

Unbundling as a crucial factor in the completion of European Electricity and Gas Market Liberalisation

Position Paper EFET European Federation of Energy Traders

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I. Importance of unbundling

1. Unbundling – imperative for truly competitive markets?

Liberalisation of the energy sector in Europe and the formation of internal European markets in electricity and gas have been conceived with the idea of benefiting European industry and consumers. Achievement of the benefit necessitates creating efficient and competitive markets and offering higher quality and more varied services to energy users at lower prices. However, for liquid markets to evolve and function effectively, it is crucial that new market entry is made possible and that there are a sufficient number of participants able to compete with each other. This can only be achieved through providing retail and wholesale market entrants with solid guarantees that they will have unimpeded access to the grid and to customers on a non-discriminatory basis. The independence of transmission system operators ranks high among the guarantees required from a new market participant's perspective.

To ensure independence of a network operator it is important to prevent situations where it may face a conflict of interests and incentives. Separation of activities proves to be the most efficient way of solving the problem of entanglement of production and supply (as activities susceptible to competition) on the one hand, with transmission and distribution functions (which tend to be natural monopolies) on the other, within vertically integrated energy entities. *Unbundling* is the term normally used to refer to such structural solution.

2. Non-discrimination, transparency and objectivity – unbundling as a safeguard?

Unbundling of activities within a former vertically integrated company minimises distortions in a single European electricity or gas market, by ensuring transparent and non-discriminatory terms of transmission access for third parties and curtailing the risks of cross-subsidisation of the generation and supply activities of incumbents.

Safeguarding fair and efficient allocation of capacity

Incomplete separation of activities can result in incentives for a transmission system operator to favour its affiliates over third parties by allocating transmission capacity to the former on a priority basis, modifying rules and requirements to meet their needs, or giving them advantageous access to information, such as available capacity figures. Without a minimum of separate management and independent managerial incentives, the opportunity to operate the two or more businesses in an integrated manner would remain. If the businesses are operated with a common workforce and information systems, the opportunity (and temptation) remains to gain access to commercially valuable and competitively confidential information.

A fully independent TSO can more objectively be incentivised to optimise available transfer capacity through the adoption of market-based solutions (e.g.; re-dispatch and counter-trading), the removal of artificial constraints (e.g.; overly onerous balancing arrangements, excessive n-1 UCTE security requirements) and physical reinforcement.

Enabling foreign companies to import/export and transit energy commodities

The entrance of new market players is vital to successful liberalisation. For them especially, but also for independent marketing and trading affiliates of established players, truly non-discriminatory access across borders, which involves at least two transmission system operators, is absolutely axiomatic to full transparency and liquidity in commodity transactions. Requests for transit across, and transmission by way of export into, second or third country transportation grids, are likely to benefit from the establishment by incumbents of an independent transmission arm. The evolution of cross-border transactions in electricity in Continental Europe in the last two years, and more recently in gas, has highlighted a special sensitivity on the part of “foreign” market participants to the independence of the transmission system operator in the country, which they attempt to penetrate.

Making ancillary services available to all parties

Also crucial for a truly competitive marketplace, where third parties are effectively capable of accessing the network and supplying to eligible customers, is the availability of ancillary services, particularly balancing in electricity and gas, and storage in gas. We have illustrated later on in this paper how denial of these services can result in an indirect discrimination in favour of incumbents if there is still some degree of integration between the transmission and generation/supply arms.

Mitigating cross-subsidisation

If production and supply activities of an incumbent are not properly divorced from the transmission and distribution functions, it is highly difficult to prevent the former from attributing part of its costs to transportation, thus using its affiliate relationship with the transmission operator to gain an unfair cost advantage over new market entrants. In theory, accounting separation is intended to eliminate the possibility for cross-subsidisation, as costs and revenues which accrue legitimately to a particular business must be identified. In practice, however, it is difficult to ensure that accounts are properly unbundled and stronger forms of unbundling should therefore be pursued wherever possible. In cases where accounting separation only is used, it should be supported by transparent and rigorous accounting rules supported by close regulatory scrutiny.

Conclusion

A global unbundling of incumbent companies facilitates control by supervisory authorities and allows immediate and effective intervention in case of abuse of its position on the part of a transmission system operator.

The strengthening of unbundling for open, non-discriminatory and transparent access in the internal energy market is therefore crucial.

II. Need for improvement in many EU countries

1) Electricity

In electricity, except for the exemplary initiatives taken by the UK, Sweden, Norway and Spain as described in appendix 2, no other European country has yet opted for such comprehensive unbundling and carried it through to completion. Certain countries did go

beyond the minimum envisaged in the Electricity Directive to impose various degrees of further unbundling. However, we found that in practice the measures, short of legal, physical and financial unbundling, pursued in those countries have often proved to be insufficient to ensure true independence of a transmission system operator. Below we try to give a few European examples where inadequate independence of a network operator resulted in unjustified barriers to entry for new market participants.

France

In France, access to all new entrants is partly impeded by the persisting interrelationship between the transmission affiliate EdF-GRT and EdF, which has inhibited the grid operator in behaving in a non-discriminatory fashion in respect to EdF's competitors.

The absence of a balancing service is only the most conspicuous example of several hindrances, which especially early on tended to be procedural. Neither EdF Production nor EdF-GRT has been prepared to offer balancing power on really cost-reflective terms. This often disables new market participants from taking full advantage of third party access rights, as they are not in a position to offer necessary flexibility to their potential customers. Inability of third parties to get load following for their customers is of direct benefit to the incumbent who preserves a close relationship with the grid operator and therefore has access to such information for its customers.

Similarly, access to the transmission network for transit purposes was for more than a year after the date for implementation of the Electricity Directive made impossible. Still, few foreign companies have up till now been able to carry out transits through France and only on a very sporadic basis, which suggests an internal market failure. We believe that the difficulties in accessing transit in France were mainly caused by the method of interconnection capacity allocation used at the French/Spanish border (first-come, first-served basis) and other international borders and by 'grandfathering' of existing rights (supposedly attributable to long term commodity contracts).

Germany

The point-to-point system of tariffication originally envisaged in the Verbaendervereinbarung I (Association Agreement I) seemed to constitute an attempt by transmission operators to create a framework, that would give their production and supply affiliates a significant advantage over their competitors.

A similar motivation can be found even behind the 'improved' version of the agreement, Verbaendervereinbarung II, which imposed a 0.25pf/kWh charge for power crossing an internal border separating the German market into two trading zones and also for going across the national boundaries in import/export transactions. Incumbents have now undertaken to forego the internal charge, as part of a package of remedies in recent merger review proceedings. Such a charge has obviously prejudiced foreign competitors' chances of growing in the German power market. Equally unfair would be a proposed new export – related supplementary transmission tariff to be levied on cross-border power transmission contracts.

Another instance of a transmission company falling into temptation to co-operate with its affiliates has been revealed in recent German power merger review proceedings, where transfers of confidential information about transactions from the transmission to the supply arm of an incumbent were complained of to the Commission and to the BKartA. We are aware of instances when a request for transportation resulted in the customer getting a revised supply offer from the marketing affiliate of the transportation company.

Belgium

Similarly to the case described above for France, companies wishing to get access to the Belgian grid for transit purposes have experienced serious difficulties. There is still no transparent scheme in place for allocation of capacity at the Belgian border.

Absence of a liquid market for balancing power also puts the incumbent supplier in a highly privileged position. Firstly, because it has domestic generation capacity it is able to satisfy customer's volatile demand and top up from its own resources when necessary, without having to turn to the network operator for expensive balancing power. Secondly, because it is able, just as we saw in France, to follow customers' load profiles, apparently due to its close relationship with the network operator. This is aggravated by a requirement for every supplier to be balanced on a 15-minute basis, which puts new market entrants in a highly vulnerable position.

Also, the transmission tariffs proposed by the network operator are structured in such a way as to make any short-term commodity transactions economically unviable due to the high fixed portion of the tariff (subscription fee). This has resulted in a very low liquidity in the market, thus hindering incipient competition.

Italy

Allocation of transmission capacity on a 'first-come, first-served' basis, chosen originally in late 1999 at the Italian borders proved to be non-transparent and discriminatory. It allowed a large discretion for the network operator to favour its affiliates, and it has an incentive to do so. In a situation of incomplete unbundling, compounded in Italy, as in France, by the integrated incumbent's current sole dominance in generation and supply, there is a serious danger of the 100%-owned grid operator falling into such temptation. The latest available draft guidelines envisage auctioning of 100 percent of available capacity at the borders with France and Austria but only 50 percent of the interconnection capacity at the Swiss and Slovenian borders.

The Netherlands

Insufficient separation of TenneT from Sep has resulted in agreements between the two, whereby TenneT undertakes to reserve 1500MW of capacity at the Dutch borders for Sep's long-term commodity contracts, the economic justification for which is yet to be demonstrated.

Another obvious instance of co-operation between Sep and TenneT is the balancing contract for the year 2000, whereby Sep has obtained complete load following, thus de facto restricting imports by other market participants.

Also, TenneT's role in the implementation of the so-called Protocol has raised concerns as to its impartiality in its supposed role of an independent network operator. TenneT's use of an 'end user contract test' protected Protocol parties, including Sep. For the time being TenneT is still owned by Sep, and until the latter is dissolved and/or the high voltage grid sold, managers there seem intent on maintaining artificial restrictions on classes of power sales contracts which can qualify for grid access.

2) Gas

In electricity, we were able to draw on a number of practical examples of incomplete unbundling resulting in frequent instances of discrimination against new entrants. This is due to the fact that we had an opportunity to witness those for over two years elapsed since the implementation of the Electricity Directive. In gas, however, we can only anticipate some of the problems that the even less stringent unbundling requirements in the Gas Directive would cause to new entrants.

Such problems are only bound to be further aggravated by the indispensability of access to storage for the execution of supply obligations by market participants. If a grid operator is not fully independent in carrying out its transmission function there is a high risk of a prejudice on its part against its affiliates' competitors. By denying (or not making readily available) storage facilities to third parties, for instance, a network operator can render their right of access to the grid virtually irrelevant.

Another potential source of discrimination, which we did not have to worry about in electricity but which is relevant in the gas market, is availability of blending services. Gas transportation operators define a range of acceptable gas quality in order to maintain gas in their system to meet the specifications of gas burning appliances. If an operator chooses to achieve this by requiring from each shipper that the gas entering the system is *on average* within the specified quality range then incumbent suppliers will find themselves in an advantageous position over new entrants or smaller market participants. This will happen due to the fact that an incumbent having a significant share of the market can more easily 'net off' the low quality gas that it brings into the system by supplying high quality gas elsewhere, which is not always possible for other suppliers. Alternatively, pipeline operators may offer a separate blending service that would bring the low quality gas up to the required minimum, but if it has incentives to discriminate in favour of its affiliate, it may charge a prohibitively high price for such service.

Up to date, only the UK has carried out full unbundling of activities in the gas sector. Spain and Italy currently require legal unbundling, Ireland is planning to call for legal separation as well. Belgium, Denmark, France and the Netherlands opted for "Chinese wall" separation between the transmission business and production/import/supply businesses (though France has not even yet implemented the Directive). This would imply going beyond the minimum required in the current Gas Directive, i.e. accounts separation plus respecting confidentiality of information, to require full separation of information flows and information systems and operational / administrative functions. We believe that these requirements, though helpful, would not suffice to safeguard the principles of transparency, objectivity and non-discrimination in third party access, already incorporated in the current Gas Directive. In Germany, which has yet to transpose the Directive into national law, the situation is yet worse, with no apparent determination displayed on the part of the government, to impose a meaningful form of unbundling on gas oligopolists, if any.

Even though, as we said, real life examples of insufficient unbundling resulting in discrimination against third parties are yet very few in gas, we can already name some of them here due to the early implementation of the Gas Directive in the Netherlands and in Germany. In the Netherlands, customers of independent suppliers have to balance hourly, which is not required of Gasunie's customers. In Germany, just like in electricity, there were instances of customers getting a counter offer from the marketing affiliate of the pipeline operator after the request for transportation had been made. Also, access to storage has been made available only to incumbents' marketing affiliates, and not to independent suppliers.

III. Conclusions and policy implications

1) Measures available at the EU level

In the absence of any further legislative measures, problems associated with the insufficient unbundling requirements in the current Directives can only be cured through the following channels:

- Merger reviews by DG Competition at the European Commission. There is a possibility to introduce higher degree of unbundling in the form of structural remedies in particular merger cases involving incumbent suppliers. Such requirement could have been included in the package of remedies in the recent Viag/Veba merger review proceedings but unfortunately was not recommended. Also relevant could be a requirement to set up a balancing or flexibility market to improve liquidity, or to give access to storage, in the case of gas.
- Discussions within the framework of Florence Regulatory Forum in electricity and Madrid Regulatory Forum in gas often prove to be a valuable opportunity for the European Commission (DG TREN) to influence behaviour and rule making of national transmission system operators and gas pipeline operators.
- In the cases where Member States demonstrably have not done enough to secure transparency, objectivity and non-discrimination in third party access as stipulated in the Directives, DG TREN can launch infringement procedures against such Member States. As argued above, minimum unbundling requirements when not supplemented by other safeguards against discrimination, would not suffice in most cases to ensure a truly competitive environment. However, any infringement procedures against Member States via the European Court of Justice, even if once commenced, might prove extremely drawn out and therefore ineffective.
- Investigation of incumbents' long-term or exclusive contracts by DG Competition could reveal discriminatory arrangements between transmission operators and affiliated or contractually linked suppliers. These could then be prohibited, but again proceedings take a long time.

But in most cases, except for the Florence and Madrid processes, the solutions described above are only available to the Commission when the problems have already risen and when practices can be proved to be improper with sufficient evidence. In this situation the role of the Commission is confined to that of a haphazard and reactive one, and not a pro-active and policy setting one. Experience to date shows that these processes and initiatives of the Commission or the Council would not in themselves yield mandatory forms of unbundling going beyond the Directives.

2) New Energy Directive – possible provisions on unbundling

If the Commission decides, however, that a more pro-active stance should be taken by the EU in securing transparency, objectivity and non-discrimination, more effective unbundling requirements could be incorporated in the new legislative initiative contemplated by the Commission, in the form of amendments to existing Directives. As explained in previous sections, we believe that for separation of activities to be truly effective and verifiable, it is necessary to go much further than what is currently envisaged in the two existing Directives

and to require physical, financial and legal unbundling in the provisions of a new Energy Directive.

We recommend that the following requirements are included in the text:

- **Division of the integrated company's assets and operations between newly-formed, subsidiary legal entities (within one group, if necessary) which would not have a common corporate governance, nor a common constitution, even though they may have common ownership;**
- **Separate buildings and facilities for the transmission and distribution operations and generation/supply businesses;**
- **Staff, management and boards being entirely separate, sharing of staff or managerial resources and linkage of career paths and development not being permitted;**
- **Information systems and flows remaining separate; the only exceptions being the information required to be submitted by the generation and supply affiliates of the transmission subsidiary to allow for dispatch of nominated plants and transmission of power, submissions of bills, and notification of any capacity constraints on the system;**
- **Financial resources (including cash), assets and liabilities being divided between affiliates to prevent any form of cross-subsidisation.**

In this paper we have not gone so far as to evaluate the extra merits of the most far-reaching form of unbundling, i.e. full structural (ownership) unbundling, however effective we believe such a step would be. We appreciate at this time that if the conditions of physical, legal and financial unbundling listed above are satisfied, it may prove unnecessary to impose the requirement of ownership unbundling on the EU level, and that political difficulties would be encountered in some Member States if such impositions were attempted.

Appendix 1

Various forms of unbundling

The Electricity Directive requires accounts separation as between generation, transmission and distribution plus separation of management and information. Unbundling of accounts is the weakest form of unbundling, whereby the integrated companies are required to publish separate balance sheets and profit and loss accounts for each of their activities: production and supply, distinguished from transmission and distribution. Separation of management implies distinctly independent management structures, as well as administrative and operational separation. There must be no flow of information between the transmission arm of the integrated company and its production and supply affiliates. The Gas Directive does not go even that far – it only requires accounts separation and prohibits abuse of commercially sensitive information obtained in the context of providing access to the system, which is extremely difficult to police in the absence of other separation measures.

More compelling unbundling requirements would include physical, legal and financial separation of activities. This would entail separation of: management structures, staff (including their career development), assets and liabilities, cash and debt management, information systems, buildings.

The strongest degree of unbundling goes so far as to require full ownership unbundling, whereby assets of the integrated company are divided up between several newly-formed, legal entities which do not have significant common ownership, management, nor control of operations.

Appendix 2

Success stories – rewards for getting it right

1) European pioneers – UK in electricity and gas, Norway and Sweden in electricity (followed by other Nordic countries and Spain)

In the England and Wales system, the National Grid Company (NGC) was created in the course of the 1989 reforms as a separately owned, controlled, operated and managed company. The Utilities Act provides for the separate licensing of distribution and supply and these now have to be undertaken by separate legal entities. Although the companies can still be affiliates under common group ownership, no interaction between the staff and finances of these legal entities is permitted. As part of its licence conditions NGC is prohibited from owning or operating any generation business. On the distribution level the Regional Electricity Companies (RECs) are required to maintain separate accounts and management in respect of their distribution and supply businesses. In addition, many distributor-suppliers have sold off their supply.

In Norway, all vertically integrated companies have to ring-fence generation from transmission functions, with separate budgets and accounts, with a stated intention that divisions are to be allowed to operate budgets and accounts. On the distribution side, the vertically integrated utilities must have their supply business separated from transmission and supply, pursuant to the Energy Act 1990, through accounts unbundling and separate budgets.

Restructuring of Sweden's electricity market happened in two stages and it is interesting to note that the unbundling occurred in Sweden before the new electricity framework was implemented in 1996. The first step was to split off Vattenfall's generation and transmission operations into different business areas. The second step was the creation of Svenska Kraftnät as the state-owned company responsible for the transmission grid. This company is independent of generators and transmission. According to the electricity law, "a juridical person involved in the generation or trade in electricity may not be involved in network operations." On the distribution level, accounting separation is required.

In Spain, the transmission system operator, RED Electrica, has been successfully unbundled in much the same way as NGC was.

In gas, the UK was the only European country to eventually pursue comprehensive separation of activities 11 years after the original privatisation of British Gas. This solution was embraced after lesser forms of separation (accounts unbundling, Chinese walls) proved to be insufficiently effective, even though the final act of full separation was instigated by British Gas themselves. Since then, being allowed to concentrate on their respective businesses has actually enabled the entities created to experience greater levels of growth than before. The whole of integrated business of British Gas was split into six business units in 1995. Following the full demerger of British Gas' supply unit in 1997, the transportation function has been performed by TransCo, which is part of BG plc, created in the course of that demerger. The supply business was formally divorced from the transportation part by the creation of a separate legal entity, Centrica plc (which retained the supply contracts under the British Gas brand name). Initially these two companies had identical shareholders, but now they are separately listed on the London Stock Exchange. The new 1995 licensing regime prohibits the holder of a public gas transporter's licence to hold licences for supply or shipping.

In Spain, the government has recently unveiled plans to unbundle the gas transportation business of ENEGAS from the supply business of the holding company, Gas Natural, to create separately owned businesses.

3) Instructive examples from the rest of the world (Australia, Argentina, USA)

Electricity

US

In the US, the Federal Energy Regulatory Commission (FERC) Order 888 in 1996 required public utilities to separate wholesale transmission from generation functions. In California, one of the most progressed States in terms of restructuring, and Independent System Operator (ISO) has been created. The ISO allows transmission-owning utilities to keep legal title to their transmission facilities, while they transfer operational control to the ISO. The ISO is forbidden to have any ownership interest in generation.

Australia

The legislation of the State of Victoria prevents the reintegration of generators and distributors, and limits the interest that market participants can hold in other participants. IN NSW TransGrid also has separate statutory obligation as the Market and System Operator, to operate the NSW market and control the operation of the network. A separate “ring fenced” unit has been created to carry out these functions.

Gas

US

The gas industry in the US was characterised by a multiplicity of producers and separate pipeline companies, which bought the gas to be transported. There was therefore no integration between production and pipeline business. Separation between these areas was governed by the existing competition legislation.

Australia

Prior to and post reforms in Australia, production has been carried out by private companies, usually in joint ventures, who then sold their gas to the transportation network of either State. There has therefore been no integration between production and transportation.

Argentina

The Argentine Gas Act 1992 prohibits producers and storage companies from owning a controlling interest in a transportation and distribution company. Contracts between affiliated companies engaged in different activities in the gas industry must be approved by ENARGAS (the regulatory body), who may disapprove such contracts if it determines that they were not entered into on an “arm’s length” basis.