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Title:
'Energy Investments under the EU Ownership Unbundling Regime'

Η υπογράφουσα βεβαιώνω ότι το έργο που εκπονήθηκε και παρουσιάζεται στην υποβαλλόμενη διπλωματική εργασία είναι αποκλειστικά ατομικό δικό μου. Όποιες πληροφορίες και υλικό που περιέχονται έχουν αντληθεί από άλλες πηγές, έχουν καταλλήλως αναφερθεί στην παρούσα διπλωματική εργασία. Επιπλέον τελώ εν γνώσει ότι σε περίπτωση διαπίστωσης ότι δεν συντρέχουν όσα βεβαιώνονται από μέρους μου, μου αφαιρείται ανά πάσα στιγμή αμέσως ο τίτλος.

Μαρία Χάιδου

Abstract

Since the mid-1990s the European Commission has been laying the pavement for European electricity and gas markets, to be opened up, liberalized, and unified. This goal was promoted by three EU energy packages of Directives in late 1990s, 2003 and 2009. The principal objective of the said legislation packages was to formulate a well-organized, competitive, and sustainable energy market across the EU. One of the fundamental provisions of the third package Directives is the unbundling of structures and functions, with ownership unbundling as its extreme expression. In order to meet these objectives significant investments in electricity and gas transmission infrastructure are indispensable. Nevertheless, at the same time, it has as a consequence the creation of impediments for investors looking for the creation of a portfolio of assets at different stages of the energy cycle. To this effect, the Commission has developed a balancing approach to ensure that an application of the unbundling rules will not have a disproportionate effect to energy investors.

This working paper sets out the path along which EU electricity and gas unbundling regulation has moved, the way EU energy ownership unbundling rules has been interpreted by the European Commission so as to ensure access of financial investors, and the significance of investments in the energy networks, in addition to the role of energy regulation in the facilitation of the required EU infrastructure financing.

Contents

'Energy Investments under the EU Ownership Unbundling Regime'

I. Introduction

Historically, energy markets in Europe have been vertically integrated. Hence, a prerequisite for regulated common access to the network was unbundling (i.e. separating) the network services from other business fields. Since the mid-1990s the European Commission has been laying the pavement for European energy markets, especially gas and electric power, to be opened up, liberalized, and unified. The driving goal of these reforms in the gas and electricity sector was both giving European consumers a choice between different companies supplying gas and electricity at reasonable prices, and making the market accessible for all suppliers. The key problem identified in the 1990s was the dominance of incumbent monopolies that controlled import and onward sales of gas, as well as, transmission assets. Progress toward the overriding economic objective of the European Union, creating a 'single market' for goods and services, was clearly impossible without breaking up or unwinding these monopolies. This goal was promoted by a first European Union energy package of Directives in late 1990s. This *first* package was followed by a *second* energy package in 2003, to be later followed by a *third* package of Directives introducing deeper requirements for transparent and fair third-party access to transmission, distribution, and storage facilities.

The process of power market liberalization pushed by the European Commission since two decades has entered a new phase with the debate over the ownership and regulation of energy transport infrastructure. The issue is at the heart of the process of disintegrate vertically integrated national holdings, creating a more competitive market for power production. The European Commission in its so-called *third* package sees ownership unbundling as the key element to limit the ability of European electricity producers to exert market power in the complex technical interaction between production, transport and distribution. According to Directive 2009/72/EC: "*Any system for unbundling should be effective in removing any conflict of interests between producers, suppliers and transmission system operators, in order to create incentives for the necessary investments and guarantee the access of new market entrants*."[1] Without effective separation of networks from activities of production/generation and supply, there is a risk of discrimination not only in the operation of the network but also in the incentives for vertically integrated undertakings and financial investors to invest adequately in the energy networks.

[1] Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC [2009] OJ L 211.

The endeavor to establish a genuine European internal market for electricity and gas is ongoing. Applying to telecoms and railways and realized there already, it is today subject to important intra-European arguments in energy markets. More than anything, at a time when very large investments in grid and energy transmission infrastructure in whole are needed to promote market integration and ensure security of supply, the way the current unbundling is set up, leads to distortions of investment incentives. After presenting the core principles of unbundling, its historical development and the current state of the European Union affairs and initiatives regarding unbundling in energy markets, and ownership unbundling as its extreme expression, the way European Union energy (ownership) unbundling rules - which seem to be more and more often in the European agenda- has been interpreted and applied by the European Commission in the context of the certification procedure of TSOs so as to ensure fair access of financial investors, such as pension funds, insurance companies and infrastructure funds with participations in the energy sector will be presented. Finally, the need for investments in the energy networks will be raised, in addition to the key role of regulation in the facilitation of the required EU infrastructure financing.

II. Defining 'unbundling': *unbundling energy suppliers from network operators*

A. The notion of unbundling

Unbundling is a technical notion since its origin, which has entered into the vocabulary of a broader public; it is a process by which a large company with several different lines of business retains one or more core businesses and sells off the remaining assets, product/service lines, divisions or subsidiaries. Unbundling within energy markets refers to the unbundling of vertically integrated structures, i.e. the separation of production and supply of vertically integrated activities, where the transport assets constitute monopolies. In other words, unbundling means operating energy transmission and distribution networks independently from the production and supply; integrated incumbent companies, irrespective of whether they are public or private, have to split up ('unbundle') the distribution and transmission from the rest of their business.[2]

Unbundling occurs through different forms; from accounting/functional unbundling where the firm remains integrated but reorganizes its book-keeping so that the costs of the network services can be identified; legal unbundling, which provides for the organization of different activities under different legal entities, however, without preventing such different activities from being owned by the investment group; and then, as the extreme version, ownership unbundling, where to the contrary of legal

[2] Zafirova Z., 'Unbundling the network: the case for ownership unbundling?' [2007] I.E.L.T.R., 2, p.29

unbundling, requires the unbundled assets and activities to not be owned by the same investment group.

B. Types of Unbundling

The weakest form of separation is *accounting unbundling*, which consists of separate account keeping for the distribution and transmission business, intended for a degree of transparency and, thus, avoiding cross-subsidies between the network and supply or production part of a vertically integrated enterprise.[3] The accounts for the network business are to be kept as if it were a separate undertaking, but there may be no further requirements for independence. A greater degree of separation is called for by *functional unbundling*, which encompasses independent organization and decision-making.[4] These are to be achieved through measures such as non-involvement of the management personnel of the production and supply in the decision-making concerning the network activities.[5]

While accounting and functional unbundling call for independence of the operations, regardless of the legal form, legal unbundling requires the establishment of a separate legal entity in charge of the distribution or transmission activities; typically, as a subsidiary of the energy corporation. Certainly, legal unbundling does not substitute the need for accounting and functional unbundling; to some extent, it takes the unbundling process one step ahead. Nevertheless, the fact that a network operator is set up as a legally distinct business does not allow the parent to exercise control over the activities of the daughter company, than what would be allowed by the principle of functional separation alone.[6]

The degree of competition depends on the type of unbundling implemented. Indeed, the DG Competition Report on Energy Sector Inquiry indicated that there were still a number of issues in providing non-discriminatory access to the network, even after the putting into place of not only accounting, but also functional and legal unbundling.[7] Debatably, the aim of preventing discrimination may be effectively achieved through ownership unbundling alone.[8]

Ownership unbundling is the strongest form of unbundling, where the independence of accounts, information, decision-making, and legal form are a natural result of the fact that the network business is owned by a different person, other than the one

[3] See e.g. Art 19 of Directive 2003/54 concerning common rules for the internal market in electricity and repealing Directive 96/92 [2003] O.J. 176/37
[4] See e.g. Art.15(2) and Art.13(2) of Directive 2003/55 concerning common rules for the internal market in natural gas and repealing Directive 98/30 [2003] O.J. L176/57
[5] See e.g. Art. 10 (2) Directive 2003/54[2003] O.J. 176/37, fn. 3
[6] Ibid fn. 2, p.30
[7] European Commission, Competition DG, DG Competition Report on Energy Sector Inquiry, SEC/2006/1724, p.7
[8] Ibid fn. 2, p.31

possessing the production or supply activities. In this form, networks are no longer in the same group of companies with the production or supply energy business; Distribution System Operators (DSOs) and Transmission System Operators (TSOs) are fully divided from the original undertaking, so that the undertaking has no shareholders' rights in them, preventing even informal influence of the producer or supplier of energy on the network undertaking's choice of board members, on its financial or investment decisions and everyday business.[9]

In all cases, unbundling aims at introducing more competition into the market, bringing an end to inequity potentially exercised by the holder of the natural monopoly. The mechanism referred to as vertical unbundling aims to provide the access of all players to distribution and transmission systems without discrimination and the prevention of cross subsidization between undertakings conducting generation, transmission, distribution and retail sales activities. The unbundling of generation, transmission, distribution and retail sales has a key role within the electricity and gas markets regarding the implementation of competition; the rationale of unbundling is that network operators, which are natural monopolies and therefore dominant undertakings, are required to give access not just to their electrical grid or gas pipelines, but also to their customers.[10]

C. The reasoning behind Unbundling

i. Enhanced competition

Unbundling prevents discrimination in the access to the energy networks in favor of other parts of the vertically integrated enterprise. This is of vital importance, seeing the amount of fixed costs for constructing new network facilities, which are hard to recuperate if there is an existing equivalent network. The consequence is that network operators are natural monopolies, thus unrestricted access to the networks is crucial for effective competition. When access to the network is facilitated, burdens to new entrants in the market are lowered.

The reasoning of unbundling is illustrated by a decision in the E.ON/MOL merger case[11] concerning the acquisition by E.ON (Germany) of two subsidiaries of MOL, an

[9] Ibid fn. 2, p.30
[10] Ibid
[11] Case COMP/M.3696 E.ON/MOL (2006/622/EC), December 21, 2005 [2006] O.J. L253/20:
MOL had, prior to the transaction, an almost exclusive control over the access to gas resources and gas infrastructures in Hungary. MOL owned the gas transmission network, all Hungarian gas storage facilities and had a quasi-monopoly position on the gas wholesale markets. The essential change brought by the proposed transaction is that E.ON, unlike MOL, had strong market positions in the retail supply of gas and electricity in Hungary. Therefore, except for the transmission and gas production businesses of MOL, the said transaction would create a vertically integrated entity along the gas and electricity supply chains in Hungary. The Commission's market investigation established that, owing to the new entity's nearly exclusive control over gas resources (mostly of Russian origin) available in Hungary and its vertical integration in the gas and electricity markets, the transaction

integrated Hungarian oil and gas company active in the wholesale, marketing and trading of gas, and the storage of gas, where the European Commission (the 'Commission') allowed vertical integrating, but only under the condition that the network activities will be [ownership] unbundled.[12]The decision shows that the Commission regards unbundling as a powerful instrument to fight distortion of competition.

ii. Better-quality regulation

Apart from enhanced competition, unbundling is argued to generate conditions for more effective regulation in the energy sector.[13] Unbundling heads to openness and accountability, so that the regulator disposes of progressively more precise and higher quality information and can establish and monitor more appropriate tariffs and incentives.

iii. Improved performance of the network

It is argued that an independent network tends to focus on its own activities and thus in fact performs more effectively.[14]

iv. Security of supply

Improved regulation and functioning of the network operators, coupled with a competitive market on the production and retail side, is argued to guarantee reliability as regards security of supply considerations.[15] Moreover, the creation of a genuine European energy market is likely to ensure improved conditions for balancing demand and supply, compared to purely national markets, whereas high demand in one or several Member States is likely to be covered by extra capacities in other Member States. The diversification of suppliers may only be realized in an integrated market, and a prerequisite for integration is the existence of independent network operators, providing non-discriminatory access to all producers and suppliers, rather than backing the existing holdings.

III. From liberalization to Ownership Unbundling

A. First and Second European Union electricity and gas package Directives

During the late 1990s, the European Union ("EU") decided to fundamentally change the basis for the provision of electricity and gas from a monopolistic to a competitive market framework. A first liberalization package was adopted in 1996, followed by

would lead to a serious risk of foreclosure of competitors on the downstream gas and electricity markets.
[12] Ibid paras. 60-61
[13] Ibid fn. 2, p.31
[14] Ibid
[15] Ibid p.32

Directives[16] on common rules for the internal natural gas markets in August 1998, which removed the legal monopolies and partially opened the market to competition by allowing large users to choose their suppliers. Already at that early stage, the Community legislator identified the risk that vertically integrated energy companies could use their monopolies over the transmission networks in order to suppress the emergence of competition in the supply business. Rules were established to mitigate that risk, including certain unbundling provisions to ensure that vertically integrated operators would not discriminate against new entrants or create other entry barriers. Toward the strategic objective of market liberalization, the first step under the 1996 Directives involved accounting separation, the least strict form of unbundling, with the aim to prevent cross-financing that would result in distortion of competition.

The next and more deliberate step towards market liberalization was legal unbundling under the second electricity and gas package of Directives[17] ("Second Package Directives"). The afore commitment to competition was confirmed and strengthened with the adoption of the second package of Directives in 2003, insisting, in particular, on the necessity to harmonize the rules of the system across EU Member States. With this legislation Member States agreed a timetable to open electricity and gas markets fully to competition. Under legal unbundling regime, in principle, the essential input was meant to be controlled by a legally independent entity; however, a firm active in the downstream market was still allowed to own this entity.

The unbundling provisions were reinforced, a regulated 'third party access' regime[18] was introduced and the creation of national regulators became mandatory. The most radical change was the emphasis upon legal unbundling, where network activities were to be exercised by a separate legal entity; the other activities of the business outside the network may continue to be operated in a single company. Along with the accounting unbundling, the requirements for separate decision-making were more noticeable in comparison with the previous 1996 Directives and applied to both DSOs and TSOs in the electricity and the gas sector. In addition,

[16] Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity [1997] OJ L 27 & Directive 98/30/EC of the European Parliament and of the Council of 22 June 1998 concerning common rules for the internal market in natural gas [1998] OJ L 204

[17] Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC [2003] OJ L 176 ("Second Electricity Directive") &Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC [2003] OJ L 176 "Second Gas Directive")

[18] Art. 20 Second Electricity Directive & Art. 18 Second Gas Directive, fn. 17

certain Regulations[19] were introduced which allowed for the adoption of legally binding guidelines with the aim of facilitating cross border competition.

However, after several years of experience with this new pattern for energy markets, the Commission has become increasingly aware of the presence of significant remaining obstacles to competition. In mid-2005, the Commission, in response to concerns raised by consumers and new entrants to the energy sector regarding the development of the wholesale gas and electricity markets across Europe and the limited availability of consumer choice, launched an inquiry[20] ("Sector Inquiry") into the functioning of European gas and electricity sectors pursuant to Article 17 of Regulation (EC) 1/2003 [21]. In January 2007, following eighteen months of investigation, the Commission adopted and published its final report on the Sector Inquiry, highlighting a number of factors common in national markets that burdened the realization of a single market for electricity and gas across Europe.[22]

Although Second Package Directives have raised the unbundling of network operators to a new level, in its Sector Inquiry, the Commission argued that the development of competition in European energy markets was slow.[23] The Sector Inquiry confirmed that substantial differences kept at the level of the implementation of the unbundling provisions. In certain Member States, the unbundling provisions were still absent because of the lack of timely, comprehensive or accurate transposition of the Second Package Directives into national law. In fact, this directed that different degrees of market opening occurred between Member States obstructing the formation of a level playing field.[24] Nevertheless, even where Member States have implemented the unbundling provisions under the Second Package Directives, this does not signified that network operators essentially complied with them.[25] Moreover, even where the unbundling provisions were fully adopted, the Sector Inquiry has shown that incentives for preferential treatment within vertically integrated operators continued.

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[19] Regulation (EC) No 1228/2003 of the European Parliament and of the Council of 26 June 2003 on conditions for access to the network for cross-border exchanges in electricity [2003] OJ L 176 &
Regulation (EC) No 1775/2005 of the European Parliament and of the Council of 28 September 2005 on conditions for access to the natural gas transmission network [2005] OJ L 289

[20] Commission decision (EC) No C(2005) 1682 of 13 June 2005 initiating an inquiry into the gas and electricity sectors pursuant to Article 17 of Council Regulation (EC) No 1/2003

[21] Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty [2003] OJL 001

[22] Communication from the Commission (COM(2006) 851 final): "Inquiry pursuant to Article 17 of Regulation (EC) No 1/2003 into the European gas and electricity sectors (Final Report)" and its Technical Annex SEC(2006) 1724 (hereinafter the "**Final Report**")

[23] Ibid, p. 10

[24] Lowe Ph., Pucinskaite In. et al., 'Effective unbundling of energy transmission networks: lessons from the Energy Sector Inquiry', Competition Policy Newsletter, 1-2007, p.25

[25] Ibid

Undeniably, the unbundling rules at that time did not remove the incentives and opportunities for discrimination with regard to third party access. Frequently, changes to network access conditions, like investment projects, had to be authorized by the TSO's parent company where supply affiliates are represented.[26] Network operators that had supply interests often had both the ability and incentives to give preferential treatment to that supply business leading to discrimination of their competitors. Such discrimination may be performed in several ways, some of which were hard to detect, even for a specialized regulatory body; that is delaying or complicating the connection of new entrants' power plants to networks, charging high balancing fees to be primarily paid by new entrants, not making available unused capacities or not using the most efficient allocation methods.[27]

Above all, under the aforesaid state of unbundling, investment incentives remained distorted. The degree of autonomy over investment decisions to be adopted by the unbundled network operators tended to be too low, as investment decisions in new infrastructure projects are in fact taken by the group as a whole.[28] Per se, investment decisions of vertically integrated entities were frequently prejudiced towards the needs of supply affiliates; since the vertically integrated undertakings obtain strong market position as a supplier in the area where they control the network, it was in their interest to avoid investing in infrastructure that would carry extra competition to this area.[29]

As above, one of the main shortcomings identified in the Final Report related to continued vertical foreclosure, i.e. the obstacles to competition stemming from the vertical integration of companies active in the supply and network business. The Final Report concluded that there was an ongoing conflict of interest in these vertically integrated companies with a continued risk that they use their control over the network to make market entry and expansion of their competitors in the supply markets difficult. Whilst the two generations of gas and electricity Directives had already sought to address these issues by introducing a minimum level of unbundling, the Sector Inquiry has demonstrated the mere implementation of existing unbundling legislation was not sufficient and did not address the abnormal functioning of the energy markets.

The Energy Council of 15 February 2007[30] laid emphasis on the fact that there should be effective separation of supply and production activities ensuring equal and open access to transport infrastructures and independence of decisions on investment in

[26] Ibid
[27] Ibid
[28] Ibid, p.27
[29] Ibid, p.27
[30] 2782nd Council Meeting, Transport, Telecommunications and Energy, Brussels, 15 February 2007, 6271/07 (Presse 24)

infrastructure. The European Council of 8-9 March2007[31] approved to a large extent the conclusions of the Energy Council as regards the internal energy market, maintaining to proceed with an additional unbundling agenda. In particular, the European Council agreed on the need for a number of new developments of the internal market rules including effective separation of supply and production activities from network operations, guaranteeing equal and open access and independence of decisions on investment in infrastructure with relevant investment signals contributing to the efficient and more secure operation of the transmission grid.

B. The 2009 Unbundling Rules

In response to the abovementioned, the European Council adopted the Third Legislative Package for the Electricity and Gas Markets in June 2009 of improving the regulatory framework for energy liberalization in the European Union.

The key legislative documents were Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC (hereinafter the "Third Electricity Directive"), and Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC (hereinafter the "Third Gas Directive"), (hereinafter, jointly, the 'Third Package Directives').

One of the main aims of EU's third energy package was to remove any conflict of interest between generators, producers, suppliers, on the one hand, and transmission system operators, on the other. Accordingly, Article 9 of the Third Package Directives prohibit the same person, at the same time, to "control"[32] generation, production and/or supply activities and "control" or exercise "any right"[33] over a TSO or a transmission system. In addition, the same person is prohibited from being a member of the board of both a TSO and a generator, producer or supplier.

C. Unbundling models under the Third Package Directives

The rules on legal and functional unbundling of TSOs as provided for in Second Package Directives have not led to effective unbundling. The Third Package

[31] Presidency Conclusions of the Brussels European Council (8/9 March 2007), 7224/1/07 REV 1

[32] Defined in Regulation No 139/2004 as rights, contracts or any other means which, either separately or in combination confer the possibility of exercising decisive influence on an undertaking, in particular by: (a) ownership or the right to use all or part of the assets of an undertaking; or (b) rights or contracts which confer decisive influence on the composition, voting or decisions of the organs of an undertaking.

[33] Includes in particular (1) the exercise of voting rights; (2) the power to appoint members of the supervisory board, the administrative board or bodies legally representing the undertaking; or (3) the holding of a majority share (Art. 9 par.2 of the Third Package Directives).

Directives, therefore, provide for a new structural unbundling regime. Following the doubts of the European Commission on the developments in the competition on the European energy markets, Third Package Directives take further steps and measures in unbundling of the energy companies. These measures aim predominantly at a direct improvement of competition and secondly at an improvement of investment incentives for the expansion of interconnector capacities.

Under the Third Package Directives, there are three different models in which transmission activities can be carried out in the EU, depending on the preferences of individual EU countries, whereas each model has different unbundling requirements: the Independent Transmission Operator, the Independent System Operator and Ownership Unbundling. Member States are free to opt for one of the three models, which are on an equal footing, under certain restrictions. All these models are subject to a certification procedure.

While these models provide for different degrees of structural separation of network operation from production and supply activities, each of them is expected to be effective in removing any conflict of interests between producers, suppliers and transmission system operators. This means that each of the unbundling regimes is intended to remove the incentive for vertically integrated undertakings to discriminate against competitors with regard to access to the network and commercially relevant information, as well as to provide incentives to invest in infrastructure.[34]The three models aimed at creating incentives for the necessary investments and guarantee the access of new market entrants under a transparent and efficient regulatory regime. [35] Notwithstanding the expectation of the Commission for the unbundling models to be equally effective, the Independent Transmission Operator model has been criticized for offering an inadequate level of structural separation between network operation and production or supply activities; whereas it has been frequently classified as a strict form of legal unbundling rather than as a full unbundling regime.[36] On the other hand, both the Ownership Unbundling and Independent System Operator models are considered as providing more stringent unbundling arrangements. Ownership Unbundling implies a strict ownership separation of the TSO from the commercial business, while the Independent System Operator model splits the transmission ownership from the system operation.

[34] Commission Staff Working Paper, Brussels, 22 January 2010: Interpretative Note on Directive 2009/72/EC Concerning Common Rules for the Internal Market in Electricity and Directive 2009/73/EC Concerning Common Rules for the Internal Market in Natural Gas

[35] Recitals 11 and 12 Third Package Directives

[36] Meletiou A. et al, 'Regulatory and ownership determinants of unbundling regime choice for European electricity transmission utilities', Utilities Policy 50 (2018), p. 15

i. Independent Transmission Operator (ITO)

The ITO model was based on a proposal made by Germany, France, and six other member states (Austria, Bulgaria, Slovakia, Greece, Luxembourg, and Latvia) in January 2008.[37]Energy supply companies may still own and operate gas or electricity networks, but must do so through a subsidiary-in the legal form of a limited liability company[38]-, while all important decisions must be taken independent of the parent company. Under the ITO model, the TSO may remain part of a vertically integrated undertaking (VIU), however, numerous detailed rules are provided in order to ensure effective unbundling[39]. Accordingly, TSO is subject to strong legal and functional unbundling requirements and a burdensome regulatory monitoring scheme in order to ensure its autonomy.[40]

The first important rule that orders the autonomy of the ITO is that it should be equipped with all necessary resources for fulfilling its obligations; all necessary resources -not only the network itself- for operating the transmission network must be owned by the ITO.[41]This obligation concerns not only the network, but also any other assets necessary for the activity of electricity or gas transmission. As regards staff, Article 17(1)(b) of the Third Package Directives stipulates that personnel which is necessary for the activity of electricity or gas transmission must be employed by the ITO. This concerns personnel necessary for performing the core activities of the ITO, including management and network operation. Leasing of personnel between or rendering of services from parts of the VIU to the ITO are prohibited; the ITO may, however, render network access services to the VIU at arm's length if non-discriminatory towards other users and after regulatory approval.[42] As regards corporate services, including legal services, accountancy and IT services, which are considered to constitute part of the activity of electricity or gas transmission as defined in Articles 12 and 17(2) of the Third Electricity Directive and Articles 13 and 17(2) Third Gas Directive, the ITO must employ a sufficient number of qualified staff members to handle day-to-day core activities in order to be autonomous.

Further, the ITO cannot transfer part of its responsibilities relating to the activity of electricity or gas transmission to other entities, although joint ventures may be set up, including with one or more TSOs, power exchanges, and other relevant actors pursuing the objectives of furthering the creation of regional markets or of

[37] Ibid, fn. 36, p.15
[38] Article 17(3) Third Package Directives requires the ITO to be organized in the legal form of a limited liability company as referred to in Article 1 of Council Directive 68/151/EEC
[39] The concept of 'vertically integrated undertaking' is defined in Article 2(21) Third Electricity Directive and Article 2(20) Third Gas Directive
[40] Articles 17-23 of the Third Package Directives for key provisions concerning the ITO model
[41] Article 17(1)(a) Third Package Directives
[42]Article 17(1)(c) Third Package Directives

facilitating the liberalization process.[43] In addition, the ITO is not permitted to share IT systems or equipment, physical premises and security access systems with any other part of the VIU.[44] The ITO is also not allowed to use the same consultants or external contractors for IT systems or equipment, security access systems or auditing, in accordance with Article 17(5) and (6) of the Third Package Directives.

An additional set of more operational measures define the independence of the ITO; the ITO must have effective decision-making rights, independent from the VIU, over the assets necessary to operate the transmission network. [45] The general management structure and the corporate governance of the ITO should provide for decision-making arrangements and rules that ensure its effective independence; whereas, this principle is demonstrated by the following provisions: (i) the ITO must have the power to raise money on the capital market[46]; (ii) subsidiaries of the VIU performing functions of generation or supply cannot have any direct or indirect shareholding in the ITO and vice versa[47]; (iii) with the aim to avoid preferential treatment, all commercial and financial relations between the ITO and other parts of the VIU must comply with market conditions and be submitted for approval to the regulatory authority if these give rise to formal agreements[48]; and (iv) the VIU must abstain from any action inhibiting or prejudicing the ITO from complying with its obligations and must not require the ITO to seek permission from it in fulfilling those obligations[49].

In addition, a set of managerial provisions are adopted to guarantee the independence of staff and management of the ITO. For the purposes of the said provisions in the Third Package Directives, a clear distinction is made between top executive management and board members with decision-making power(both falling under the term 'management') and employees.[50] Regulatory authorities are committed to ensure that the management of the ITO is independent from other parts of the vertically integrated company and can so object to any decision concerning appointment, renewal or termination of office of the persons responsible for the management of the ITO, if there is doubt as to the professional independence of such persons.[51]Along with the control of the regulatory authorities, Third Package Directives lay down specific rules intended to ensure that any conflict

[43]Article 17(2)(g) Third Package Directives
[44] Article 17(4) Third Package Directives
[45] Article 18 Third Package Directives
[46] Article 18(1)(b) Third Package Directives
[47] Article 18(3) Third Package Directives
[48] Article 18(6)& (7) Third Package Directives
[49] Article 18(9) Third Package Directives
[50] Commission Staff Working Paper, 2010, ibid fn. 34, p.18
[51] Ibid, p.18

of interest is avoided as regards the management of the ITO, some of which also apply to regular personnel[52].

An additional key requirement is the Supervisory Board to be appointed, with as its main role the safeguarding of the interests of the VIU and other shareholders. The majority of the Supervisory Board (at least half of the members minus one) is subject to the same independence rules as the management.[53] In addition to the decisions concerning the management of the ITO, the Supervisory Body is responsible to make decisions that may have a significant impact on the value of the assets of the shareholders within the ITO, including decisions regarding the approval of financial plans, the level of indebtedness and the amount of dividends to be distributed to shareholders.

A final set of rules determining the ITO regime addresses the allocation of decision-making power, more specifically on investments and network development. The ITO is essentially empowered to take investment decisions, however under the strong and comprehensive competences of the national regulatory authority commissioned to ensure that the necessary investments are made in the network.[54] More specifically, the ITO is under the obligation to submit every year to the regulatory authority a ten-year network development plan containing efficient measures to guarantee adequacy of the system and security of supply, including which infrastructures needs to be build, which investments have been made or identified as necessary to be executed and respective timeframe; reasonable assumptions on the evolution of production, supply, consumption, export and import must also be made.[55] Upon submission, the regulatory authority examines whether the plan covers all the investments needs, following a consultation process with all the actual and potential system users on the ten-year network development plan, and is entitled to request amendments.[56] After the plan has been approved, the regulatory authority monitors its implementation and takes measures in case the ITO, other than for overriding reasons beyond its control, does not execute a planned investment; such measures, depending on the implementation by the Member State, may impose (i) a straightforward obligation on the ITO to make the investment, (ii) an obligation to organize a tender procedure for other investors or (iii) an obligation to accept a capital increase to finance the necessary investments and allow independent investors to participate in the capital.[57] If one of the aforementioned measures is imposed, the ITO must provide the investors with all

[52] Article 19 Third Package Directives
[53] Article 20(3) Third Package Directives
[54] Article 22 Third Package Directives
[55] Article 22(1)-(3) Third Package Directives
[56] Article 22(4)&(5) Third Package Directives
[57] Article 22(6)&(7) Third Package Directives

necessary information and facilitate the implementation of the project.[58] The Third Package Directives make plain that through the application of these measures the Member State in question has an obligation to assure that the investment in question is executed.[59] The success of the latter two measures, however,-and consequent compliance with the obligation- depends on the capacity of the markets to provide the necessary financing.[60]

A Member State can decide to apply for an ITO model, if the transmission system belonged to a VIU when Third Package Directives entered into force. In overall, the ITO model allows for TSOs to remain part of the VIU, however under a set of detailed behavioral and structural rules-laid down in the Directives- in order to ensure effective unbundling. The Third Package Directives require that in order to be autonomous vis-à-vis any other part of the VIU, ITOs must be equipped with all financial, technical, physical and human resources. Independence of the management, supervision by a neutral Supervisory body, asset ownership, management and network personnel employed by the ITO, monitoring competences of regulatory authorities, are some of the main facets of the ITO model. Concluding with the conceptual categorization of the ITO regime, TSOs have to ensure independence in decision making and activities through organizational structure which needs to be autonomous from the VIU.

ii. Independent System Operator (ISO)

Conceptually, a transmission network consists of two parts; the transmission owner, who owns the assets, and the system operator, who operates the network. Under the ISO model, energy supply companies may still formally own gas or electricity transmission networks but must leave the entire operation, maintenance, and investment in the grid to an independent company. In essence, this model splits the transmission owner from the system operator. The ISO does not own or maintain transmission assets, but is responsible for scheduling and dispatching generation and load; it works with the transmission owners and other stakeholders on the coordination of maintenance schedules and planning for new transmission investments to support changes in the demand for and supply of generation services. As the ISO has no direct interest in the financial performance of the owners of any of the assets of the transmission network, it can be expected to be indifferent and operate independently.[61]

[58] Article 22(7) Third Package Directives
[59] Commission Staff Working Paper, 2010, ibid fn. 34, p.21
[60] Christopher Jones (Ed.), *The Internal Energy Market*, EU Energy Law Vol. I, (3rd edn, Claeys & Casteels (2010)), p. 178
[61] Balmert D., Brunekreeft G., 'Deep-ISO s and Network Investment', Competition and Regulation in Network Industries, Vol. 11 [2010], p.33

Where on the date of entry into force of the Third Package Directives, i.e. 3 September 2009, the transmission system belonged to a VIU, a Member State could decide (instead of applying the rules on Ownership Unbundling as per below) to designate an independent entity, the ISO, and transfer to it the system operation responsibilities.[62] The Commission in the Third Package Directives adopts a definition for an ISO with extensive competences and limited authority for the transmission owner. Under Article 13 of the Third Electricity Directive and Article 14 in the Third Gas Directive the ISO is proposed by the owner of the transmission system concerned, and is approved and nominated as an ISO by the Member State, on the condition that it has been certified by the regulatory authority as having complied with the specific requirements listed in the aforementioned Articles. In particular, as part of the certification procedure, the regulatory authority must ensure that the following conditions are satisfied, whereas the burden of proof is on the candidate operator to demonstrate that it: (i) complies with the rules on ownership unbundling of Third Package Directives[63]; (ii) has at its disposal the required financial, technical, physical and human resources to carry out its tasks; (iii) has undertaken to comply with a ten-year network development plan examined by the regulatory authority; (v) has ability to comply with all obligations applicable to TSOs under Regulation (EC) No 714/2009[64] for electricity and Regulation (EC) No 715/2009[65] for natural gas.[66]

Furthermore, an ISO should be considered as a TSO; this follows from Article 13(4) Third Electricity Directive and Article 14(4) Third Gas Directive: 'the independent system operator shall act as a transmission system operator'. In particular, this means that each ISO is responsible for granting and managing third party access, maintaining and developing the transmission system.[67] As regards investments, the ISO has full responsibility for ensuring the long-term ability of the system to meet reasonable demand through investment planning.[68] Third Package Directives expressly provide that when developing the network, the ISO is responsible for planning, construction and commissioning of the new infrastructure.[69] All the

[62] Article 9(8)(a) Third Package Directives
[63] specifically, the requirements under Article 9(1)(b), (c) & (d) Third Package Directives
[64] Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003 [2009] OJ L 211
[65] Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005 [2009] OJ L 211
[66] Article 13(2) Third Electricity Directive & Article 14(2) Third Gas Directive
[67] Article 13(4) Third Electricity Directive & Article 14(4) Third Gas Directive
[68] Ibid
[69] Ibid

aforementioned competences grant the ISO the authority to decide on investment and, thus, create a 'deep ISO'.[70]

On the part of the VIU, as being the system owner, the VIU is required to cooperate with the ISO and deliver all necessary information, namely regarding the network, and provide coverage of liability relating to the network assets, excluding the liability relating to the tasks of the ISO and provide guarantees to facilitate the financing of network expansions.[71] In fact, this means that the transmission owner is required to cover liability for, for instance, the condition of the network, but not for the management of the network.[72] Further, the system owner finances the investments decided by the ISO and approved by the regulatory authority; or if the network owner does not want to finance the investments itself, it has to give its agreement to financing by any interested party including the ISO.[73] In view of this, Third Package Directives require the designated transmission owner to undertake the investment or at least to make way for another interested investor. As a result, the regulatory system makes a division between investment decision-maker (the deep ISO) and the investment risk-bearer (the system operator).[74] To mitigate pressure over the system operator, Third Package Directives allow the possibility of tendering the transmission investment, which practically means that the designated system operator will not have to make the investment if another party would take over. This may mean that the network owner will not be the owner of the new parts of the network that it has not financed.

If an ISO has been appointed, Third Package Directives require legal and functional unbundling of the transmission system owner. Article 14(1) of Third Electricity Directive and Article 15(1) of Third Gas Directive make explicit reference to the obligation of legal unbundling, namely that network owner must be "*independent at least in terms of its legal form, organization and decision making from other activities not relating to transmission*". Similarly, Article 14(2) of Third Electricity Directive and Article 15(2) of Third Gas Directive provide for rules on functional unbundling. These rules aim to ensure the independence of the transmission system owner from other activities of the vertically integrated company not related to transmission, in terms of organization and decision-making power (subparagraphs (a) and (b)), and require the establishment of a compliance programme (subparagraph (c)).

In view of the ISO regime, it is inferred that it affects both the network operation and decision-making element, including investment decisions, as it is a deep ISO regime.

[70] Balmert D., Brunekreeft G., 'Deep-ISO s and Network Investment', ibid fn. 61, p.35
[71] Article 13(5) Third Electricity Directive & Article 14(5) Third Gas Directive
[72] Commission Staff Working Paper, 2010, ibid fn. 34, p.13
[73] Article 13(5) Third Electricity Directive & Article 14(5) Third Gas Directive
[74] Balmert D., Brunekreeft G., 'Deep-ISO s and Network Investment', ibid fn. 61, p.35

ISO, being a fully unbundled system operator without the grid assets, is separated from the VIU that is obliged to provide to the ISO all the relevant cooperation for the fulfillment of its tasks. Although only officially appearing in the EU legislation in the provisions of the Third Package Directives, a nearly form of ISO model was presented and applied in certain European countries before 2009. As regards, electricity, Italy was the first country that applied this model in 1999, followed by Greece (2002), Hungary (2004), and the UK and Ireland (2005).[75] Currently, the ISO model is only applied in a few countries, that is, the UK, Ireland, and most recently, Latvia, where in 2013 the government appointed a system operator.[76]

iii. Ownership Unbundling (OU)

Under OU, generation and supply, on the one part, and transmission activities, on the other part, must be controlled or owned by independent entities, while these entities are not allowed to hold controlling interest in both activities. More specifically, under Article 9(1)(b) of the Third Package Directives, the same entity is not entitled to exercise control over an undertaking performing any of the functions of production or supply, and to exercise control or any right over a TSO or transmission system. The same rule applies for the alternative situation. Accordingly, OU provisions apply across the gas and electricity markets so that no entity can have influence over both (i) an electricity generator or supplier and a gas TSO; or (i) a gas producer or supplier and an electricity TSO.

Under Article 9(1)(a) of the Third Package Directives, each undertaking which owns a transmission system is required to act as a TSO. Compliance with this rule means that the undertaking which is the owner of the transmission system also acts as the TSO, and is consequently responsible, inter alia, for granting and managing third-party access on a non-discriminatory basis to system users, collecting access charges, congestion charges and payments, as well as, maintaining and developing the network system.[77] With regard to investments, the transmission system owner is responsible for ensuring the long-term ability of the system to meet reasonable demand through investment arrangements.[78] Under Article 9(1)(b)(i) of the Third Package Directives, the same person is not entitled to exercise control over an undertaking performing any of the functions of production or supply, and to exercise control or exercise any right over a TSO or a transmission system. Paragraph1(b)(ii) of Article 9provides for the same rule but covers the alternative situation of a person exercising control over a TSO, and exercising control or any right over an undertaking performing any of the functions of production or supply.

[75] Meletiou A. et al, ibid fn. 36, p. 15
[76] Ibid
[77] Commission Staff Working Paper, 2010, ibid fn. 34, p.8
[78] Ibid

The definition of the term 'control' in Article 2(34) of the Third Electricity Directive and Article 2(36) of the Third Gas Directive is taken from Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings ('the EC Merger Regulation')[79] and should be interpreted accordingly.[80] Under Article 3(2) of the EC Merger Regulation, control is constituted by '*rights, contracts or any other means which, either separately or in combination and having regard to the considerations of fact or law involved, confer the possibility of exercising decisive influence on an undertaking*'. The key point in this respect is the concept of 'decisive influence'. The EC Merger Regulation specifies that decisive influence can particularly arise from: (a) ownership or the right to use all or part of the assets of an undertaking; or (b) rights or contracts which confer decisive influence on the composition, voting or decisions of the organs of an undertaking.[81]

The concept of 'rights' used in Article 9(1)(b) of the Third Package Directives is further explained in Article 9(2), which provides for a non-exhaustive list of these rights, namely, first, the power to exercise voting rights, secondly, the power to appoint members of the supervisory board, the administrative board or bodies legally representing the undertaking, and thirdly, the holding of a majority share. As above, under OU, Member States should be required to ensure that the same person is not entitled to exercise control over a production or supply undertaking and, at the same time, exercise control or any right over a transmission system operator or transmission system. Correspondingly, control over a transmission system or transmission system operator should preclude the possibility of exercising control or any right over a production or supply undertaking. Within those limits, a production or supply undertaking should be able to have a minority shareholding in a transmission system operator or transmission system.[82]

Practically, in a structure where a company controls a production or supply company, it is allowed to hold a minority interest in a TSO, provided that it does not directly or indirectly confer control over the TSO, nor the right directly or indirectly to exercise voting rights or appoint members of the boards legally representing the TSO. Article 9(2) of the Third Package Directives, thus, implies that shareholding can only provide financial rights, i.e. the right to receive dividends, but cannot confer any right to take part in the decision-making of the company or exercise any influence over the company.[83]In fact, a producer or supplier can keep a direct or indirect shareholding in a network operator or system, if, cumulatively, the producer or

[79] Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings (the EC Merger Regulation) [2004] OJ L 24
[80] Recital 13 Third Electricity Directive; recital 10 Third Gas Directive
[81] Article 3(2) EC Merger Regulation
[82] Recital 11 Third Electricity Directive; recital 8 Third Gas Directive
[83] Commission Staff Working Paper, 2010, ibid fn. 34, p.9

supplier: (i) has a shareholding that does not establish a majority share, (ii) does not directly or indirectly exercise voting rights as regards its shareholding, (iii) does not directly or indirectly exercise the power to appoint members of bodies legally representing the network operator or system, and (iv) does not directly or indirectly has any form of control over the network operator or system. The same applies to an entity controlling a TSO or network system, as regards shareholdings in a production or supply company.

Additionally, Article 9(1)(c) and (d) of Third Package Directives provide for the following two further requirements. Under Article 9(1)(c), the same person is not entitled to appoint members of the supervisory board, the administrative board or bodies legally representing the undertaking, of a TSO or a transmission system, and directly or indirectly to exercise control or exercise any right over an undertaking performing any of the functions of generation or supply. In practice this rule complements the rules of subparagraph (b) with a specific constraint as regards parent companies or other entities that do not have any controlling interest in a network operator or a supplier; by this means it is aimed to avoid a situation where a parent company having certain influence over a supplier, even slight, can appoint board members of a network operator.[84] Accordingly, a parent company (or other entity) that holds a majority share, or has the power to appoint board members or exercise voting rights in a supplier, cannot appoint board members of a TSO. It is noted that the provision is only towards one direction; that is to say, a parent company holding non-controlling shares in a supplier, may still be allowed to appoint board members of the supplier. This is important for financial investors, holding minority shares, who regularly apply for the right to appoint at least one administrator in return.[85] Article 9(1)(d) addresses the issue of conflict of interest for board members by prohibiting the same person from being a member of the board of both a supplier and a TSO. This basic provision aims at ensuring the independence of the TSO's board members.

Further, in order for undue influence arising from vertical relations between gas and electricity markets to be avoided, Article 9(3) of Third Package Directives make clear that OU applies across the gas and electricity markets, thereby prohibiting joint influence over an electricity supplier and a gas network operator or a gas supplier and an electricity network operator.[86] The rule, however, only applies to the main requirements of OU of Article 9(1)(b) Third Package Directives, not to the supplementary rules provided for in subparagraphs (c) and (d).

[84] Ibid, p.10
[85] Christopher Jones (Ed.), *The Internal Energy Market*, ibid fn. 60, p.140
[86] Ibid

The ownership unbundled network operator manages system operation -including the interaction with the system users-, network maintenance and network investment in a unified mode. OU entails the formation of a separate company, which owns and operates network assets and the removal of any significant shareholding by one type of company in the other. In practice it means that no supply company can have a significant stake in the network operator and certainly not a stake that would give a company any type of control over the other. Although, a VIU that controls production or supply activities may still hold a non-controlling minority share in an ownership unbundled network operator, it can be entitled to no more rights than merely financial ones. Control or any sort of influence, particularly through appointment or voting rights, is restricted by the Third Package regime.

D. Ownership unbundling as an optimal solution

Since the first steps toward market liberalization in 1996, there has been discussion over the right degree of vertical network unbundling to achieve a level playing field. While the unbundling provisions of the first and Second Package Directives were accepted in their positive impact, European Commission proposed the Third Package Directives imposing minimum obligations on TSOs with regards to structural unbundling. In the context of the Third Package Directives, the countries are mandated to make stricter the previous unbundling rules for transmission, choosing between two principal options: full unbundling models (ISO and OU) or an ITO model. In the framework of unbundling, the term 'full' denotes a fully segregated system operation from the ownership of transmission assets or to a fully segregated transmission system ownership and operation from the commercial -generational and supply- business.[87]

Tracing back in 2006, Commission its Final Report for the Sector Inquiry reached the conclusion that ownership unbundling would be the most effective cure to the inadequate unbundling regime in energy markets. OU has been seen as the only measure which actually removes the incentives for discrimination in favor of the affiliated generator or supplier, and thus ensures a level playing field on the market.[88] As regards the strategic benefits of full OU for network operators, a fully unbundled and properly regulated TSO will focus on optimizing performance and revenues from its network.[89] As regards the competitors, network operators will have no incentive any more to discriminate between market participants. Only the

[87] Meletiou A. et al, , ibid fn. 36, p. 14
[88] European Commission, Competition DG, DG Competition Report on Energy Sector Inquiry, SEC/2006/1724
[89] Ibid, p. 55

removal of the incentive for VIU to discriminate against competitors as regards network access and investment can lead to effective unbundling.[90]

OU, which involves the appointment of the network owner as the system operator and its independence from any supply and production interests, has been seen from the Commission as an efficient and firm way to answer the inherent conflict of interests between generators/producers/suppliers, on the one hand, and TSOs, on the other, as well as to ensure security of supply. In view of this, the European Parliament, in its resolution of 10 July 2007 on prospects for the internal gas and electricity market[91]referred to ownership unbundling at transmission level as the most operative tool by which to promote investments in infrastructure in a non-discriminatory way, fair access to the network for new entrants and transparency in the market. Under OU, Member States are thus required to ensure that the same person or persons are not entitled to exercise control over a production or supply undertaking and, at the same time, exercise control or any right over a transmission system operator or transmission system. Conversely, control over a transmission system or TSO should preclude the possibility of exercising control or any right over a production or supply undertaking.

IV. Application of Ownership Unbundling rules to financial investors

A. Ownership Unbundling in the context of the certification procedure for TSOs

Third Package Directives have introduced a structural separation between transmission system operator activities on the one hand, and generation, production and supply activities on the other hand. The object of these provisions on unbundling of networks is to evade from conflicts of interest and to make sure that network operators take their decisions autonomously, guaranteeing transparency and non-discrimination towards all network users. This is not only relevant for the day-to-day operational decisions of network operators, but also for their strategic investment decisions.

As stated, the aim pursued under Third Package Directives unbundling rules is the elimination of any conflict of interest between generators/producers, suppliers and transmission system operators. However, it would not be consistent with this aim if certification of a TSO were to be denied in circumstances where it can be clearly established that there is no motivation for a shareholder in a TSO to influence the TSO's decisions in order to favor his generation, production and/or supply activity interests at the expense of other network users.

[90] Recital 11 Third Electricity Directive; recital 8 Third Gas Directive
[91] European Parliament resolution of 10 July 2007 on prospects for the internal gas and electricity market (2007/2089(INI)) OJ C 175E, 2008

From this perspective, the application of the unbundling regime, as laid down in Article 9 of the Third Package Directives, in relation to cross-sector investments in energy assets by financial investors is essential for financial investors (such as pension funds, insurance companies or infrastructure funds) who hold diversified portfolios with stakes in energy transmission, generation, production and/or supply activities. To this end, the Commission by releasing interpretative notes[92], aimed to clarify the application of rules on OU to situations where a shareholder in a TSO also owns stakes in generation, production and/or supply activities and specify certain aspects of the rules on the unbundling of TSOs as laid down in the Third Package Directives and assess the presence of a conflict of interest in the case of parallel participations in generation, production and/or supply activities.

The above clarification need has emerged from the Commission findings in the context of the first round of certification procedure for TSOs, where in certain situations referred to in Article 9(1)(b), (c) and/or (d) of the Third Package Directives, it was apparent from the facts of the actual case that the concurrent participation in transmission activities on the one hand, and in generation, production and/or supply activities on the other hand, did not create any potential conflict of interest or incentive for exploitation, and consequently did not by any means risk to have a negative effect on the independent management of the TSO.[93]

The unbundling rules passed by the European authorities in 2009 to curtail conflicts of interest resulting from the simultaneous holding of transmission and production/supply interests were often perceived as hampering investment. The Commission has acknowledged the important role of financial investors in the energy sector given that in many cases they enable TSOs to raise the capital required for the realization of necessary investments in the EU energy network infrastructure and has indicated that in specific circumstances where the relevant shareholder is able to demonstrate that it has no incentive to influence the decision-making process of the TSO in order to afford preferential treatment to its generation, production and/or supply activities to the detriment of other network users, it is possible that no conflict of interest arises and the relevant TSO will consequently not be deemed to breach the unbundling rules.[94]

Since the aim of the unbundling rules is to prevent a conflict of interest between generators/producers, suppliers and TSOs, the Commission has taken the view it would not be in line with the objectives of the Third Package Directives if certification of a TSO were to be refused due to prescribed non-compliance with the

[92] Commission Staff Working Document, Brussels, 8 May 2013: Ownership Unbundling, The Commission's Practice in Assessing the Presence of a Conflict of Interest Including in Case of Financial Investors, SWD(2013) 177 final.
[93] Ibid, p.4
[94] Ibid, p.4

unbundling requirements where, in the circumstances of the individual case, it can be clearly demonstrated that there is no incentive for a shareholder in a TSO to influence the TSO's decision-making in order to favor his generation, production and/or supply interest to the detriment of other network users. Any other interpretation of the OU rules bring about effects which would not be justified by the objective the unbundling rules seek to pursue, especially, prevention of discriminative treatment in the operation of the network and in the investment decisions concerning the energy infrastructure.[95]

B. Commission's guidance in TSO Certification

A network operator can only be approved and designated as a TSO following the certification procedure stipulated in Article 10 of the Third Package Directives in combination with the provisions of Article 3 of Regulation (EC) No 714/2009 for electricity and Regulation (EC) No 715/2009 for natural gas. These rules apply to all TSOs regarding their initial certification, and, subsequently, whenever a reexamination of a TSO's compliance with the unbundling rules is required. The regulatory authorities are under the obligation to open a certification procedure upon notification by a potential TSO, or upon a reasoned request from the Commission. Along with that, regulatory authorities monitor compliance of TSOs with the rules on unbundling on a continuous basis, and open a new certification procedure on their own initiative where, according to their knowledge, a planned change in rights or influence over transmission system owners or TSOs may lead to a breach of unbundling rules, or where they have reason to believe that such a breach may have occurred.

i. Conflict of interest rule

The 2009 legislation set up a TSO certification procedure to ensure compliance with the unbundling rules. In essence, each TSO must file an application with its national regulatory authority, which, in turn, must provide the Commission with its draft opinion. The Commission may comment whether it agrees or not with the national regulatory authority's draft. The national regulatory authority must take the Commission's comments into the utmost account, but in theory can maintain its stance in case of disagreement.[96] Given that TSO certification can only be granted if any conflict of interest is clearly excluded, the Commission has attempted to identify certain circumstances on a case by case basis that would render parallel investments (i.e. investments in both transmission and generation or supply assets) permissible and has based its reasoning on five case studies, namely National Grid, Swedegas,

[95] Ibid, p.5
[96] Article 3 of Regulation (EC) No 714/2009 for electricity and Regulation (EC) No 715/2009 for natural gas

Red Electrica de Espana & Enagas, 50 Hertz Transmission and Societa Gasdotti Italia.[97]

(*a*) National Grid

The first case where the above approach was followed is the Commission's opinion on the certification of the three National Grid TSOs in the United Kingdom[98]. In this opinion, the Commission considered the fact that the ultimate holding company of the three National Grid TSOs in the United Kingdom also controlled generation interests in the United States and found that on this occasion, despite the fact that the OU rules are not restricted to EU assets, in the absence of any connection or interface between the energy systems in question there was no risk of a conflict of interest arising.

(*b*) Swedegas

Further, in the opinion on the certification of the Swedish gas TSO, Swedegas, the Commission analyzed whether a conflict of interest could be identified[99]. In this case the Commission agreed with the Swedish regulatory authority 'EI' that the fact that it was impossible for the ultimate parent company of both Swedegas and a waste disposal company generating electricity in the neighbouring Denmark to use the gas transmission activities of Swedegas in a manner so as to favor the generation interests of the waste disposal company in Denmark, given that limited quantities of electricity sold at pre-established prices; thus there was no risk of discrimination of other network users which could preclude certification. The Commission referred that: *"Swedegas is owned by the EQT Infrastructure Fund, an infrastructure investment fund. The ultimate ownership of the EQT Infrastructure Fund lies, via a number of intermediary legal persons, with SEP Capital B.V., registered in The Netherlands. In its draft decision, EI has assessed whether other companies owned and controlled by the EQT Infrastructure Fund perform any of the activities of generation, production or supply. EI has found that three companies perform such activities. The first of these undertakings is Kommunekemi A/S, a waste treatment company operating in the neighbouring Member State Denmark, which uses heat from the processing of waste primarily for district heating purposes. During the summer months the heat is also used for the generation of limited quantities of electricity, which Kommunekemi A/S sells for guaranteed and pre-established prices. The Commission agrees with EI that, given that only limited quantities of electricity are being generated, as a mere byproduct, and given that the electricity generated is*

[97] Commission Staff Working Document, 2013, ibid fn.92, p.5
[98] Commission opinion of 19 April 2012 on the certification of National Grid Electricity Transmission plc (009 - 2012 - UK), National Grid Gas plc (010 - 2012 - UK), and National Grid Interconnector ltd (011 - 2012 - UK)
[99] Commission opinion of 30 April 2012 on the certification of Swedegas AB (018 - 2012 - SE)

subsequently sold for pre-established prices, these generation activities cannot form an obstacle to certification of Swedegas as an ownership unbundled TSO. Since in the present case it appears impossible to use the transmission activities of Swedegas in a manner so as to favor the electricity generating interests of Kommunekemi A/S, there is no risk of discrimination of network users."[100].

(*c*) Red Electrica de Espana & Enagas

It is not excluded that a simultaneous participation in a gas TSO and in electricity generation and/or supply activities, or in an electricity TSO and in gas production and/or supply activities can also give rise to a conflict of interest. Nevertheless, in situations where a shareholder has a participation in a gas TSO and simultaneously a share in electricity generation activities, the possibility to favor its electricity generation activities by influencing the gas transmission may under certain specific conditions be somewhat more limited than in situations where the transmission and generation activities both relate to electricity. In the opinions on the certification of the Spanish electricity TSO Red Electrica de Espana[101] and the gas TSO Enagas[102], the Commission applied a similar reasoning. The Commission acknowledged that where an investor owns cross-sector assets, the scope for giving preferential treatment to its electricity generation activities by influencing the gas transmission may, under certain circumstances, be rather limited than where the transmission and generation interests are both in electricity. On the facts, the Commission found that as long as the coal-fired generation activities are performed under a regulated framework, can benefit by law from priority dispatching and remain small in size, it is beyond the bounds of possibility that the investor would be able to affect the transmission activities of the TSO in a manner that would favor its generation activities and hold back other network users.

(*d*) 50 Hertz Transmission

An additional case is the Commission's opinion on the certification of the German electricity TSO 50 Hertz Transmission[103]. In this case a financial investor, IFM Global Infrastructure Fund, with a controlling stake in the German TSO, also had several participations in generation and supply activities including a supplier of heat on the regulated district heating market in Poland, namely DalkiaPolska. The by-product of heat production was generation of limited quantities of electricity. In this case, there was no incentive to influence the decision-making process of the TSO with a view to favor the generation interests as the decisions regarding the operation of the Polish

[100] Ibid, p.3
[101] Commission opinion of 24 May 2012 on the certification of Red Electrica de Espana S.A.U. (021 - 2012 - ES)
[102] Commission opinion of 15 June 2012 on the certification of ENAGAS S.A. (024 - 2012 - ES)
[103] Commission opinion of 6 September 2012 on the certification of 50 Hertz Transmission GmbH (027 -2012 - DE)

heating plants were taken on the basis of the heating needs of the consumers connected to the district heating network rather than the needs of electricity generation. In addition, the Polish company was a price taker on the Polish electricity market. The Commission stated in its opinion: "*Decisions concerning the operation of the different plants of DalkiaPolska are taken on the basis of the heating needs of the consumers connected to the district heating network and not on the basis of needs of electricity generation. In practice, DalkiaPolska is a price taker on the Polish electricity market and does not have any influence on the electricity price. In its draft decision Bundesnetzagentur (the General Federal Network Agency) analysed in detail whether in the circumstances of the present case any incentive could be identified for IFM Global Infrastructure Fund to influence the decision making in 50 Hertz as a TSO in Germany in order to favour the generation interests it has in DalkiaPolska or to discriminate against actual or potential competitors. Bundesnetzagentur came to the conclusion that in the present case no such incentive could be identified, and that as a consequence the participation of IFM Global Infrastructure Fund in DalkiaPolska does not form an obstacle to the certification of 50 Hertz as an ownership unbundled TSO. Based on the information in the draft decision, the Commission has no reason to question the assessment of Bundesnetzagentur in the present case and agrees to its conclusion. The Commission invites Bundesnetzagentur, however, to continue monitoring the case also after the adoption of the certification decision in order to satisfy itself that no new facts and circumstances emerge which would justify a change of its assessment and to include a condition in its final certification decision which requires 50 Hertz to regularly report to Bundesnetzagentur on the relevant circumstances.*"[104].

(*e*) Societa Gasdotti Italia

Lastly, reference is made to the Commission's opinion concerning the certification of the Italian gas TSO Società Gasdotti Italia[105]. In this case a financial investor, Eiser Global Infrastructure Fund, the ultimate owner of the TSO, in addition to owning an Italian TSO had interests in two Spanish companies producing electricity from solar energy. The Commission found that the interface between the Spanish electricity market and the Italian gas market was limited. Moreover, it was important that the generation activities were performed under the Spanish regulated framework with a regulated price, benefited by law from priority dispatching and were small in size. The fund also had an interest in a waste management company in the UK that generated electricity from waste and biogas through two production units of relatively small size. At this point, the most significant factor was the geographical

[104] Commission opinion of 6 September 2012 on the certification of 50 Hertz Transmission GmbH (027 -2012 - DE) p. 4,5
[105] Commission opinion of 23 January 2013 on the certification of SocietàGasdotti Italia S.p.A. (047 - 2012 - IT)

distance between the origin of electricity and the gas transmission network of the TSO that effectively precluded any conflict of interest. The fund's interest in a waste management company in Italy was also found not be an impediment to certification as the renewable electricity produced from waste was a by-product of the main operations, its size was small, it was sold at a regulated price and the production units were not located in the area where the gas network of the TSO was situated.

ii. Additional illustrative cases

Throughout its decisional route, the Commission has obtained substantial experience in the application of the unbundling rules. In particular, the Commission has become aware of the fact that a fixed application of the unbundling rules would be improper, especially in cases where a shareholder has no incentive or ability to influence in practice the TSO to benefit in a significant way.

(*a*) Mitsubishi Corporation & Barclays PLC

As per above, the Commission found that no conflict of interest existed where the controlling shareholder of a TSO had production/supply interests located in a different country. A similar approach has been adopted for the intra-EU Mitsubishi Corporation & Barclays PLC cases[106]. Since 2007, Mitsubishi commenced activities in transmission infrastructure connecting offshore wind farms to the mainland grid, particularly in the UK. In two cases, it formed a joint venture with Barclays. While Mitsubishi constructed and operated the said facilities, Barclays acted as a financial investor; the joint venture had to apply for TSO certification. Mitsubishi also had interests in generation assets in other parts of EU, namely Spain, France, and Bulgaria, and Barclays had interests in generation activities in the UK.

The Commission found that Mitsubishi's transmission and production activities in other parts of the EU generated limited potential for interference with the transmission infrastructure in the UK. With regard to Barclays, the size and market share of its generation activities were insignificant compared to the total generation capacity in the same country.[107] In addition, the Commission stressed that the TSO's role was limited to operating a single cable connecting offshore wind farms to the wider national system. Thus, in actual fact, the TSO joint venture would be coordinating its actions with the main TSO in the UK, which in turn would be responsible for providing instructions on the day-to-day operation of the cable, whereas the owners would not play any significant role in this respect.

[106] See Commission's Opinion on Ofgem's draft certification decision for Walney1C(2013) 979; Commission's Opinion on Ofgem's draft certification decision for Walney 2, Sheringham and London Array C(2013) 2030; Commission's Opinion on BnetzA's 's draft certification decision for TenneT offshore C(2013) 5631

[107] Commission's opinions C(2013) 979, p. 5, C(2013) 2030, p. 5

(*b*) Eleclink

A similar approach has been adopted in the Eleclink case[108], where a private equity sponsor Star Capital requested for assurance that its interest in a TSO would not hinder its future ability to invest in generation assets. In reply, the Commission stated that not every investment in generation and supply would necessarily entail a breach of the unbundling rules.[109] Accordingly, the Mitsubishi Corporation & Barclays PLC cases confirm that lack of geographic interface and size of the generation assets can lead to unbundling compliance, despite concurrent holdings in generation activities.

(*c*) TIGF

Further, in terms of corporate structure standards, the Transport et Infrastructures Gaz France ('TIGF') case[110] is indicative as to the Commission's approach. Through its subsidiary Société C31 S.A.S.,Electricité de France ('EDF') -a leading French electricity generator- co-controlled TIGF Holding, which in turn controlled (daughter company) TIGF Investissements S.A.S., the controlling entity directly above the TSO, namely, TGIF TSO for gas in France. EDF appointed two out of nine members of the Board of Directors in TIGF Holding. The case modeled a potential conflict of interest situation, given that Société C31 could have an inherent incentive to use its influence over TIGF in a way so as to favor its mother company's interests, given that it is active in the supply of both electricity and natural gas in the area where TIGF was the TSO. Nevertheless, the Commission issued a positive opinion considering the following: (i) TIGF Holding could not take any strategic decision in relation to TIGF Investissements S.A.S. and TIGF, such as investment decisions in the network; (iii) EDF could not appoint any of the members composing the boards of directors of TIGF Investissements S.A.S. or TIGF;(iv) once a decision by TGIF Holding concerned TGIF Investissment S.A.S., EDF board members were not authorized to obtain information on this item, nor were they able to participate in the relevant voting. In the overall, the Commission was convinced that EDF's controls did not go beyond TIGF Holding and were limited to the veto rights that are regularly conferred to minority shareholders to safeguard their financial interests as investors and on these grounds the Commission issued an affirmative opinion.

(*d*) Fingrid

In contrast to the above, is the Commission's approach in the Finnish TSO Fingrid.[111] Out of Fingrid's twelve shareholders ten of them where insurance companies with interests in generation activities. Fingrid approached the

[108] ElecLink (FR-UK) Commission's Decision C(2014)5475
[109] Ibid, p.22
[110] Commission's Opinion on CRE's draft certification decision for TIGFC(2014) 3837
[111] Commission's Opinion on EMV's draft certification decision for FingridOyj C(2014)329, p. 4

aforementioned companies with a letter, informing them about the potential conflict of interest, advising to comply with the OU requirements and indicating that they could not appoint the same persons in the operation of undertakings performing generation activities to act as Fingrid directors, as well. The Commission, nevertheless, opposed to this and opined that it is for the TSO to establish that the investors in question do not have the reasons or ability to influence the TSO decision-making; a mere letter would not suffice to ensure compliance with the ownership unbundling rules. A simple one-sided assurance not to abuse the simultaneous shareholding would not provide adequate comfort to reserve unbundling certification; only an appropriate corporate structure can be practicable and adequate to safeguard ownership unbundling model goals.

(e) WoDS

An additional case demonstrating the Commission's strong attention to corporate structure benchmarks is the certification case of WoDS Transmission Limited (WoDs), an offshore TSO for electricity in the UK.[112]The WoDS case shows that the Commission remains attentive and does not hesitate to request national authorities for more comprehensive examination of the facts even in cases where the size of the asset is not major and there are corporate security arrangements in place.

WoDs won a tender to become the TSO operating the West of Duddon Sands offshore electricity transmission system, connecting an offshore wind farm to the UK mainland. Even if the TSO at issue represented a small portion of the entire national system, and its role was principally to bring together the national electricity grid, the parties arranged a corporate structure akin to TGIF's. WoDs were a 100% subsidiary of WoDs Transmission HoldCo Limited, which in turn was 100% owned by WoDs Transmission TopCo Limited. The owners of WoDs Transmission TopCo Limited were ultimately the 3i Group and the Macquarie Group Limited, both parties holding a 50% share.

In its decision the UK regulatory authority has evaluated the two ultimate shareholders of WoDs in order to found whether or not they perform the functions of generation, production or supply or have shareholdings in companies that perform such activities and up to what point that influences WoDs's compliance with UK legislation transposing Article 9(1)(b)(i) of the Third Electricity Directive. In its draft decision, the UK regulatory authority has found that the applicant complies with the requirements of OU model and on this basis, submitted its draft decision to the Commission requesting an opinion. As regards, the generation interests of 3i Group, the Commission found that do not create a risk of discrimination in the operation of the networks or to adequate network. On the other hand, Macquarie

[112] Commission's Opinion on Ofgem's draft certification decision for WoDs C(2015) 1614

Group is an Australian investor controlling significant generation assets in the EU and specifically in the UK. According to UK regulatory authority it does not exercise control over WoDs and hence it passes the unbundling tests. Nevertheless, the Commission asked the national authority to reexamine its affirmative position on Macquarie and provide a full assessment of whether it exercises control over WoDs, especially as a result of its voting rights at the shareholding meeting on strategic matters, including investments above certain thresholds. In particular, the Commission asked the UK regulatory authority to reconsider the extent of Macquarie's voting rights to ensure that these were limited only to "*matters that are necessary for Macquarie to maintain the necessary minimum level of oversight over its financial interest*"[113].

C. Case by case approach

In cases where participation in a TSO does not meet the OU requirements set out in Article 9(1) (b), (c) or (d) of the Third Package Directives, a certification can only be granted if conflict of interest is clearly excluded. In certain cases it may not be straight clear to demonstrate whether or not a conflict of interest exists where a shareholder with a participation in generation, production and/or supply activities has invested in a TSO. This requires a thorough analysis on a case-by-case basis. The Commission has made it clear that each case will be subject to an in-depth analysis and will be assessed on its own facts. The burden of proof as to the absence of a conflict of interest, or an incentive to exploit it, lies with the candidate TSO and its shareholders, and includes an obligation to submit all relevant information.

On the basis of the above decisions, several elements can be of relevance for the case-by-case TSO Certification assessment. The geographic location of the transmission activities and the generation, production and/or supply activities concerned, including the presence or absence of any interface or connection between the energy systems is one of these elements as per the Commission's approach; for non-EU investments where investors control or exercise rights over a TSO, but their generation, production and/or supply assets are located in non-EU countries that do not border or supply to the EU (e.g. an EU TSO, with other energy assets in the US or Australia) shall be considered on its facts that meets the certification OU requirements. Nevertheless, the Commission is likely to take a stricter approach if assets are held in non-EU countries that are geographically near to, or major suppliers to, the EU (e.g. Russia). In addition, the value and the nature of the participations in these activities, for instance whether electricity generation is a mere by-product of other activities is to be taken into account. A primary issue the Commission is likely to consider is whether or not the generation, production and/or supply is provided on standard commercial terms, or is subject to some restriction

[113] Ibid, p.4

that limits its effects on the competitive market. This could take place, for example, where generation, production or supply: (i) is a by-product of another primary operation and is of very limited range; is small-scale and/or subject to price regulation; has no influence on market prices, and/or is a very small competitor, and/or is a price-taker on the market. The size and market share of the generation, production and/or supply activities is another factor to be considered, namely, whether the generator has any influence over the electricity price or is a price-taker, as well as whether wholesale price evolution of the commodity would have consequences for the emergence of a conflict of interest. Further, the Commission assesses that where the TSO and vertically-related assets are of different energy types (e.g. gas TSO and downstream electricity assets), the investor's ability to influence the TSO decisions may be more limited than in situations where the transmission and generation activities both relate to the same energy type.[114]

The Commission has emphasized that these criteria are indicative and not exhaustive, and none of these elements is necessarily decisive on its own.[115] In all cases, an overall assessment will be required, taking the various elements under consideration. It also stresses the need for continued monitoring by the national regulators following the certification decision to ensure that no new facts or circumstances arise that could alter the initial assessment.[116] The Commission has reiterated that a certification decision may contain a condition requiring the TSO to regularly report to the regulator on the relevant circumstances and that TSOs must notify any material changes that may trigger a re-assessment; further any national regulator has the authority to initiate a new certification procedure if it has acquired knowledge of a material change (or any such plans to this effect) in rights or influence over a TSO that may lead to a breach of the ownership unbundling rules. Alternatively, it may be the Commission to request the national regulator to open a new certification procedure.[117]

D. EU energy unbundling rules application and investment decisions

The EU unbundling rules limit how and where strategic and financial investors can invest in transmission and generation. Unbundling rules are often perceived as preventing or hindering the progress of investments. Investors are facing uncertainty over the impact of the unbundling rules on their investments; strategic and financial investors, such as private equity and infrastructure funds, have been concerned about coming into conflict with the unbundling rules. Nevertheless, when investments are not adjacent and/or small, there is typically less concern about

[114] Commission Staff Working Document, 2013, ibid fn.92, p.6
[115] Ibid p.10
[116] Ibid p.10
[117] Ibid p.11

conflicts of interest. For significant projects though, where investors already participate in the same or contiguous markets, corporate structures can be designed in a way that make the investors passive at the level of the operating assets. As the WoDS case demonstrates, investors will need to make a persuasive case, through comprehensive and efficient mechanics, that the risk for conflict of interest and undue influence is properly controlled.

Tension between unbundling rules and the need to attract financial investors for transmission assets has been of great importance for the EU as a whole. New entrants will be likely to be indecisive regarding possible investments if they are not convinced that the network operator will treat them fairly. Such ambiguity is hampering investments that national governments and the EU wish for to attract and receive. The Committee of the Regions has stressed the need for national regulators to try and create incentives for the necessary investment in the networks to be performed.[118] Regulation, and particularly access regulation, should facilitate firms to enter the market; more rigorously enforced access regulation and specifically OU of the activities of the incumbent on different phases of the production route may well have unfavorable consequences.[119]

In this regard, the Commission has developed a balancing approach to ensure that an overly mechanical application of the unbundling rules will not have a disproportionate effect and discourage the anticipated investments in energy infrastructure. In situations where there is no material functional overlap between production and transmission investments or where there is significant geographic distance between investments, strategic and financial investors should be able to pursue transactions with reasonably predictable and encouraging regulatory outcomes. The Third Package Directives go on with the requirements of the EU legislation, but reflect the more goal-directed approach developed by the Commission. Particularly, OU rules go on to prevent discrimination by TSOs where that might occur as a result of common control, but make less severe the rules which confine control where there is no real possibility of discrimination. Yet, while the policy guidance does provide some useful assistance that gives support and certain clarity to investors, to understand in better depth the unbundling rules, they should remain affixed to the Commission's clear statement that every case must be decided on its full facts after a comprehensive investigation.

[118] Opinion of the Committee of the Regions on the 'Third legislative package on European electricity and gas markets' (2008/C 172/11)
[119] Gugler K. et.al, 'Ownership unbundling and investment in electricity markets — A cross country study', Energy Economics 40 (2013), p. 703

V. The call for Energy Infrastructure Investments

The electricity and gas sector are structured according to the Third Package Directives, whereas activities that make allowance for strong competition are liberalized (i.e. generation, trade and supply) while the grids, which denote a natural monopoly, are unbundled from the competitive activities and are bound by regulation. The key goal of the EU energy market liberalization is the creation of an internal energy market. Improved performance of the transmission business, and the power sector in total, has been an additional important goal. A durable and sheltered transmission network is a commonly acknowledged requirement to allow for EU energy and policy objectives. It is anticipated that the accomplishment of these objectives would bring about a rise of welfare for the EU economy. In order to meet these objectives significant investments in electricity and gas transmission infrastructure are indispensable. This invitation for investments in interconnectors, transmission systems and grids, nevertheless, is exceptional in its scope and entails a substantial financing challenge.

In fact, grids are getting old and transmission assets have to be constantly substituted; being constructed in the second half of the 20th century, several network assets are nearing the end of their lifespan.[120] In addition, TSOs are obliged to unite demand and production components to their networks, thus, a more essential reform of the transmission grid is required to put up asset replacement, new connections, cross border associations. The European Network of Transmission System Operators in the Ten-Year Network Development Plan 2014[121] outlines that "*grid development is a vital instrument in achieving European energy objectives*"[122] and involves important economic benefits for the European society. Transmission investments moderates the total cost of electricity supply by amplifying generation competition and allowing more trades among lower and higher rated districts; this developed market integration shall bring about an equalization of energy prices across EU and is estimated to diminish power prices[123]. The aforementioned indications reveal that financing transmission grids may lead to major welfare for EU citizens.

The investment benefits arrive through policy aims being accomplished and, accordingly, emphasis should be given to an electricity and gas transmission regulatory framework having the most positive qualities. One of the most significant

[120] ENTSO-E, Fostering Electricity transmission investments to achieve Europe´s energy goals: Towards a future-looking regulation, Working Group Economic Framework (2014), p. 4
[121] In order to increase European coordination and to establish a central reference point for European electricity grid development, ENTSO-E is legally obliged to publish a community-wide Ten-Year Network Development Plan (TYNDP) according to Regulation (EC) No 714/2009.
[122] Ten-Year Network Development Plan (TYNDP) 2014, p. 6
[123] ENTSO-E, Working Group Economic Framework (2014), ibid fn. 120, p. 9

barriers affecting investments in the energy sector is the lack of regulatory certainty due to insufficient policies and inappropriate regulatory framework, including demanding permit granting procedures. Investments in grid assets are primarily determined by regulation that guarantees investors an equitable return. Accordingly, effective regulation should establish a sufficient comprehensive reward ratio for investment risk, proper motivations to prospective investors, sufficient access to capital markets to facilitate adequate financing, and the integration of transmission investment prerequisites which navigate EU policy aims.[124] Along these lines, transmission investments will be facilitated, which subsequently will bring greater welfare in the EU.

In the Third Energy Package, transmission investments were given a clear attention and Commission Regulation (EC) No 347/2013[125] is exclusively engaged to this area. Well-interconnected energy network is a keystone of the European strategies and the EU Energy policy. However, policy arrangements to this point for trans-European energy infrastructure policy merely involve Projects of Common Interest (PCI) which stand for a small subclass of all infrastructure investments looked-for in Europe. The same holds true for the instruments and financing options developed within the Regulation (EU) No 1316/2013[126] establishing the Connecting Europe Facility, a European programme designed to financially support projects of general interest in the transport, energy and telecommunications sector. These substantial policy actions taken over the past decade are clearly welcomed. Nevertheless, there is much work yet to be done; there is still a risk of investments being postponed or given up in total for the reason that there are demanding permitting procedures, regulatory obstacles or financing concerns. The financial necessities of TSOs should be acknowledged in depth by national regulatory authorities and policy-makers at various levels and turn specific challenges into joint action; without proper agenda, the implementation of the required investments is endangered.

VI. Conclusion

In the late 1980s, policymakers largely established that the energy generation should be made available through structured and competitive markets, taking away its monopoly standing. In Europe, the liberalization and reformation of the electricity and gas markets initiated mainly with the introduction of the EU's first electricity and gas Directives on February 19, 1996, where this first legislation package was followed

[124] ENTSO-E, Working Group Economic Framework (2014), ibid fn. 120, p. 3
[125] Regulation (EC) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009 [2013] OJ L 115
[126] Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010 [2013] OJ L 348

by a second in 2003. The principal objective of the said legislation packages was to formulate a well-organized, competitive, and sustainable energy market across the EU. Although initial unbundling rules were accepted in their positive impact, the Commission regarded that these regulatory reforms were not adequate to achieve firm energy goals. Further steps of unbundling, namely OU, ISO or ITO have been seen as proper to promote competition, activate investments, and press forward the evolution towards an integrated European energy market. For this reason, the Commission passed the third legislative package in 2007, being the latest round of energy market legislation, enacted to improve the functioning of the internal energy market and resolve structural problems.

The Third Package regime pursues to liberalize the EU gas and electricity markets, including by requiring Member States to implement separation between gas and electricity production, transmission and supply operations. It has been straightforward since the commencement of the liberalization development that a considerable level of unbundling is required so as to secure non-discriminatory access to the networks and avoid conflicts of interest within vertically integrated energy companies. The unbundling regime has been designed at releasing energy markets, to a great extent by entailing the disintegration of Europe's old vertically-integrated national incumbents. Nevertheless, at the same time, it had as a consequence the creation of considerable impediments for investors and multi-national organizations looking for the creation of a portfolio of assets at different stages of the energy supply cycle.

To this effect, the Commission has developed a balancing approach to ensure that an application of the unbundling rules will not have a disproportionate effect to energy investors and that legal uncertainty will not discourage the greatly looked-for construction of energy infrastructure. Since 2011, the Commission's approach to OU has developed to be clearer as the Commission has issued its opinions to national regulators. In response to increasing disappointment from infrastructure investors who argued that the OU regime unjustifiably limited their ability to invest in poor infrastructure across the EU, it developed a more realistic approach and addressed the strict application consequences of the unbundling rules to financial investors.

More than ever, at a time when extensive investments in the grids are considered necessary to promote market integration, interconnection of energy systems and enhance competitiveness, the way the OU measures have been set up, effectuates unwanted effects to investment incentives. The required investments are being hindered by a variety of factors, including inappropriate regulation and rigorous permitting procedures. Adequate regulation and supporting initiatives are required to incentivize grid investments. Policy options should be implemented across the EU, enabling a more rapid permitting procedure for investments in grids, in order to

facilitate the required infrastructure financing. Investors' certainty should be enhanced by more consistent, stable and balanced policies based on long term strategy and objectives. Thus, only a case-by-case approach may produce the required results and there is little doubt that a coordinated EU adjusted OU application approach should be in place to stimulate investments necessary.

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