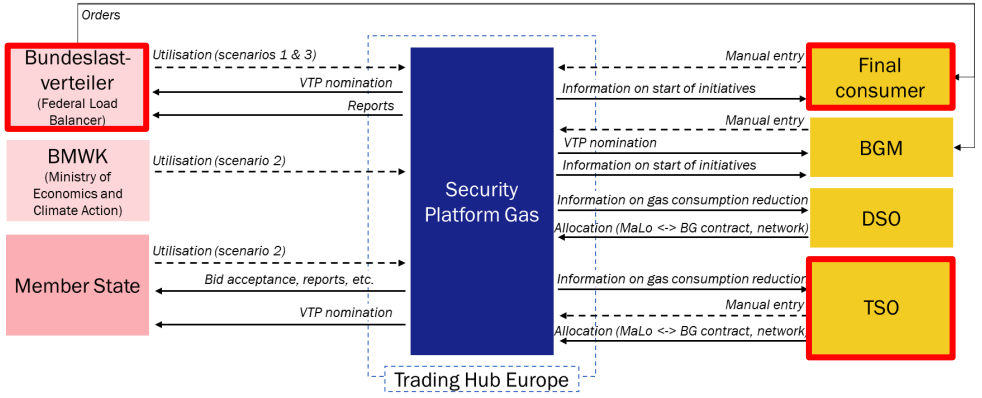
- Registration obligation according to §1a (2) GasSV
- Data entry and transmission obligation according to §1a (6) GasSV

The Security Platform Gas...



Stakeholders communicate with each other simultaneously.

1. **Federal Load Balancer** initiates rationing process
2. **TSO** submits gas shortage report
3. **End customers** update gas consumption data
4. **Federal Load Balancer** decides for *(i)* proportional or *(ii)* differential load shedding
   - Ex ante damage assessment based on industry and socio-economic data
   - Identification of most cost-efficient rationing potentials
   - Selection of rationing portfolio
5. **Federal Load Balancer** submits oders to individiuals



Currently, the Security Platform Gas is extended by network operators, storage operators, and storage users.

Network operator registration

- Identification of end customers and storage operators obliged to register

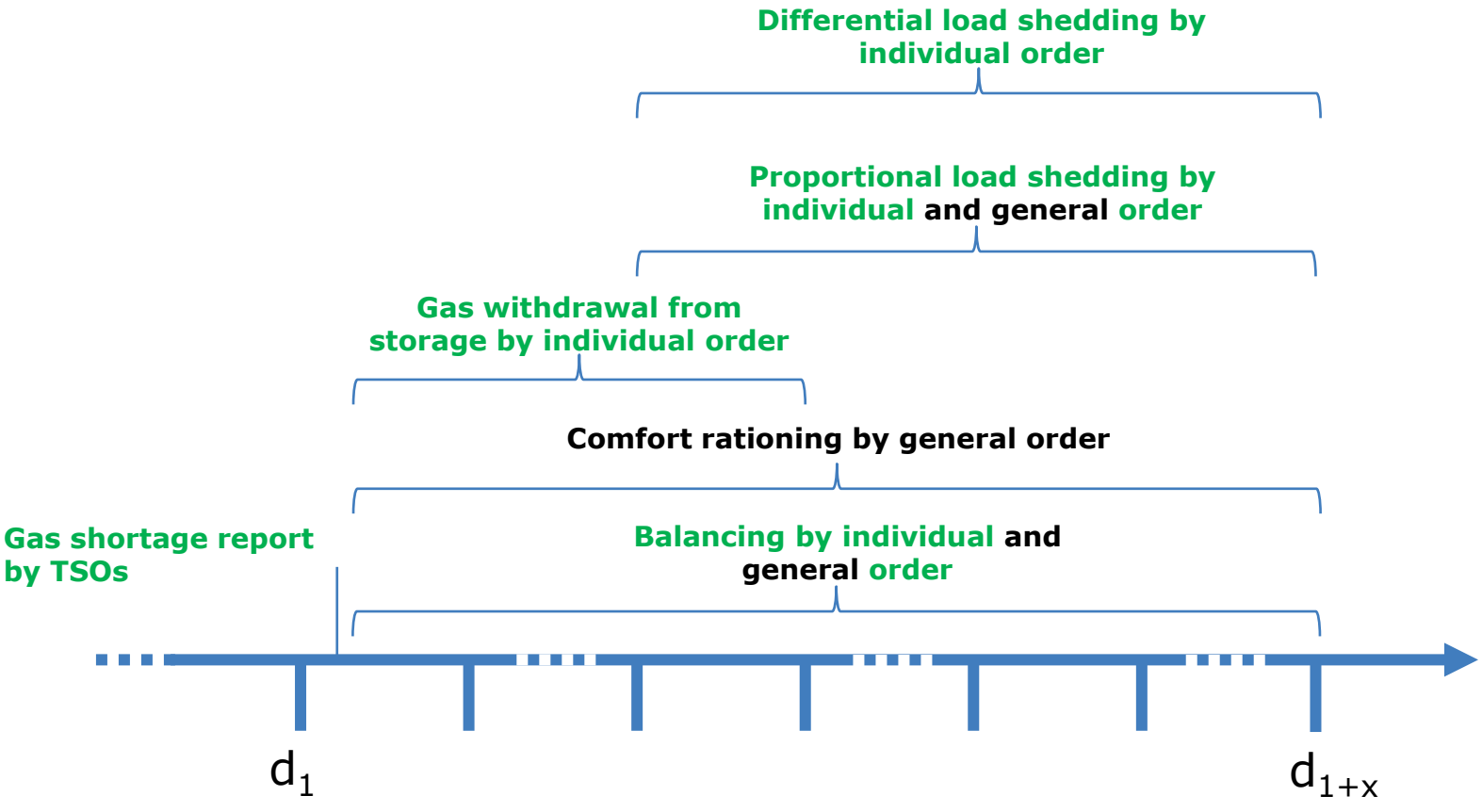
Storage operator registration

- Identification of storage users obliged to register
- Data provision to storage users

Storage user registration

- Validation of the storage operator data
- Order reception via Security Platform Gas

… thereby, a possible gas shortage could be efficiently managed in the coming heating season.



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Gas crisis prevention

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