MARKET DESIGN TO PROVIDE SECURE GAS SUPPLIES BEFORE SHIFTING TO STATE MEASURES

Chris Cuijpers, Commission for Electricity and Gas Regulation (CREG),
Nijverheidsstraat 26-38, B-1040 Brussels, Belgium
Phone: +32 (0)2 289 76 63, chris.cuijpers@creg.be
Andreas Tirez, Commission for Electricity and Gas Regulation (CREG),
Nijverheidsstraat 26-38, B-1040 Brussels, Belgium
Phone: +32 (0)2 289 76 77, andreas.tirez@creg.be

Overview

In this paper we address the efficient mix of market-based measures and state measures for Europe's policy to secure gas supplies. The market design should enable to rely on market mechanisms for as long as possible when coping with disruptions. Once markets alone are no longer able to deal adequately with a gas supply disruption, state measures should intervene in order to cope with the emergency. If state measures intervene earlier, there is a risk of market distortions and undermining market responses to disruptions. These principles are generally not perceived as controversial but their application in European regulation is quite ambitious. The maturity of gas markets in Europe differs as well as the market conditions (e.g. gas supply sources and routes) and physical conditions (e.g. producing vs importing countries) which impact the coexistence of market and state measures in the different member states. It must be recognized that some regions will move more rapidly to an emergency situation in case of an incident than others. Furthermore, the public nature of security of gas supply leads governments to intervene directly instead of enhancing the well-functioning of the market.

The paper discusses the two-stage approach of prevention (market measures) and mitigation (state interventions via emergency plans) in order to secure gas supplies. The turning point between prevention and mitigation needs clearly be defined in order to ensure the required level of security of supply is reached at lowest cost. Market mechanisms available should be allowed to continue as long as possible before shifting to state interventions. Where interventions are introduced, the impact on the market should be understood and minimized.

Method

The paper starts discussing the market design resulting from the European Third Energy Package (EC, 2009 a,b) and Network Codes in order to move to an effective internal gas market (ACER, 2015). We argue that a full implementation creates a competitive and contract-based market environment which largely integrates security of supply concerns. For instance, the Gas Balancing Network Code (EC, 2014) puts a right framework in place for the value of security of supply to be incorporated into a market-based balancing regime. The Gas Balancing Network Code should play an important role, particularly in the prevention stage before the declaration of an emergency, since it provides the instruments to monitor the balancing situation. Within the balancing regime, price signals and incentives can be established for market participants in order to help keep the system in balance. When it comes to moving to different crisis levels, the information gained by the Transmission System Operator (TSO) through its balancing activities can provide the information needed to define the triggers for the declaration of an emergency.

Well-functioning spot and forward markets set the framework for security of supply: to optimize transactions and flows by signaling scarcity and promoting efficient use of assets through price signals. The market responsiveness to a gas supply disruption leads to efficient solutions. The paper presents guidelines aiming at enabling the market to be as resilient as possible without interventions of authorities which may hamper market functioning. It is argued that such an approach would accelerate moving towards more mature gas markets in Europe. It may also require incentives and obligations on gas suppliers when there is a market failure. It requires sufficient infrastructure, efficiently used (e.g. physical reverse flows) to ensure access to markets.

The critical turning point of shifting to non-market measures is assessed. Once market-based instruments are exhausted and the issue is not resolved, the emergency phase begins. This means that the markets do not function anymore and emergency plans have to be used.

The assessment is largely based on ongoing regulatory assessments in the task force of the Council of European Energy Regulators (CEER, 2015 ,b) which develops views concerning measures to safeguard security of gas supply in general and the use of market-measures in particular. These assessments contribute to the revision of Regulation (EU) No 994/2010 (EC, 2010) and show the growing importance of cross-border coordination and solidarity in the context of security of supply.

Results

The paper shows to what extent the market design in Europe fits for security of gas supply purposes. It is argued that the implementation of the European Third Energy Package and Network Codes is the best guarantee to achieve efficient trading, market liquidity and security of supply. Especially the market-based balancing regime for gas networks is a framework which largely incorporates security of supply concerns since scarcity is signaled and suppliers are incentivized to inject gas into the network according to the offtakes of their customers. The paper builds further on these insights in order to upgrade the current European regulation in order to internalize as much as possible security of supply concerns.

The paper presents insights to implement security of gas regulation in Europe. A major hurdle for an efficient security of supply policy is the different levels of market maturity across Europe and the different supply situation in terms of routes and sources. There is a risk for hampering the move to more market maturity by using state interventions, already in the pre-emergency phase, to safeguard of gas supplies.

Also economists have to recognize that once market-instruments are exhausted to cope with a gas disruption, state interventions should be activated in order to allocate the remaining gas flows in a safe manner according to a pre-defined emergency plan. The paper presents ways, from an economic point of view, to handle with two key notions for emergency management: the definition of protected customers and the role of international solidarity.

Conclusions

The two-stage approach of the prevention phase (market measures) and mitigation phase (state interventions via emergency plans) allows deriving a list of guidelines to help an efficient market design and to help the revision of European policy to secure gas supplies. Well-functioning markets set the framework for security of supply. Price signals optimize flows by signaling scarcity and promoting efficient use of assets. The more mature gas markets, the more efficient provision of security of supply and the less dependence on emergency plans to cope with gas disruptions. A rapid use of non-market based measures for security of supply maters may look effective from a government point of view but be distortive and negatively impact the process of moving to well-functioning markets. Emergency plans which generally contain a list of state interventions including cut-off plans, are important but the triggers must be efficient.

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