

Priority gas supply to the glass industry

Summary of Glass Alliance Europe input to the European Commission's work on prioritisation Criteria for non-protected customers (REPowerEU Plan)

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Against the background of the energy crisis, disruptions in gas deliveries and the risk of shortages, **Glass Alliance Europe welcomes the work of the European Commission to develop prioritisation criteria for non-protected customers**, for the supply of gas in case of shortages.

The glass manufacturing industry in the EU consumes roughly 4.5 bcm of natural gas a year, which represents slightly below 1% of the EU's inland gross consumption of natural gas. The near totality of gas consumption is used to power glass furnaces where raw materials and recycled glass are melted to produce new glass.

Glass making is a high-temperature continuous production process, which requires that the melting furnace is always maintained hot, i.e. between 1100 to 1600°C depending on glass sectors, throughout the furnace's lifetime of 10 to 20 years. The glass industry is singular in this respect as glass melting installations cannot stop, without serious and lasting damage to industrial assets and exposing the safety of workers.

A constant flow of natural gas must be ensured throughout a glass furnace's lifetime hence the importance that prioritisation criteria recognize this specificity of the glass industry and guarantee priority gas dispatch to glass melting installations.

In its input to the European Commission's work on prioritisation criteria for non-protected customers, including industry, **Glass Alliance Europe calls for the concept of 'least damage possible' to be included** as one of the most prominent criteria. 'Least damage possible' expresses the extent to which profound and lasting damages to industrial assets or to the environment will occur in case of gas shortage.

This concept is different from the one on gas dependency in the sense that an economic sector or industry can be dependent on gas for its operations but may be in a capacity to stop or heavily reduce gas input without damage to installations or the environment. This is not the case of the glass sectors, which are continuous process industries where glass melting furnaces must be kept 'hot' (at least 1000°C) or else the manufacturing installation is irreversibly damaged. There is therefore a need for a criterion distinguishing between these different industrial realities, which can be expressed as 'least damage possible'.

Summary of Glass Alliance Europe contribution

Relevance and weight of prioritisation criteria

Glass Alliance Europe suggests that **two criteria for industrial sectors prioritisation are given more prominence** than the remaining three others. These two criteria are:

- ✓ 'Least damage possible' - This is meant to ensure that no economic sector is sacrificed over the long term and that economic rationality and environmental concerns are considered in the definition of prioritisation of industry customers.
- ✓ 'Reduction and substitution possibilities' - This is meant to ensure that the plan is anchored into technical and industrial realities and is ultimately 'implementable'. The assessment of this criterion should give prominence to technical and industrial feasibility of reducing (or stopping) gas consumption in a short time frame rather than to economic considerations such as whether products can be sourced from imports or not or 'economic reliance'.

Three other criteria should be considered, although with less weight:

- ✓ 'Social and economic criticality' - This criterion is important for the continuous functioning of essential societal services however defining which are essential services can be very debatable and the complexity of the value-chains and interdependencies will inevitably lead to loopholes. In fact, this approach has shown its limits in countries implementing it at the time of COVID lockdowns. Some essential services could not function properly because some industries supplying them upper in the chain had not been considered at the time of defining the 'essential' services.
- ✓ 'Cross-border supply chain criticality' - Same comment than above criterion.
- ✓ 'Gas dependency' (for operating) - The criterion is relevant in so far that disruptions to the economy should be minimised. However, this criterion is not offering a response in case of major gas shortage when a distinction between these sectors in need of gas supply for operating and the sectors in need of gas supply to safeguard the integrity and safety of the installations may be needed.

Glass Alliance Europe shares the global view that anything impacting health, safety, security and food can be defined as 'socially critical'. When trying to mitigate the impacts of an energy shortage, energy production and infrastructure (including transport), and energy savings activities should equally be considered as 'socially critical'.

Most of the glass production is devoted to these sectors. Around 60% of glass production is used directly by the food and pharmaceutical industry (food containers, pharmaceutical jars, vials, and syringes). Around 15% of glass output is used in both renewable energy production (photovoltaics, wind energy) and energy savings applications (building insulation). A lower level of output is used in defence applications such as glass reinforcements for composites in the aeronautic sector, as well as in glass reinforced plastic pipes for potable water distribution networks.

When implementing these criteria, **Glass Alliance Europe calls on authorities to work in cooperation with the relevant affected industrial partners.**

Internal Market considerations

To Glass Alliance Europe, the proper functioning of the single market is essential and it is even more important to safeguard it at times of crisis.

The glass industry is organised and operating on a continental scale within the EU's single market. Any restriction in place in a country, not aligned with those of other EU Member States has repercussions on operations in the glass sector. Member States must realize that the supply of certain goods can be dependent from the ability of manufacturers to continue production in another Member State. **An EU coordinated approach is therefore preferable to individual diverging approaches from Member States.**

Distortion of competition between sectors or competing materials and within sectors between competitors manufacturing comparable products should also be avoided.

Reliance on stocks and imported production

While data on the level of stocks in the different glass sectors are not collected for competition compliance reasons, **Glass Alliance Europe warns against the idea of relying on stocks of glass products.**

Based on today's market realities of high tensions on the EU market to source certain glass products and considering all manufacturing disruptions generated by the COVID crisis but still felt today, one should not expect that utilizing stocks would allow for smoothness provision of glass products onto the market in case of production stoppages.

It must be borne in mind in that respect that, should glass manufacturing plants have to stop, they will need complete rebuilds before they can resume production. In normal times, this takes 1 to 1,5 years between planning and works delivery. Such lead time would be longer if many sites had to undergo a rebuild considering limitation and logjams with materials and machinery suppliers and engineering firms. No glass manufacturer can rely on stocks for so long. Most customers of the glass industry keep stocks of glass for few days only.

Glass Alliance Europe believes that relying on imports from outside the EU is neither sustainable nor acceptable from an industrial, social, economic, technological, strategic and security point of view. Relying on imports would fully expose some of the glass value- chains (e.g. transport, construction, renewables, electric and electronic devices, defence) to decisions made by external actors, including foreign state-owned companies.

There are already known tensions on the EU market for some glass products (including container glass for the food and health sector) therefore relying on stocks or on imports would only serve to exacerbate competition to source glass thus fuelling market tensions and inflation. Relying on trade is also difficult to conceive at a time when maritime transport is disrupted globally.

Effects of stops and possibilities for reduction and substitution

As explained at the start, stopping the fire on a glass furnace, meaning temperatures going below the 'hot hold'/melted glass point, means irreversible damage to the installation, i.e. collapse of the refractories, solidification of the liquid glass inside the furnace, and if uncontrolled, risks of glass leakages, fire and explosions. A stopped installation will need a complete rebuild before it can resume production. In normal times, this takes 1 to 1,5 years between planning and works delivery. Such lead time would be longer if many sites had to undergo a rebuild, considering limitation and logjams with materials and machinery suppliers, engineering firms, and the need for financing.

If such catastrophic scenario requiring the stop of installations was to materialize, **the glass industry would be confronted with the sudden complete loss of industrial assets**, the need to invest between EUR 10 and 80 million per furnace rebuild (depending on the type of furnace and installation) and **the loss of production** for 1 to 2 years. Due to the length of the stop, shutdowns will be accompanied by (temporary) **lay-offs of most employees, with a cascading effect on all the glass supply chains**.

There is **no real possibility to substantially reduce gas consumption in the short term**. While a furnace can be put on 'hot hold', this takes several days and is accompanied with industrial risk. This exceptional measure causes damage to the industrial equipment, increases the risk of injury to the workers, hazards and related environmental impact, and generates substantial losses in production. The energy savings are at best marginal, since they could be offset by the additional energy consumption required to restore the glass temperature at production level. 'Hot hold' is therefore not fit for purpose.

In the immediate short term (i.e. in a handful of months), no equipment's change solution exists to reduce natural gas needs. Only medium to long-term measures can be planned. Technical solutions that could be most rapidly implemented will take around a year time or more to be implemented and in use on some sites only. All these solutions, e.g. electric boosting or raw materials pre-heating, etc. may help reduce the need for natural gas however the latter will remain essential for the glass furnace to remain operational. Most substantial changes to installations can only be undertaken when the furnace is brought to a cold stop at the end of its life and is then entirely redesigned and rebuilt.