Equal access to the energy infrastructure as a precondition to promote competition in the energy market. The case of European Union

Bartłomiej Nowak

Kozminski University, Warsaw Poland.

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ABSTRACT

In many EU countries, the infrastructures for supplying electricity and gas (electricity networks, gas pipelines, and storage facilities) are still properties of the so-called vertically integrated undertakings (VII) responsible for the extraction or generation, supply, and transmission and distribution of the energy. While competition can be promoted in the generation/production and supply side of the vertical integration, transmission and distribution segments remain natural monopolies that hinder market mechanisms. Vertical integration simply raises the possibility for incumbents to favor their own divisions and to block new entrants. As a result, non-discriminatory and equal access to the electricity and gas transmission and distribution networks, also LNG and storage facilities, is crucial to foster competition in politically delicate structures of the electricity and gas markets.

1. General remarks

Reliable and continuous supply of both electricity and gas at reasonable prices is an essential public service. In fact at present, the level of economic and social development, which has been achieved in the EU causes energy, especially electricity, to be a public good, pertained to everyone, without differentiation on material status. Paradoxically, energy is also considered to be a commodity in the case law of the European Court of Justice, and as such, its price should be determined by supply and demand (Jamasb and Pollitt, 2005; Joskow, 2006a; Nowak, 2009a), not by non-market factors such as administrative price regulation. The result is a fundamental question: should electricity, like all material goods, especially finite goods, be left to market forces, or should it be available to everyone, even those who cannot afford to pay a fair market price for it (thus the electricity price should be regulated)? Regulated prices can be helpful in protecting customers in specific situations—for instance, in the transition period towards effective competition, or when customers are vulnerable. However price regulation, which in fact might be declared as public service obligation, should be well balanced and should only be transitional—that is, it should be eliminated at a certain date or when certain preconditions of the market are met. Otherwise it may have a very negative impact on the market. Price regulation may be used to avoid market opening, to discriminate among suppliers, or distort competition.

If electricity prices remain constant in real terms when the cost of primary energy sources (such as coal, oil, or gas) rises, the principle of the free market is undermined. Similarly, low prices in the gas sector are hard to reconcile with market factors—for example, the need to move to more expensive supply sources, such as LNG. In addition, those who invest in renewable energy, which is more expensive than conventional sources of energy, are at a major disadvantage. Moreover, if regulated prices are not in line with market prices, suppliers without significant low cost generation capacities and infrastructural assets or equivalent long-term contracts will not be able to make competitive offers, which they need in order to cover their supply costs (Nowak, 2009a). As a result, regulated prices are strong disincentive for investments in new generation capacity in particular and in energy infrastructure in general (Joskow, 2006a). Lack of energy infrastructure on the other side increases market segmentation and congestion and blocks equal access to the transmission and distribution grids for all players. In addition, the transmission and distribution infrastructure—mainly networks—are very costly to construct. Because return on capital invested in networks is calculated on a long-terms basis, the energy market is unattractive to potential private small or medium investors, who usually expect quick returns. The result is that the construction and operation of the networks is left to the natural monopolies, which have an incentive to use their dominant positions to deny access to the infrastructure of potential competitors and to slow down their efforts.
the opening of the market for new players, in particular on the supply side. For this reason non-discriminatory and equal access to the electricity and gas transmission and distribution networks is crucial for competition to evolve. In fact in the case of the transmission and distribution of gas and electricity, all Member States in the past granted undertakings de jure or de facto exclusive or special rights to transmit, to sell, to import, to export, or to construct infrastructure. Such grants prevented competition among utilities. In consequence, access to networks by third parties in most Member States was not given any special legal protection (Roggenkamp and Boisseleau, 2005). Presently in many EU countries, the electricity networks and gas pipelines are still properties of so-called vertically integrated corporations, which are responsible for extraction, generation, transmission, distribution, and supply. Vertical integration raises the possibility that incumbents will favor their own corporate divisions, since there is both clear incentive to do so and the means to discriminate against competitors by blocking their access to the transmission and distribution infrastructures (Vaitilingam, 1999).

Vertically integrated companies discriminate against potential competitors in many ways (Jones, 2004) but the main include:

- Creating technical barriers—for example, expensive procedures for customers who wish to change suppliers (such as their obligation to install new metering devices, to set up complicated balancing timetables, or obligation to collect complex administrative documents).
- Manipulating access tariffs (for example, the transmission/distribution operator may require customers wishing to switch suppliers to inform the operator about the details of the new contract, information which than can be passed on informally to its own sales department enabling it to selectively offer discounts).
- Manipulating the availability of capacity to ensure that lines required by competitors are congested.
- Using various accounting techniques for cross-subsidies from its transmission/distribution activities to other competitive operations (generation or supply).

In order to mitigate the incentives for discriminating against competitors, and to increase equality in access to the market, it is necessary both to separate the transmission and distribution activities of a network business from its activities of production and supply (unbundling) and to ensure non-discriminatory access of third parties to the infrastructure such as networks, storage capacities or LNG terminals. This article discusses the main issues of equal and non-discriminatory access to the infrastructure, as one of the main elements of fostering competition on the energy market.

2. Third party access (TPA)—requirements of the EU law

Effective competition requires that the owners of networks must allow any electricity or gas supplier equal and non-discriminatory access to these networks. Lack of equal and transparent third party access would create an enormous entry barrier for new players and would severely hamper the development of a competitive market.

Some scholars (Jones, 2004) have argued, though, that (…) it is unnecessary to require third party access to gas networks to permit competition in the gas sector, as potential competitors to the existing pipeline owner could construct a competing network (…). However, if companies are natural monopolies not because of changes in the market structure but because the State built and then transferred ownership of the infrastructure to the monopoly, then by definition the State has discriminated against every company that is not State-owned. Certainly, these companies would benefit if they did not need third party access but could afford to construct their own networks or pipelines, a possibility that would increase competition as well as security of energy supplies. The construction of the Nord Stream (formerly the North European Gas Pipeline) by the consortium, Nord Stream AG, of several major European and Russian gas companies illustrates the complexities of this alternative to third party access. The cost of the project, around Euro 10 Billion, was far too high for a single company to undertake it. Even though such projects are lucrative for the construction firms involved and benefit the nations by securing the supply of energy, their costliness militates against them. New networks, then, are not the only solution to creating an open and competitive market. For this reason the electricity and gas directives provided for non-discriminatory access to the infrastructure throughout the instrument called—third party access (TPA).

In principle, there are two access regimes—regulated and negotiated. With respect to electricity, both transmission and distribution are subject to regulated third party access. With respect to the storage of gas and ancillary services related to gas (article 19 of the gas directive), Member States may choose between regulated and negotiated third party access.

To secure transparent and non-discriminatory third party access, vertically integrated companies must spin off the functions of network (system) operators—both transmission system operators (TSOs) and distribution system operators (DSOs). Article 2(4) of the gas directive and article 2(4) of the electricity directive define the parameters of TSOs. A TSO is:

(…) a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the transmission system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity.

This definition applies equally to a gas TSO. The transmission of electricity refers to:

(…) the transport of electricity on the extra high-voltage and high-voltage interconnected system with a view to its delivery to final customers or to distributors, but not including supply.

The transmission of gas refers to:

(…) the transport of natural gas through a high pressure pipeline network other than an upstream pipeline network with a view to its delivery to customers, but not including supply.

Article 2(6) of the electricity directive and article 2(6) of the gas directive define distribution system operator as:

(…) a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the distribution system in a given area and, where applicable, its interconnections with other systems and for ensuring the long-term ability of the system to meet reasonable demands for the distribution of electricity.

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