

Defining gas price limits and gas saving targets for a large-scale gas supply interruption

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Should deliveries of Russian gas by pipeline be interrupted for an extended period of time, then gas prices could explode to up to several hundred Euros per MWh because gas demand and net-supply are inelastic once price levels exceed fuel shifting options. It is unclear whether these prices will clear the market and facilitate an effective gas allocation across EU member states. On top of this, such prices would imply huge economic costs for households with limited budget and for industry competing in global markets. They would likely trigger policy intervention across a set of EU countries, which, if uncoordinated, may further increase uncertainty and costs.

To avoid such ad-hoc measures, the EU Commission has proposed in the REPowerEU communication to agree already now, ahead of any potential large-scale interruption, on a coordinated European response to a large-scale gas supply interruption. This includes gas saving targets to be achieved by member states through dedicated measures. If the targets were implemented already now at a moderate scale this could ensure the preparation of the necessary governance and programs, facilitate learning and accelerate the refilling of gas storages.

The EU Commission also proposes to define a price limit for the case of a large-scale supply interruption. We find that the price limit if set at 50 Euro/MWh and agreed and applied at EU level could reduce the available LNG imports at a scale corresponding to 6% of EU demand compared to a scenario in which EU and global LNG prices escalate to 300 Euro/MWh. We find that households and consumers save more from lower prices than they incur costs in terms of unserved load even if we assume that the reduced import volumes are not compensated by structured savings programs but with curtailment and if assume that a very high value for the curtailed load of 600 Euro/MWh. The case for a price limit is further strengthened, if international security cooperation were to make some additional LNG imports available already at the level of the price limit, e.g. through government gas saving

programs implemented in Asian countries to provide mutual support to a country in an emergency.

The risk of extremely high prices after a supply interruption is already reflected in a large risk premium on gas prices and has caused much of the current extremely high gas price levels and volatility. Preparing for a large-scale supply interruption, including with a price limit, could largely eliminate this risk premium and thus reduce European gas prices. With EU spot demand for LNG currently driving global demand and prices, this would directly translate to global LNG spot pricing. Thus, costs to EU consumers and payments to gas producers – currently at the scale of 400 billion Euro annually could be reduced by a factor of up to 2.5.

This risk premium currently results from the strategic non-cooperative behavior of the largest gas supplier, Russia, which benefits from creating uncertainty and partially limiting gas exports and thus escalates gas prices and its revenue. From a competition policy perspective, a price-limit for the case of a supply interruption would reduce the incentives for Russia to create uncertainty and to increase the risk premium, and thus would help to stabilize energy markets.

To ensure that fuel shifting from gas to coal and oil in Asian countries does take place even in the absence of the security cooperation, it seems warranted to increase the price limit above 50 Euro/MWh if the oil price should increase significantly above 100 Euro/barrel. For fuel shifting in EU power markets, even higher gas price limits may be necessary due to the carbon pricing incentives associated with the EU ETS. Alternatively, it should be considered to directly limit the scale of gas power generation building for example on historic experience limiting the use of gas for power generation.

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