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A regulatory assessment of the Electricity Merchant Transmission Investment in EU ☆

Alessandro Rubino [a,*], Michael Cuomo [b]

[a] Bari University, Dipartimento Studi Aziendali e Giusprivatistici, Largo Abbazia Santa Scolastica, 53, 70124 Bari, Italy
[b] Independent Researcher, USA

HIGHLIGHTS

- Modern energy dynamics extend well beyond national borders.
- The existing legal framework favour regulated solutions for interconnection expansions.
- The regulatory framework also allows for Merchant Transmission Investment (MTI) initiatives.
- The Energy Union calls for enhanced interconnection among MS including merchant lines.
- The existing regulation is poorly adapted to address security of supply at regional level.

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ABSTRACT

Current EU energy policy calls for a well-integrated Internal Energy Market by 2020 aimed at achieving interconnection of at least 10% of the installed electricity production capacity for all Member States (MS). In 2030, this target will increase to 15%, expanding to include the construction of electricity highways to connect MS and non-EU neighbouring countries in order to fulfil energy and climate goals. While most cross-borders interconnections are envisaged as regulated lines, private players will play a significant role in increasing interconnection via the Merchant Transmission Investment (MTI) exception. By reviewing the procedural and substantive treatment of the existing five MTI interconnectors, this paper evaluates whether the existing legal and regulatory framework adopted in the EU represents a suitable model for the development of cross border interconnections. Further, the paper explores the MTI exception as a potential model for cross-border interconnection with non-EU neighbouring countries. This analysis demonstrates that MTI's potential contribution would not significantly impact the achievement of the 2020 target. Moreover, the existing regulatory framework for merchant lines among MS is not apt for MTI developed between MS and non-EU countries, since the interconnection developed with non-EU neighbouring countries to date has necessitated non-market characteristics too extraordinary to be practical on a continuing basis.

1. Introduction

The majority of existing European energy infrastructure was designed and built more than 50 years ago based on energy policies and security of supply priorities defined and implemented at the pre-EU national level. Dramatic changes to the energy landscape in the last half century dictate that national dynamics must now be combined with regional and global trends and policies. In particular, climate change related policies, together with energy security measures, have greatly impacted the existing energy infrastructures and transmission grids, and will continue to do so for the foreseeable future. However, in order to achieve EU energy policy objectives (European Commission, 2010a), and also be in line with the launch of the Energy Union strategy[1], the

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* Corresponding author.
E-mail address: alessandro.rubino@eui.eu (A. Rubino).

[1] Please refer to the Energy Union recent communication available at: http://ec.europa.eu/priorities/energy-union/index_en.htm.

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infrastructural endowment will need to be considerably updated and expanded. In particular for the electricity network, a combination of short-term goals and long-term patterns will define the development of the transmission network in the coming decades (European Commission, 2013b).

Short term goals include the development of a greater degree of interconnection between Member States (MS). This increased capacity is necessary to achieving an integrated Internal Energy Market (IEM) by 2020. Among the tenets of the IEM is that each MS must reach the threshold of at least 10% electricity interconnection of their installed capacity,[2] as envisaged by the Barcelona European Council and reinforced in the recent Energy Union communication (European Commission, 2015).

Long term goals include installing interconnection capacity sufficient for the transport of electricity generated via renewable energy sources (RES). According to the 2030 scenario depicted by the Energy Union, include the significant development of RES will constitute the single main driver for the expansion of the pan-European transmission network. ENTSO-E (2014) estimated that expenditures totalling 150 bln€ will be necessary to reinforce the EU electricity grid in the coming 15 years. Effective RES deployment means that electricity will be generated in the most efficient locations, often far away from consumption hubs (European Commission, 2010b), requiring long distance interconnection between individual MS, as well as between MS and non-EU neighbouring countries.

Notwithstanding the urgent need for better interconnection in Europe, the regulated investment scheme has proven to be an insufficient means to integrating national electricity markets (Van Koten, 2012). And the adoption of the third energy package[3] has been proposed precisely to address (among other issues) cross-border interconnection, with the aim of facilitating the process and unlocking investments. Therefore, whereas most of cross-borders interconnections are envisaged as regulated lines, private players are also called to play a significant role by developing MTI. According to the EC,[4] MTI will play a significant role in the framework of enhanced regional integration. Some merchant lines are already included[5] as Projects of Common Interest[6] (PCI), in the list of investment that have a special priority and that are able to significantly increase the current interconnection capacity. However, compared with regulated transmission lines, MTI projects have a risk profile requiring specific treatment, including exemptions from aspects of the regulatory framework (European Commission, 2015, p. 10). So, while it is still too early to evaluate the impact of the enhanced permit granting procedures introduced with PCIs, the evidence available so far highlights how the Transmission System Operators (TSOs) are either not being provided with effective incentives to invest in cross-border interconnection (Brunekreeft et al., 2005; Littlechild, 2003) or lack the capital required to make such significant investments or a combination of both factors.[7]

The debate regarding the most appropriate regulatory and market model for fostering interconnection investment became more relevant following the implementation of the third package, which expanded the MTI exemption regime (as outlined below). It has been argued that the formation of a regional grid, that will result of a combination of different cross-border links, will be highly path dependent (Leveque et al., 2012) and therefore the design that allows for an optimal configuration of such a regional network, should require the definition of a standard reference model, or an even stronger institutional constraint, such as a regional framework treaty, that could allow interested parties to maximize the benefit accruing from an integrated approach (Woolley, 2013). Therefore, a threshold issue for this discussion would seem to be whether the existing legal and regulatory framework adopted in Europe for MTI represent a suitable model for the development of cross border interconnections, intra-EU and EU/non-EU. In order to provide answers to those questions, we reviewed the procedural and substantive treatment of the existing five MTI within the EU regulatory framework focusing on the approval process for developing MTI electricity interconnection under the EU regulatory regime.

An additional motivation for the analysis of the MTI regulatory framework derives from the long term scenario depicted by the EC. It foresees additional interconnection with non-EU neighbouring countries. However additional interconnections will need to be developed as PCIs or, in coordination with non-EU countries, as Projects of Mutual Interest (PMI) (European Commission, 2013a, p. 9). The association of the Mediterranean TSO[8] (MED-TSO) has estimated the requirement of additional 3000 MW of North-South Interconnections in the Mediterranean basin, requiring investment in the order of 20 bln€ up to 2020 (Med-TSO, 2013).

Within the discussion of developing of cross-border interconnection with non-EU countries, the policy and legal framework for PMI still needs to be explored in detail (European Commission, 2013b). An interesting corollary discussion of the existing EU regulatory framework is the potential adoption of the MTI framework as a possible model for cross-border interconnection with non-EU countries. Traditionally the EU external energy policy has been strongly characterized by a normative approach,[9] where the promotion of internal norms is used as a mean to spread EU standards and legal framework outside EU borders. This process is also taking place in electricity, where sector cooperation is strongly bound to the adoption of the *acquis communautaire.* We will see how his normative approach has also been proposed as a way to develop interconnection with non-EU countries by adopting a business model that mirrors EU regulation.

The paper is therefore organized as follows: Section 2 provides a regulatory analysis of the current treatment of MTI projects under the existing EU regulatory framework, Section 3 provides a detailed look at the approval procedure in connection with the five electricity interconnectors (EstLink, BritNed, Imera, Tarvisio–Arnoldstein and ElecLink) approved for development by the EC with exemptions from the provisions of the regulatory framework dealing with third party access rights and restrictions on the use of congestion revenues (an "Exemption"). Section 4 narrows the discussion to those issues having a direct impact on the evaluation of the existing business model. The MTI business model is

[2] Currently 12 EU member states present a level of interconnection capacity below the 10% threshold (Ireland, Italy, Romania, Portugal, Estonia, Latvia, Lithuania, United Kingdom, Spain, Poland Cyprus, Malta). Refer to EC (2015, p. 5).

[3] The package was proposed by the European Commission in September 2007, and adopted by the European Parliament and the Council of the European Union in July 2009. It entered into force on 3 September 2009. The Third Energy Package consists of two Directives and three Regulations. Those relevant for the electricity sector are: Directive 2009/72/EC concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003, Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators.

[4] European Commission (2015).

[5] ElecLink and East Link2 have been included in the list of PCI. See Sections 3.1 and 3.5.

[6] Introduced with Regulation 347/2013.

[7] DG Energy, European Commission, European Autumn Gas Conference, Paris, 15 November 2011.

[8] In 2013, Med-TSO—the Association of Mediterranean TSOs—started its activity. Med-TSO includes electricity companies operating the grids of 17 Mediterranean Countries.

[9] See Vantaggiato (2014) for a careful review of this approach to energy cooperation.

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