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RECONSIDERING THE REGULATION OF MERCHANT  
TRANSMISSION INVESTMENT IN THE LIGHT OF THE  
THIRD ENERGY PACKAGE:  
THE ROLE OF DOMINANT GENERATORS

Adrien de Hauteclocque and Vincent Rious



**EUROPEAN UNIVERSITY INSTITUTE, FLORENCE**  
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*Reconsidering the Regulation of Merchant Transmission Investment in the Light of  
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## **Abstract**

Following the grant of exemptions from the EC rules on third party access to the interconnectors *BritNed*, *Estlink* and *East West Cables*, the regulation of merchant transmission investment has become an important issue in the electricity sector. The creation of a new Agency for the Cooperation of Energy Regulators (ACER), which will enjoy decision powers on this issue, is therefore a unique occasion to question and maybe re-design the current strategy. This paper shows that the recent decisions evidence a strong bias against dominant generators and that incumbent or new entrant TSOs are generally favoured by European regulators and the European Commission. It argues that this strategy is misguided as it fails to recognize both the conflict of interest between the regulated and non-regulated activities of incumbent TSOs and the new incentives of generators. The opportunity to let dominant generators undertake merchant investment is then investigated and we find that it is generally welfare-improving as long as potential abuses of dominance can be mitigated. To deter possible anti-competitive effects, the paper proposes a new and feasible allocation of regulatory powers based on a clear demarcation between the monitoring of transparency requirements by ACER and antitrust enforcement by the European Commission.

## **Keywords**

Merchant transmission investment, European Union, third energy package



## 1. Introduction

There is ample evidence in Europe that the current regulatory framework has been unable to incentivize the required increase of interconnection capacity through regulated investment, essentially due to the national tropism of regulators and the conflicts of interest of some vertically integrated companies (DG COMP, 2007). As recalled by the *Priority Interconnection Plan* (DG TREN, 2007a), only EUR 200 Mns have been invested in electricity interconnection in 2006 as compared to EUR 3.5 Bns in the whole grid. This has also to be compared with the EUR 6 Bns which should be invested by 2013 to relieve cross-border congestions and support the achievement of the goals of the European Union, in particular the inclusion of a substantial amount of electricity generated from renewable energy sources (DG TREN, 2008c). This issue is highly topical as one of the core objectives of the third liberalization package (thereafter Third Package), officially published the 14<sup>th</sup> of August 2009, is to unlock investment in the cross-border transmission network.

A recent and promising trend in this regard is the development of Merchant Transmission Investment (thereafter MTI), i.e. investment in interconnection by private parties fully or partially exempted from the rules on Third Party Access (thereafter TPA) and/or the rules on the use of the congestion rent. An obvious advantage of MTI is that private parties also contribute to the overall development of interconnection. MTI, if well regulated, can be seen as a tool both to increase competition and welfare in the short term and to increase investment and security of supply in the longer term. Until recently, MTI had been considered a relatively minor issue in Europe. This has changed recently following the grant of exemptions from TPA to the interconnector *Estlink* between the Baltic and Nordic electricity markets, *BritNed* between the UK and the Netherlands and the two *East West Cables* between North Wales and the Republic of Ireland. The small number of exemptions granted so far does not however display a clear picture on the strategy of the European Community, except a general reluctance to let dominant generators and suppliers undertake MTI (or obtain long-term priority access rights to interconnection through MTI promoted by a third party). This is well summed up in the most recent note of the European Commission on this issue: “*Exemption requests by dominant undertakings in markets served by the new infrastructure are likely to have the greatest potential for harming competition and therefore require particularly careful scrutiny*” (DG TREN, 2009). This statement needs to be discussed in view of both the structural under-investment in interconnection we face and the new incentives to build MTI these “*dominant undertakings*” may have today.

The regulation of MTI in the electricity sector has recently yielded considerable debate across the world, especially so in the United States and Australia. The opportunity to let private parties monopolize part of the network, in particular when they are dominant in the related upstream or downstream markets, and thus to rely on a decentralized mode of development of interconnection has divided the academic community. If some emphasize the efficiency of market-based incentives, the failure of the current policy on unbundling in the EU context or the inability of regulators to credibly commit and overcome their national tropism (Brunekreeft, 2005a; Brunekreeft, Neuhoff and Newbery, 2005 and Littlechild, 2003), others underline the inherent natural monopoly characteristics of the electricity transmission network, the risks of loop flow effects on system reliability and the potential abuse of market power (Joskow and Tirole, 2000 and 2005). Overall, this debate has shown that the right articulation between regulated and unregulated investment is highly context specific. In particular, the specific characteristics of the legal and regulatory tools available greatly define the best achievable solution for a given state of technology and market structure. In the European context, the recently enacted Third Package with the forthcoming creation of a new Agency for the Cooperation of Energy Regulators (thereafter ACER) modify the regulatory landscape and could thus open new opportunities for a smarter EU energy policy on MTI.

This paper is grounded on the idea that the current changes in the European regulatory framework may allow for a change in regulatory practice towards a more lenient treatment of dominant generators willing to undertake MTI. We will thus explore the regulatory barriers that surround such projects and how to adapt regulation to maximise welfare. We note that some papers have already addressed the procedural and substantive aspects of European MTI regulation<sup>1</sup> but this idea has never been extensively discussed. De Jong *et al.* (2006) for instance raise only financial and regulatory issues but keep most questions opened. Vandezande *et al.* (2007) make an analysis of the criteria for exemption through the study of *Estlink* and conclude on the need to precise the former Regulation 1228/2003. Brunekreeft (2004, 2005a) analyzes regulatory issues concerning merchant lines, respectively the effect of merchant lines on competition, the ownership questions and access regimes. He concludes that MTI may not always raise competition problem in Europe. On ownership questions, he asks whether there should be any restrictions for generators. As for access regimes, he globally argues that general competition law may suffice for unduly restricting access.

This paper thus aims both to evaluate the current strategy of the European Community for the development of interconnection and propose feasible improvements to boost MTI after the implementation of the Third Package, in particular from generators, and especially dominant ones. This is thus a contribution towards finding better solutions to accommodate the short-term benefits of competition with the need for more investment and security of supply in the longer term. It will also emphasize the benefits of both reintegrating the analysis of supply and transmission markets and searching better complementarities between sector-specific regulation and antitrust policy.

A first section will analyze the current strategy of the European Commission for the development of the cross-border transmission network, either through regulated or unregulated investment, as well as the root causes of the current outcome. The possible role of ACER will be analyzed. A second section will show that this strategy is largely misguided and propose to open MTI to those who have today the most incentives to undertake them: the dominant generators. Section III will finally turn to the analysis of the possible market abuses that this new policy would create and argues that the new regulatory framework soon to be created by the Third Package is perfectly able to address them.

## **2. The strategy of the European Commission for the development of interconnection**

Interconnection capacity is known to be insufficient in Europe. This is one of the main concerns of the European Commission as cross-border interconnectors are crucial for increasing security of supply and fostering competition between dominant incumbents (DG COMP, 2007). To overcome underinvestment, the European Commission is trying within the context of the Third Package to advance the implementation of a model which, since the beginning of liberalization, underlies the regulation of the cross-border transmission network: a benevolent regulator at the scale of Europe applied to fully unbundled Transmission System Operators (thereafter TSOs). This first section shows how both the opposition of several Member States to full ownership unbundling during the discussions on the Third Package and the absence of a true EU-wide energy regulator undermine this strategy, and what the immediate consequences are. The future powers of ACER and the emerging strategy of the European Community on MTI are also analysed.

### ***2.1 The strategy of the European Commission for the development of interconnection in the light of the Third Package***

Developing interconnection encounters difficulties of several kinds. Some are well known such as the opposition of local population to high-voltage power lines and others are not specific to

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<sup>1</sup> See also Littlechild (2003) for an empirical analysis of MTI in the Australian regulatory framework and Joskow (2006) for a similar analysis in the USA.

interconnection such as a lack of harmonization of application procedures and planning processes (DG TREN, 2007a). This has for instance led the European Commission to appointing European coordinators<sup>2</sup> to pursue identified priority projects or try to accelerate the harmonization of market designs, for instance through the ENTSOE initiative (DG TREN, 2007b). In its guidelines for trans-European energy networks (the TEN-E Guidelines), projects of ‘common interest’ have been defined and might be supported through loans from the European Investment Bank.<sup>3</sup> A Directive to safeguard security of electricity supply has also been enacted but has hardly been followed by any concrete effect. These initiatives, though useful, have not yet enabled the required increase of interconnection capacity. We must thus focus on the root causes of the under-investment problem: the incentive scheme of TSOs and the regulatory powers of national regulatory authorities; as well as how the European Commission is trying to solve the problem in the Third Package. Assessing TSOs’ conduct is legitimate because, despite their legal obligations, they re-invest less than a quarter of congestion revenues in interconnection (DG COMP, 2007).

In theory, the natural monopoly characteristics of power transmission activity require that unbundled, independent and well regulated TSOs coordinate such that network users feel they face a unique TSO over the interconnected network (Costello, 2001; Pollitt, 2008; Lévêque *et al.*, 2009). This model has driven the strategy of the European Commission since liberalization and explains the choices made in the Third Package.

The strategy promoted in the Third Package is based on two pillars. The first pillar is the unbundling of the network. Unbundling not only aims to ensure non-discriminatory access to the network but also aims at providing the right incentives for the TSOs to invest on a regulated basis, both domestically and across borders. The European Commission thinks that TSOs must be isolated from and freed of any influence from vertically integrated dominant companies to develop optimally the European network (DG COMP, 2007). Recently, E.ON, RWE and ENI have all been under European Commission scrutiny for anti-competitive behaviours linked to their vertically-integrated structures, for instance for anti-competitive capacity hoarding, discrimination, excessive pricing, eviction from the balancing market or strategic under-investment in the network. The second pillar is the creation of ACER. In order to optimize the development of the transmission grid at the European level and facilitate a consensual approach to regulation, the ACER is intended to create an institutionalized forum where cross-border decisions concerning operation as well as investment will be more easily taken. It thus seeks to enable more coordination among national regulators and among TSOs.

Prior to 2003 and on only one instance, the *Viking Cable* between Norway and Germany had already obtained an exemption from TPA by the European Commission under the Merger Regulation, but the procedure needed streamlining. Since the second legislative package of 2003, private parties can obtain exemptions from national regulatory authorities for the most risky interconnection projects. For example, the interconnector *BritNed* between Great Britain and the Netherlands which should be in operation in 2010 will be a merchant line owned by a subsidiary of both the British and the Dutch TSOs. This opportunity remains open in the Third Package. For an exemption to the rules on TPA and/or the use of the congestion rent to be granted by national regulators, the project must fulfil a stringent set of conditions concerning among others the impact of the project on competition and network externalities, the level of risk involved or its legal form. From an EU law perspective, the exemption test is nothing else than the effect test pursued under EC antitrust law carried out *ex ante* to provide sufficient legal certainty to potential investors (DG TREN, 2009).

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<sup>2</sup> A coordinator has for instance been appointed for the Germany/Poland/Lithuania, Denmark/Germany/Poland and France/Spain interconnections.

<sup>3</sup> However, the TEN-E funds only amount to about EUR 20 Mns and are mainly used for feasibility studies (DG TREN, 2008a and 2008b).

European TSOs are thus supposed to develop national networks and cross-border interconnection on a regulated basis while MTI should retain a status of exception (DG TREN, 2004). In the context of the Third Package, the European Commission seeks to implement a strategy devised at the beginning of the liberalization period, sometimes by using the EC antitrust laws. However, the politics of liberalization has so far been less than amenable to its strategy.

## ***2.2 The difficulties faced by the European Commission to implement this strategy: causes and consequences***

The European Commission faces difficulties to implement this 'ideal' organization of power transmission activity as some influential Member States such as France or Germany have been strongly opposing the two pillars of its strategy. This new organization would indeed imply breaking up national integrated champions and losing a fair share of national regulatory sovereignty. The European Commission thus has to seek a consensus which compromises the overall efficiency of its action.

Within the framework of the Third Package, ownership unbundling is not mandatory. Only legal, management and accounting unbundling are imposed. Despite the joint efforts of the European Commission and the European Parliament, no substantial improvement on this side took place and ownership unbundling will be enforced only on a voluntary basis. A group of Member States led by France and Germany indeed refused the proposition of the European Commission to impose either full ownership unbundling of the grid or the outsourcing of the grid operation to an Independent System Operator (thereafter ISO) and managed to include a 'third way' where the past provisions on unbundling are only a little bit strengthened. The European Parliament and the Czech EU Presidency finally reached a long-awaited agreement on the general principles of the Third Package and on this third option the 23<sup>rd</sup> of March 2009.

There are two problems without mandatory ownership unbundling. First, the potential conflict of interest with the generation subsidiary is not addressed fully, even when the generation arm cannot directly intervene in the decision-making process of the transmission company. The objectives of the company as a whole may interact with the objectives of the transmission subsidiary in several ways. For instance, a TSO whose mother generation company has high generation cost may for instance be reluctant to increase interconnection capacity despite the fact that it would yield higher direct profits. Indeed, new interconnection may increase competition in the domestic market to the detriment of the generation branch, which may reduce the aggregated profit of the group (Brunekreeft and Newbery, 2006). A weakly unbundled TSO can also oppose and delay the building of new interconnection capacities in different ways. A TSO has to fulfil two main steps before building a new line. First, a TSO must realise a cost-benefit analysis to evaluate if building the line is technically and economically justified. The cost-benefit analysis of a line will be longer when the study is more refined.<sup>4</sup> A TSO can then delay the construction of a line by arguing with the other TSO about the assumptions and hence the sensitivity of the study. The second step before construction is to obtain the right of way. This step is risky as it can last more than ten years without any guaranty of success (ETSO, 2006a). A weakly unbundled TSO can use this step and deliberately relies on the local opposition to the building of interconnection to prevent construction.

The second problem with only weakly unbundled TSOs is that they are more complicated to regulate. To compensate the potential conflict of interest between a legally unbundled TSO and his

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<sup>4</sup> A probabilistic study is longer to realise than a deterministic study because a bigger amount of data must be processed and because the TSO considers a higher number of scenarios for generation cost and load evolution. Power lines are expensive investments. It is then justified to undertake a full risk analysis considering different scenarios. However, a weakly unbundled TSO can use this step to multiply the number of scenarios studied and delay construction. Besides, due to the long lifespan of an interconnection, a cost-benefit analysis remains very sensitive and thus easy to manipulate.

mother generation company, a stricter regulation needs to be imposed. A stricter regulation first requires a much more comprehensive collection of data on TSOs' conduct and then to ensure that regulators are sufficiently skilled to conclude from the data that TSOs guarantee a non-discriminatory and free access to the network and expand the network in an optimal way from the social point of view, considering equally the effects on the surplus of all market participants. It might be all the more difficult for the regulator that the government sets its powers. Even if the European Commission tries to harmonise and increase the regulators' powers, national governments may still be willing to limit their powers to protect the vertical integration of their national champions. Eventually, not only the prerequisite of full ownership unbundling is very difficult to implement in the current political context but also it would not be sufficient to reach optimal cross-border investments in Europe. Indeed, even fully unbundled TSOs may not have the right incentives to invest in interconnection. This time it is not linked to the type of unbundling imposed but to the weaknesses of European regulation on cross-border issues.

Up until today, regulation has remained mainly national in scope and the work of national regulatory authorities has been highly influenced by national considerations. This might have hampered interconnection investment for four main reasons, linked either to their own incentive schemes or to ill-defined regulations.

First, a new interconnector will as a rule decrease prices on the importing side, but increase prices on the exporting side. The losing side may then be tempted to block or to delay the construction of the line although the line might be globally welfare enhancing (De Vries and Hakvoort, 2002). On the exporting side, an increase in prices is of course good for the producer but bad for the consumer. The regulator being generally biased in favour of customers, it might tend to oppose the construction of the line.

The second reason is that national regulators can be reluctant to an increase in cross-border capacity because it can induce a decrease in the congestion rent perceived by the TSO. This congestion rent is precious to the regulator as it allows him to decrease the access tariff and to exert ostentatiously its regulatory power. The reason often invoked by regulators is that the existing interconnectors having been financed out of tariffs paid by local customers, it is legitimate that they now benefit from the proceeds of auctions. In this case, a lack of interconnection capacity may not be a problem for a regulator as no investment means no unpopular raise of the regulated tariff and a parallel increase of the congestion rent (De Jong *et al.*, 2007). *NorNed* which links the Netherlands with Norway is an example of such a situation. It was initially thought to have a 1200 MW capacity, which was the optimal capacity from the social welfare point of view. However, the regulators (respectively DTe and NVE) and the TSOs (respectively Tennet and Statnett) finally chose a 600 MW capacity (Brunekreeft, 2005b; Bugten, 2004). Therefore the TSOs, whether fully unbundled or not, are likely to have poor incentives to increase interconnection capacity with regulated investments due to the national tropism of national regulators.

The content of the regulatory mechanisms themselves might also explain the behaviour of TSOs regarding interconnection expansion. Indeed, incentive regulation,<sup>5</sup> which is now broadly adopted in Europe, requires a well-designed incentive scheme with adjustment mechanisms efficiently reacting to changes in external factors and which must be clearly specified, particularly towards the end of regulatory periods. If these elements are ill-devised or not clearly specified, TSOs will perceive risks on their revenues, which might deter investment (Microeconomix, 2008). As we saw, cross-border investment faces special risks from high opposition to their right of way and from problem of coordination among TSOs. It should thus be investigated further whether incentive regulation needs to be adapted to the special problems raised by cross-border investment.

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<sup>5</sup> Incentive regulation consists mainly in periodically setting access tariff up to a given value in order to prompt the TSO to reduce cost. In practice, incentive regulation encompasses a wide array of mechanisms devised for instance to control maintenance and congestion costs or to regulate power quality.

Last, the Inter-TSO Compensation (thereafter ITC) scheme currently implemented provides few incentives to TSOs for the development of cross-border capacity (Newbery, 2009). The rationale of ITC is that countries must be compensated for the costs they incur when hosting cross-border flows. ITC is thus a mechanism for compensation, charges and net payments among the European TSOs involved. However, the method currently being used is too simple to provide signals and incentives to the European TSOs for the efficient development of cross-border interconnection (Olmos and Pérez-Arriaga, 2007).

### **2.3 The future powers of ACER: prospective analysis**

Let us now see what will be the possible role of the future ACER in solving the problem of regulated investment in interconnection. ACER will primarily have a monitoring and advisory role. Its main task will be to provide opinions and recommendations to TSOs, national regulators, the European Commission, the Council and the European Parliament. These opinions and recommendations should contribute to ensuring more coordination among TSOs and regulators of the different Member States, spread good practices and in particular contribute to the implementation of the non-binding Community-wide ten year network development plan, i.e. monitoring the work of the new ENTSO-E. Its role will also be to promote harmonization in the transposition of the new Directive and Regulation. Regarding an issue like the ICT, the ACER has the right to propose non-binding 'framework' guidelines which can then subsequently be adopted by the European Commission. Last, ACER will also have a duty to check the compliance program of vertically-integrated TSOs cooperating within a joint undertaking covering two or more Member States for capacity allocation and for checking the security of the network. However, ACER will not dispose of any true decision or enforcement powers on those issues. Overall, ACER is to create an institutionalized forum for cooperation but will be vested only with a limited degree of discretionary power which will essentially limit its action to sunshine regulation (Henry, 1997; Henry *et al.* 2001).

Interestingly, the only true decision powers of ACER will reside in the regulation of MTI, even though these powers are severely limited. Until the enactment of the Third Package, the national regulatory authorities of the Member States directly involved had jurisdiction over the grant of exemptions. The Member States or the national regulatory authorities in charge had thus to cooperate and find common grounds for the grant of an exemption. In the case of a sustained disagreement between them, the project could not proceed. When they agreed, the European Commission retained the right to propose amendments or a complete withdrawal of the exemption. If the Member States did not comply, the disagreement had to be settled through comitology.

With the new Regulation 714/2009 on cross-border exchanges, the allocation of decision powers is somewhat modified. National regulatory authorities remain in charge of the examination of applications but can jointly decide to delegate their power to the new ACER. The major innovation lies in the fact that ACER is to take a final decision in case of sustained disagreement between the national regulatory authorities involved (after 6 months). ACER thus constitutes an *additional* forum to settle informal dispute among national regulators on exemptions in the common interest of the European Union. Within ACER, decisions on exemptions will be effectively taken by the Board of Regulator, constituted by no more than one representative per Member States and one non-voting representative of the European Commission. A two third majority rule, with each member having one vote, will be used to reach a decision. In case of refusal by ACER, its decisions may be appealed before the European Community Courts. However, as with the former Regulation 1228/2003, Member States may provide for the national regulators or ACER to submit, for formal decision, to the relevant body in the Member States its opinion on the application. The final decision can thus be retained by national governments. When the national regulatory authorities or ACER reach a positive decision, the European Commission may request them to amend or withdraw the decision and the notifying entities are required to comply. We thus note that the comitology procedure included in the Regulation 1228/2003 to settle disagreements between the European Commission and national authorities has not

been retained. The European Commission however is still not granted the power to overrule Member states and national regulatory authorities in case they cannot agree, even after ACER mediation.

Overall, the Third Package will provide enhanced possibilities for the national regulatory authorities to monitor cross-border issues and cooperate on a regional level, but key decisions will remain national. National regulators will then keep most of their prerogatives and their own political agenda, sometimes driven by national interests, may easily contradict what would constitute the best interest of the European Union as a whole (Cohen and Héritier, 2005; Glachant and Lévêque, 2009). It follows that even with the perfect unbundling of TSOs, problems of coordination, ill-defined regulation as well as the national tropism of regulators may still hamper the development of interconnection. Within the current political context, the current objectives of the European Commission seem very complicated, if not impossible, to achieve.

#### ***2.4 A increased interest for MTI but within the same regulatory model: MTI as a 'TSO business' in Europe?***

The granting of exemptions to the *Estlink*, *BritNed* and *East West Cables* in the last few years demonstrates that a new interest for MTI in electricity is growing in the marketplace and that national regulators, as the European Commission, increasingly seem favourable to this new way to push forward the development of interconnection. MTI could even become one of the only effective and achievable ways of developing the cross-border network given the arguably limited impact of the initiatives currently pursued.<sup>6</sup> The design of MTI regulation however remains a major challenge for EC energy law and regulation.

The crucial question here is to understand who will be allowed by the European Commission, ACER and national regulatory authorities to invest in merchant lines. Pursuing a competition analysis of an exemption application requires first and foremost looking at who is the applicant and to whom the capacity will be allocated. What matters most is who the contractors are as dominance thus tends to matter more than conduct because the competitive effect of a given business conduct is generally dependent on the extent of market power. Even if the identity of the potential recipients of exemptions does not flow automatically from Regulation 1228/2003 or the new Regulation 714/2009 on cross-border exchanges, recent experiences seem to indicate that both incumbent and pure new entrant TSOs<sup>7</sup> will be granted exemptions provided they meet the other criteria of Regulation 714/2009,<sup>8</sup> but that dominant generators will be excluded. *BritNed*, which will link the network of Great Britain and the Netherlands, was for instance granted an exemption even if it is owned by a subsidiary of both the British TSO National Grid and the Dutch TSO Tennet. Similarly, the *East West Cable* will link the network of Great Britain and of the Republic of Ireland. It is owned by a pure new entrant TSO and received an exemption. The criteria of exemption laid down in the legislation arguably lack of clarity (Hauteclouque, 2009b; Vandezande *et al.*, 2007) and remain open for discussion from a policy point of view but the current problem of under-investment and the experience so far in the gas sector (Van der Vijver, 2008) tend to show that national regulatory authorities will be rather lenient with incumbent or new entrant TSOs.

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<sup>6</sup> It is worth noting that merchant interconnection (whether built by generators or not) will not fix alone the lack of cross-border capacity in Europe. This is because the cross-border capacity of some interconnections is constrained by bottlenecks on the inner national lines. Relieving these congestions requires solving the enduring problem of transparency on the location of network congestion (DG Comp, 2007). But this is beyond the scope of this paper.

<sup>7</sup> We call 'pure' new entrant TSOs a company which does not hold any business interest in generation and retail in the markets linked by the interconnector, and which did not previously own any network assets.

<sup>8</sup> We note that the conditions for exemption in Regulation 714/2009 are strictly similar to the conditions set in Regulation 1228/2003.

However, the situation is likely to be different for generators. MTI is very capital-intensive and it is thus unlikely that a true and small new entrant in generation will be able to carry out such a project, except in consortium, so this situation does not create competition problem. TSOs will be allowed and probably encouraged to use open seasons,<sup>9</sup> as we saw in gas, but a remaining uncertainty concerns the right of dominant operators to participate in these open seasons, and in particular to undertake MTI themselves. True, the *Estlink* cable between the Baltic and Nordic markets involves two incumbent generators from both sides but this project rather follows a security of supply rationale<sup>10</sup> to limit the Baltic States' dependence to Russia and cannot be considered as a full commercial project (Piebalgs, 2008). Moreover, the exemption is only 5 years as compared to 20/25 years in the other cases and the project will recover a regulated status in 2013.<sup>11</sup> The following points also tend to show that dominant generators will be prevented from investing in merchant lines.

First, DG TREN has clearly stated in its interpretative note of 2004 that

“it will be expected that exemptions cannot apply where an existing dominant position is created or reinforced or where the granting of an exemption reduces the scope for diluting existing dominant positions”. The Notice then goes on as follows: “With regard to the requirement (a) that the investment must enhance competition in electricity (gas) supply, it is difficult to conceive of a case where an exemption could be granted to a new piece of infrastructure that was wholly or partly owned, controlled or likely to have a significant amount of its capacity allocated to a dominant player in one of the markets affected.”

This has been clearly restated in DG TREN (2009). In the gas sector where we have more experience, exemptions have indeed only concerned non-dominant players, except for transcontinental pipelines. Some national regulators, for instance the Italian AEEG, also repeatedly stated that dominant firms will not in principle benefit from an exemption.

Second, for already existing and amortized interconnectors with priority rights owned by dominant firms, the European Commission and the European Court of Justice (ECJ) have been particularly rigid with dominant operators as they systemically deemed long-term priority access rights signed before liberalization to be abuse of a dominant position and required that 100% of capacities be freed up (e.g. on the UK-French submarine interconnector, Dutch-German interconnector, and Norway-Denmark and Denmark-Germany interconnectors following the merger *VEBA/VIAG*). The same applies to current prolongation of historical contracts beyond their originally foreseen end date when this possibility was foreseen in the historic contract (Schnichels and Nyssens, 2007).

Third, to bypass the limits of the sector-specific regulatory framework described above, the European Commission is using its power under EC antitrust law to force dominant incumbents to divest their transmission arms. In 2008, both E.ON and RWE in Germany accepted divestitures to avoid further antitrust scrutiny. It is thus hard to imagine the European Commission supporting incumbent generators who would like to privately monopolize the network through MTI while pursuing its current antitrust policy.

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<sup>9</sup> DG TREN (2004) states: “Normally it will be expected that developers seeking exemptions will have, as far as possible, given other parties an opportunity to gain access to the new facility at the planning and feasibility stage, for example through an open season procedure. Alternatively, developers should create the possibility for a minimum level of third party access to the new infrastructure under the rules of the Directive for a certain proportion of its capacity.” Open season is thus a form of TPA access. ERGEG follows this interpretation (ERGEG, 2007a). DG TREN later also emphasized the role of open season as a device to test market demand for transmission, as with the Nabucco pipeline (DG TREN, 2009). On good practices for open season, see ERGEG (2007b). The ‘alternative’ option is auctions for long-term reservations (so without equity investment).

<sup>10</sup> We note that the security of supply rationale was important for the Baltic States but that for Nordic states the objective was mainly to obtain cheaper electricity from Estonia.

<sup>11</sup> The cable will then be re-purchased by the TSOs and become a normal infrastructure project.

Last, the strategy of the EU Commission regarding long-term supply contracts is clearly emerging and departs from the pre and early post-liberalization period. It demonstrates the general tightening of antitrust enforcement towards dominant firms. Since the early 2000's, and most surely since the last 3 years in decisions such as *EoN Ruhrgas* and *Distrigaz*, a new methodology to analyze long-term supply contracts in the new market building context of energy markets has emerged (Hauteclouque, 2009a). This methodology primarily relies on market shares thresholds. The baseline is that if contracting parties' individual market shares do not exceed 30% and do not include clauses with market partitioning effects, long term supply contracts will be exempted from further scrutiny. Over 30% and especially over 40%, which is the dominance threshold in EC antitrust law, the European Commission will conduct a balancing of potential anti-competitive effects with efficiency-enhancing aspects. In practice, the European Commission will be strict on the following points: the duration must not be over 5 years (reduced to 2 years if the dominant firm supplies more than 80% of the customer's demand), 70% of its portfolio of customers must come back to the market every year and clauses amounting to a use restriction are prohibited. As a result, the duration of contracts implemented by dominant companies is severely limited.

In the current context, a strong suspicion against former dominant generators is displayed, especially as regards their vertical integration in transmission. It is therefore most likely that the incumbent generators will be excluded from the exemption process and that MTI will be restricted to incumbent and new entrant TSOs, with or without open seasons, except in specific cases such as *Estlink*. These choices appear logical in view of the theoretical economic model of competitive reform that the European Commission has been trying to implement since the beginning of liberalization and which advocates letting TSOs in charge of the development of the network.

The remaining of this paper will however show that the regulatory choices incrementally being made, if they are confirmed, are largely misguided. Indeed, once the principle of MTI is accepted, the incentive schemes of the different market players change and so does the welfare effects of their conducts.

### **3. Dominant generators should be allowed to develop merchant lines**

This section first demonstrates that restricting MTI to TSOs, in particular incumbent TSOs, is likely to yield limited efficiency gains. It then studies the current incentives of generators to build merchant lines in the new market context. It last shows that letting dominant generators invest in merchant lines is likely to be a superior solution in most cases.

#### ***3.1 MTI as a 'TSO business' leads only to limited efficiency gains***

A careful competition analysis of MTI undertaken by TSOs, especially incumbent TSOs, shows that they are unlikely to substantially improve welfare compared to the current situation and have potentially strong perverse effects on competition. The main reason lies in the fact that, when a TSO considers this investment, he will not try to maximize welfare but its own profit. This profit is based on the congestion rent and the incentive provided by the congestion rent is misaligned with social welfare. This misalignment has three consequences.<sup>12</sup>

First, MTI by new entrant or incumbent TSOs generally lead to under-sized transmission investment with a capacity around half the optimal level (Stoft, 2006). The rationale of allowing MTI being to increase cross-border capacity and thus competition, this is a major drawback.<sup>13</sup> This is in fact

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<sup>12</sup> Only the first consequence applies for new entrant TSOs.

<sup>13</sup> This argument assumes that 'perfect' competition for the development of the network does not exist (in which case welfare would be maximized). This is indeed the case in practice mainly because of indivisibility and economies of scale

recognized by the European Commission as one of the most serious issues in the regulation of MTI (DG TREN, 2009). This happens because a merchant investor defines the size of the investment in order to maximize its profit through the congestion rent, while the transmission capacity is optimal (from a social welfare point of view) when the overall costs of the system is minimal, i.e. when generation and transmission costs are *jointly* minimized. When generation and transmission costs are minimized, the congestion rent is far smaller than when the merchant TSO investor maximizes his benefit (see Fig. 1). The processes of dimensioning *NorNed* and *BritNed* are good examples of situations where the TSOs alone, or with the agreement of regulators, finally opted for transmission capacity which maximizes the congestion rent (see Brunekreeft, 2005b and Bugten, 2004 for *NorNed* and Brunekreeft and Newbery, 2006 for *BritNed*). Even the European Commission acknowledged that it had probably happened in the case of *BritNed* and consequently imposed a regulatory review of the economics of the project after 10 years of operation (DG TREN, 2009).

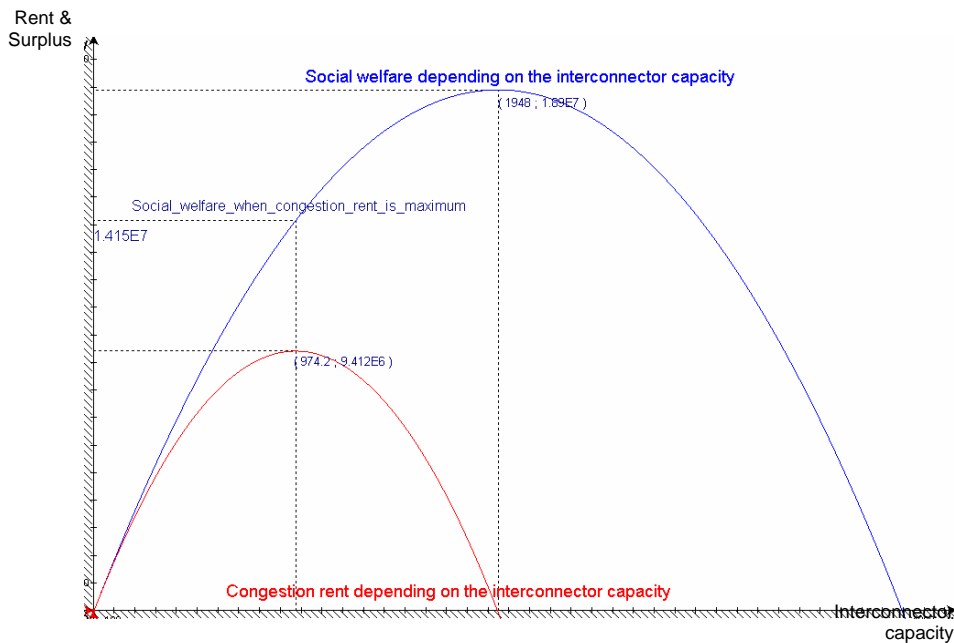


Fig. 1. An example of variation in congestion rent and social welfare vis-à-vis the interconnector capacity between two zones for linear demand and supply curves

Second, the current policy gives incentives to incumbent TSOs to build merchant line *instead* of regulated line. This is thus a new opportunity given to incumbent TSOs to abuse market power (Joskow, 2006). Indeed, performance-based regulation incentivises the TSO to build (regulated) transmission capacity close to the optimal level while limiting rent extraction. Inversely, as we have just seen, the capacity of a merchant line is far smaller than the optimal capacity because the TSO focuses on extracting a maximal (congestion) rent. Considering these two possibilities, a TSO willing to extract a maximal rent is likely to choose a merchant investment, even if the capacity is far from optimal from a social welfare point of view.

Lastly, an incumbent TSO is likely to have incentives to manipulate the dispatch of electricity flows so as to increase profits on the merchant line. However, if the ISO model is imposed, this conflict of interest disappears and the owner of the network assets should be allowed to develop MTI

(Contd.) \_\_\_\_\_

constraints which make a second merchant investments in the same cross-border transmission market unlikely and most of the time infeasible in the short to medium term. Other reasons such as the difficulty to obtain exemptions and the small number of potential investors (given the risks involved) also concur to create imperfect competition conditions. Consequently, it is even more important for regulation to ensure that the incentives of the merchant transmission investor are aligned as closely as possible with social welfare.

(Brunekreeft, 2005a). But this model has little chance to be legally imposed in Europe in the near future. Similarly, the TSO may have fuzzy incentives to deal with the possible network externalities created by merchant lines to the best interest of society, despite legal unbundling. The sixth criterion of the EC Regulation 1228/2003 on cross-border exchanges (this criterion is retained in the Third Package) is intended to prevent transmission investment with negative externalities. Transmission investment can indeed potentially generate negative externalities and then be detrimental to the whole power system (Bushnell and Stoft, 1996). It is however complicated to apply as there are asymmetries of information between the TSO and the regulator. Incumbent TSOs are the only ones to have sufficient expertise to measure negative effects of new transmission investments on network security and may thus abuse their dominant position by refusing competing merchant projects on false grounds. The inherent conflict of interest existing when regulation lets regulated TSOs with the opportunity to invest in merchant lines may lead to straight, but hardly detectable, discrimination against new entrants. A possible solution is again to rely on the ISO model. For these reasons and to avoid socially detrimental loop flow effects, merchant transmission investment should at least be strictly restricted to direct current (DC) lines in Europe.<sup>14,15</sup> We note here that the European Commission seems to be on the same line when it states that “it [is] difficult to conceive of exemptions for AC interconnectors which are subject to unattributable loop flows” (DG TREN, 2004). These elements also show that under-investment in cross-border network infrastructure is far from only being a problem of financing which could be addressed by increasing the TEN-E funds.

A strategy relying on MTI mainly built by TSOs thus does not appear satisfactory. It is striking to see that the European Commission in fact acknowledges the possible conflict of interest between the regulated and non-regulated activities of incumbent TSOs. It indeed states that the fact that a merchant line must be “separate at least in terms of its legal form from the system operators in whose systems that interconnector will be built” (criterion 3 of both the former and the new Regulations on cross-border exchanges) aims to ensure “sufficient ring-fencing of non-regulated activities of TSOs” (DG TREN, 2009). However, it does not draw the full conclusions and hence advocate for ownership unbundling of national networks and MTI, as it usually does for the unbundling of network and supply activities in domestic markets.

### **3.2 Incentives for generators to build MTI in Europe**

By preventing dominant generators from investing in merchant lines, the European Commission does not take into account the window of opening created by the on-going changes in cost conditions currently occurring in European energy markets. These changes are giving strong incentives to some generators to invest and build merchant lines. On the one hand, some countries and energy companies are committing to a renaissance of the nuclear technology. On the other hand, the costs for fossil fuels are thought to start again following a rising and volatile trend in the medium to long term even if projections are uncertain (EIA, 2008).

This situation will give classical opportunities for arbitrage between countries with different mix of generation technologies. The rebirth of nuclear energy in some countries will give advantages to their national operators while renewable energies in other countries will not suffice to cover the needs of power (DG TREN, 2008c). By chronological order, Finland, France, the United Kingdom and Italy have announced their willingness to allow the construction of new nuclear power plants. Utilities with the nuclear advantage may then want to export it in other countries where they are implanted to compete against local incumbents who are more dependent on fossil fuels and renewables. Besides,

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<sup>14</sup> Radial or quasi-radial AC interconnections can also be MTI with no problem of loopflows. It is the case for instance for the two new merchant lines from Switzerland to Italy (Cariello, 2008) and for the new merchant line from Slovenia to Italy (Enel *et al.*, 2009).

<sup>15</sup> This is because power flowing through DC lines can be directly controlled with power electronics while power flowing through classical and widely used AC lines can be controlled only through the re-dispatch of generation and load.

since the national decisions of re-launching the atomic energy are not simultaneous, there may be even inter-temporal arbitrages between countries favourable to nuclear power. These changes in cost conditions and the increasing antitrust scrutiny on domestic long-term contracts from the European Commission combine to create new incentives for dominant generators (and some big industrial consumers) to undertake MTI and secure their generation investment by contracting abroad. MTI by dominant generators thus deserves a more thoughtful competition analysis than what is currently pursued.

### ***3.3 Discussion on the sizing of MTI built by generators***

MTI built by generators may also suffer from under-sizing. The extent of under-sizing depends on the generator having and exercising market power. Generators with low costs have strong incentives to export power in zones where prices are set by thermal plants with high marginal costs. However they have to balance these incentives with the effect of increasing interconnection capacity on their market power on both sides of the line. First, we consider a situation where the generator which builds a merchant line has no market power, neither in the zone where it is located nor in the destination market. Then, we will consider the opposite situation studied by Sauma and Oren (2009), i.e. when the generator which builds a merchant line is dominant in his domestic area, not an unrealistic situation in the European Union.

First we consider a situation when a cheap generator is in a zone where there is no market power<sup>16</sup> (because of strong regulatory scrutiny for instance) and wants to export power in another market zone. He has then the right incentives to build a merchant line with an optimal capacity. To explain this, think that its profit function is described by the sum of the revenue earned in its home market and the revenue earned in the destination market, minus the sum of its generation investment cost, operational generation cost and transmission investment cost. Since we assume this cheap generator has no market power, he cannot influence its revenue. His objective is thus only to minimize his costs. When he integrates generation and transmission investment decisions, he behaves as a benevolent integrated utility. As a consequence, cheap generator within a zone with no market power will choose an optimal capacity for the merchant line from the social welfare point of view.

Now we consider a situation when a cheap generator has market power. Sauma and Oren (2009) studied what are the incentives for the generator to support transmission investment in this situation. They consider a two node network with one generator and load at each node. Only one node has access to cheaper generation. Each generator can use its market power and can so behave as a monopoly on the residual demand when his zone is isolated by congestion. Sauma and Oren (2009) study the incentives for generators to undertake transmission investment for small values of capacity when congestion and pure passive-aggressive Nash equilibrium exist.<sup>17</sup> In this framework, Sauma and Oren (2009) show that a generation firm who is net exporter has all the more incentives to fund and to support socially-efficient transmission investment that he holds more of the property rights on these new transmission investments. Indeed, because of the property rights that the generator owns on transmission capacity, he is more likely to sacrifice some profits from market power in order to increase the profits he receives from the transmission property rights he holds.

The analysis done by Sauma and Oren (2009) however does not allow concluding whether under-sizing is worst when a dominant generator with market power builds an MTI or when a TSO builds an

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<sup>16</sup> There is also the case of a generator with no market power in the fringe of a monopoly in an exporting zone willing to invest in transmission. At worst, this generator without market power then invests as the generator with market power would do (cf. Sauma and Oren, 2009 and next paragraph).

<sup>17</sup> Sauma and Oren studies also another range of transmission capacity when transmission capacity is high enough so that a Nash-Cournot equilibrium exists and the network is not congested. Obviously in this situation, generators have no incentives to invest in transmission capacity as increasing it does not modify their benefits.

MTI. Indeed, the analysis of Sauma and Oren (2009) does not consider the range of values for transmission capacity where the network is still congested and no pure Nash equilibrium exists, while the capacity of an MTI built by a TSO seems in this region. Nevertheless, there is a presumption that under-sizing will be alleviated when the investment is undertaken by a generator and we will see in the next section that other benefits also accrue.

### **3.4 The benefits of MTI by dominant generators**

If dominant generators are authorized to build merchant lines in Europe, beneficial impacts may go beyond our first analysis of welfare. Of course, merchant lines promoted by dominant firms retain the usual positive effects of any new increase in interconnection capacity, especially on security of supply and ultimately on the political goal of a deeper integration of the European single market. In this subsection, we show that other benefits may be expected, especially as concerns high-fixed costs generation investment.

First, a welfare-increasing effect emerges because generators may have more information than TSOs on opportunities of arbitrage between national markets. TSOs tend to stay within their national or regional boundaries while generators are increasingly present in a number of national markets through mergers and acquisitions. They can thus have a better understanding of the evolution of market conditions than TSOs and better anticipate future price differentials. We can then hope that generators would be able to uncover new opportunities for MTI.

The second welfare-increasing effect of the merchant lines built by generators is probably the one that has the more consequences as it is related to generation investment. Some generators may be willing to commit in a merchant line to secure partly or completely capital-intensive generation investment with long-term supply contracts outside their domestic area. Generators generally use long-term supply contracts to secure capital-intensive generation investments (Roques *et al.*, 2008) as the greater the fixed costs are, the greater are price and quantity risks (Roques *et al.*, 2005; Finon and Roques, 2008). Without long-term supply contracts, the investors are incentivized to choose less risky investments, even if they are more expensive (considering all the costs: investment, operational ones, etc.). This is why CCGT are particularly attractive to new entrants, which is confirmed by Watson (2004). With contractual arrangements and so less risk, the generation investors have better incentives to choose the optimal generation mix from the society point of view. However, the European Commission's position regarding long-term supply contracts is contrasted, especially for electricity incumbents who want to secure investments with long-term contracts in their own countries because of the related risks of customer foreclosure. Contracting abroad could thus be an alternative strategy and customer foreclosure would then be unlikely in most cases. Nonetheless, this strategy encounters a major obstacle as long-term supply contracts across borders would require parallel long-term priority access right to interconnection, which are only available with a maximum duration of one year in the best case (ETSO, 2006b). Even if the TSOs were willing to propose longer-term access rights, they could hardly do so without infringing the EC antitrust laws and the jurisprudence of the ECJ in *VEMW* (2005) where the Court came close to ban long-term priority access rights on interconnection (DG COMP, 2006; Hauteclouque, 2009b; Talus, 2005 and 2006). Therefore, the only way for generators to obtain long-term access to interconnection is either to win an open season on a merchant line built by a TSO or to build its own merchant line.

As a consequence, a positive effect of letting dominant generators obtain long-term access to the network is not only that it facilitates investment and thus contributes to long-term generation adequacy, it is also that it may contribute to fuel mix diversity by facilitating investments in base load technologies such as nuclear or coal. A secondary consequence is that long-term supply contracts channelled through a merchant line should be analysed as any other long-term supply contracts and such contracts will only raise competition problems in rare cases where the exporter is dominant in the

destination market as well.<sup>18</sup> Overall, we believe that better integrating policies regarding long-term supply contracts and MTI would enable European competition authorities to limit customer foreclosure, a major problem in European electricity markets, while facilitating the high-fixed costs investments much needed for the security of supply of Europe.

Two other benefits, which would also apply to MTI built by new entrant TSOs, must also be noted here. First, for any transmission investment, an exempted investment is realized sooner than a regulated one (Gans and King, 2003, 2004). This is because in an uncertain environment it is hard for a regulator to commit to the long-term on the remuneration of a risky investment. The network operator anticipates this lack of commitment from the regulator and delays its investment until it is less risky. There is indeed less risk of regulatory hold-up with an exempted merchant line, though some risk always remains as acknowledged by the European Commission (DG TREN, 2009). By cancelling this delay, investment may be sunk sooner.

Second, letting generators invest in merchant lines creates competition for the development of the network. For the moment, almost only incumbent TSOs invest in transmission capacity. And up to now, they have never truly competed with each other but rather cooperated in joint ventures. As a consequence, for the moment, these investments are qualified as merchant because they do not rely on the regulated revenue and not because there is competition to realise them. These investments without any kind of competition thus have a monopolistic dimension. Inversely, investments such as the one proposed by Imera<sup>19</sup> between France and the United Kingdom brings competition for investment in the network. Not only it would be in parallel to the existing France-England Interconnector but also the Imera line would compete in time with the upgrade of the existing France-England Interconnector by the French TSO RTE and from the British TSO National Grid currently under consultation.<sup>20</sup> The interconnectors of the incumbent TSOs and of Imera are then in similar conditions as pipe-to-pipe competition in the gas sector. They should then compete to attract users proposing the best transmission service with the lowest price, thus increasing overall efficiency.

This section has shown that allowing MTI by dominant generators would yield significant welfare benefits. Letting weakly unbundled TSOs invest in merchant line might under certain conditions be worse than the original problem of under-investment. The problem of pure new entrant TSOs is different. They suffer the same problem of under-sizing but bring most of the benefits of merchant lines built by generators, especially competition for the network and, when open season are introduced, they enable generators to obtain long-term access rights to the network. The current dash for base-load generation investment also creates incentives for these generators to develop interconnection on a merchant basis and this should be seen as an opportunity.

This however holds only if the related opportunities for market abuse can be mitigated. Indeed, “*a positive competition assessment [in the case of dominant generators] is unlikely in the absence of conditions that effectively address the competition concerns*” (DG TREN, 2009). The next section discusses these conditions and how they could be effectively implemented in the aftermath of the Third Package.

#### **4. How to regulate merchant transmission investment by dominant generators**

This last section studies the potential problems and solutions of letting dominant generators engage in MTI. It will argue that consistently applying a UIOLI mechanism will satisfactorily mitigate potential

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<sup>18</sup> We recall here that, in case the long term supply contracts would be with the producer’s own local distribution subsidiary, EC antitrust law could not be infringed as it does not apply to intra-firm dealings

<sup>19</sup> <http://www.imerapower.com/interconnectors/france/france.html>

<sup>20</sup> [http://www.rte-rance.com/htm/fr/offre/telecharge/consultation\\_inteconnexions\\_2008.pdf](http://www.rte-rance.com/htm/fr/offre/telecharge/consultation_inteconnexions_2008.pdf)

competition problems and that the new allocation of regulatory powers created by the Third Package will be able to ensure effective compliance.

### *Applying the UIOLI principle consistently*

The previous section emphasized the potential efficiency gains of letting dominant generators engage in MTI as compared to a situation where such investment would be prohibited. However, it is fair to acknowledge that such investment opens new doors for market abuse. These market abuses can broadly be classified in three categories.

The first market abuse concerns pre-emptive investment and anti-competitive retention of capacities. This relates to the idea that a dominant generator may be willing to build a merchant line for strategic reasons and not because he seeks to maximise profits under competitive conditions. Pre-emptive investment means that the dominant generator may build a merchant line so as to avoid that a competitor does it before him and thus with a view to control cross-border capacities. There is therefore a true first mover advantage in MTI if discretionary withholding of capacities is possible post-investment. Of course, the risk of pre-emptive investment will decrease if high diseconomies of scale due to advances in merchant line technology occur in the future.

The second competition problem may arise when the price differential between the home and the destination markets reverse. In this case, the dominant generator may use the merchant line to block competitors importing from the former destination market. This thus allows the dominant generator to protect its domestic market position in case he made a wrong investment decision in the first place. MTI in this case becomes a defensive investment *ex post*. Both problems amount to a problem of foreclosure of an essential facility.

The last competition problem relates to the opportunity given to the merchant line owner to manipulate wholesale spot prices in the destination market, especially in the peak period (Kuijlaars and Zwart, 2003). This will be possible if the size of the merchant line is substantial compared to the size of the destination spot market and if the merchant investor is present as a major producer in the destination market.

From a technical point of view, these competition problems arise from the possibility for the capacity owner of not using his right. Hence, the key condition to mitigate these competition problems is to impose on the dominant generator a systematic UIOLI provision, i.e. that when the owner of the merchant line does not use it, he then has to release the capacity to a competitor. The key regulatory target must be here to ensure transparency, which means ensuring both a reliable and timely access to information for potential users on the available capacity at different time horizons. Indeed, the foreclosure problem, namely pre-emptive investments, withholding of transmission capacities and defensive investments, all exist because the dominant generator has the possibility of not using the line. The risk of manipulation of wholesale prices in the destination market also arises from the fact that the dominant generator entirely controls the line. A strict application of the UIOLI principle would thus avoid that an operator limits the size of the daily available transmission capacity between two countries for anti-competitive reasons. It would also force the dominant operator to bear the full commercial risk of the investment and optimize the benefit for the society when price differentials reverse. Even if a cap on the capacity owned by a dominant generator on a new merchant investment would have a similar mitigation effect,<sup>21</sup> a UIOLI provision will fulfil it either way and is likely to

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<sup>21</sup> Note that imposing a cap seems to become the preferred way to limit abuses of dominance when granting exemptions (DG TREN, 2009). In Italy for instance, a very stringent cap of 20% has been imposed in the past. In the case of *Nabucco*, a 50% cap has been imposed for the allocation of capacity to any firms being dominant in the upstream or the downstream natural gas markets, as for the Dutch LNG terminal *Gate*. Finally in the *East West Cable*, the cap was 70%, except for the Irish incumbent ESB – 40%. If these were to generalize, the incentives of some major market players to invest in merchant lines would thus diminish.

have a lesser impact on the investment decision *ex ante*, especially on its size. Indeed, a cap would lead to revenue uncertainty on the remaining capacities which would limit incentives to invest. In the case of an association of collectively dominant producers, opportunities for collusion and the market abuses depicted above are higher (Joskow and Tirole, 2000; DG TREN, 2009). The UIOLI provision is thus even more important in this case.

Efficiency for individual market players and efficiency for society rejoin much more than regulatory authorities tend to think in the case of merchant lines developed by dominant producers. However, we do not argue in favour of a complete *laissez-faire* with no *ex ante* regulation or antitrust enforcement whatsoever. To the opposite, regulation must be tailored to this specific case and the required tools already exist. Indeed, the UIOLI provision has been applied in different contexts, for instance at the French-Belgian and Dutch-Belgian borders, and now needs to be applied more consistently. However, the monitoring of compliance with this provision may be problematic since the regulatory framework is especially weak on cross-border issues. The problem of enforcement will thus be crucial. The next section shows that the new characteristics of the regulatory framework after implementation of the Third Package will in fact allow for a satisfactory mitigation of these competition problems.

***The new allocation of regulatory powers will allow for a satisfactory mitigation of competition problems created by MTI by dominant generators***

The imposition of the necessary condition we defined above would require both the constant monitoring of transparency requirements and a light, deterrence-based mechanism to trigger self-enforcement *ex post*. Indeed, the threat of exemption removal in the case of non-compliance might not be sufficient to deter anti-competitive behaviours. An efficient regulatory framework for MTI could thus be based on two pillars which would better take into account the respective strength and weaknesses of the different entities in charge of the regulation of European energy markets following the enactment of the Third Package.

The first pillar could be the monitoring of transparency requirements by ACER. The monitoring of the UIOLI provision could be ensured by national regulators but a unique body at the community level will facilitate its implementation. Indeed, there is to date little harmonization of transparency requirements across Europe (DG COMP, 2007). ACER such a most European agency will not dispose of final decision powers<sup>22</sup> and has been vested with limited advising, monitoring and reporting duties. This limitation is based on the so-called *Meroni* doctrine which postulates that an institution like the European Commission cannot delegate to an agency powers it itself does not possess. Secondly, the doctrine states that an institution cannot delegate to an agency wide discretionary powers, since this would be a breach of the institutional balance. The powers delegated can be neither greater nor different than those granted in the first place by the EC Treaty. However, all powers cannot be delegated. Only strictly defined execution powers can be delegated but no political or decision powers. This implies that the delegating entity must conserve the decision powers and strictly monitor the powers of the agency. The problem then becomes to differentiate between technical and truly political powers. As a consequence, the future discretionary powers of ACER will necessarily be limited except if new powers are explicitly granted by the national regulatory authorities themselves (Rosenberg, 2008). The monitoring of transparency requirements is however most likely to be considered as a technical issue in the sense of *Meroni*. Indeed, technical decisions under the *Meroni* doctrine include specialized issues following a clearly defined goal and excluding any weighting between conflicting political objectives, which is most likely to be the case of the monitoring of transparency

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<sup>22</sup> We recall that even for the grant of exemptions, the European Commission or Member States retain the final decision power over ACER under certain conditions.

requirements. The monitoring of transparency requirements in the case of MTI could actually be based on Art 11(1) of the new Regulation 713/2009 on cross-border exchanges which clearly states that:

“The Agency [ACER], in close cooperation with the Commission, the Member States and the relevant national authorities including the national regulatory authorities and without prejudice to the competences of competition authorities, shall monitor the internal markets in electricity and natural gas, in particular the retail prices of electricity and natural gas, **access to the network** including access of electricity produced from renewable energy sources, and compliance with the consumer rights laid down in Directive 2009/72/EC and Directive 2009/73/EC”.<sup>23</sup>

A public report could then be published pursuant to Art 11(2), even though confidentiality requirements should be complied with. To make the monitoring by ACER easier and more legitimate, the European Commission could adopt guidelines to define specifically the technicalities of the monitoring duty and give the power to ACER to decide whether the UIOLI principle is complied with or not. ACER could to this effect prepare ‘framework guidelines’ in the sense of Art 4(e). The design of the UIOLI provision is beyond the scope of this paper but we see much advantage in having the European Commission providing guidelines on duration, capacity and the organization of secondary capacity trading to allow potential users to effectively use them and a secondary market to develop (see e.g. the discussion in EFET, 2002, for gas). What would constitute an objective justification for capacity withholding will also have to be defined, keeping in mind that transmission assets are usually more reliable than generation assets. ACER will therefore be able to monitor the consistent application of the UIOLI provision.

The second pillar could be based on the antitrust powers of the European Commission to fight abuses of a dominant position on the basis of the essential facility doctrine. Indeed, the fact that an exemption has been granted does not restrict the application of EC antitrust law (DG TREN, 2004), as is the case for any European sector-specific legislation or national regulatory action (Geradin, 2004/2005; Gato, 2006) and as has been emphatically recalled in the recent *Deutsche Telekom* cases. The *Deutsche Telekom* case concerned the prices charged by Deutsche Telekom to competitors for accessing the local loop. As these prices exceeded those charged to the subscribers of Deutsche Telekom on the retail market, the European Commission considered that the Deutsche Telekom pricing strategy could be analyzed as a margin squeeze. The German incumbent argued that its prices to competitors could not be in breach of Art 82 EC (the EC Treaty article on the abuse of a dominant position) because the German regulator had previously approved its tariff scheme. The European Commission however dismissed this argument and considered that the responsibility of Deutsche Telekom was engaged in view of the superiority of Art 82 EC over secondary EC law in the hierarchy of national and community rules.

We note here that the rationale of ensuring TPA is already an emanation of the essential facility doctrine (Dziadykiewicz, 2007) and that the ability of EC antitrust law to address essential facility problems in energy is much under-estimated. The extensive application of the essential facility doctrine currently being made by European authorities (Shelansky, 2009) is a clear advantage in our case. Granting exemptions to dominant generators under conditions such as UIOLI however raises two questions. First, does it infringe EC antitrust law *per se*? Second, is EC antitrust law able to fix the problem in case of non-compliance with the UIOLI condition? We show that the answer is positive in both cases.

Allowing MTI by incumbent generators would indeed create a position of dominance on the cross-border transmission market, provided a merchant line effectively constitutes the relevant market on its own, which appears to be the case (see the *UK-French interconnector* case and Talus and Wälde, 2006). However, dominance *per se* is not banned under EC antitrust law, especially in a case where

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<sup>23</sup> Emphasis added. Recital 8 also states that “the Agency should monitor, in cooperation with the Commission, the Member States and relevant national authorities, the internal markets in electricity and natural gas and inform the European Parliament, the Commission and national authorities of its findings where appropriate”.

efficiency gains in terms of increased investment and greater market integration are involved, which as we saw is the case here. Investment, transparency and a UIOLI mechanism seems to be the three key conditions for compliance with EC antitrust law when it comes to interconnectors (Hauteclocque, 2009b). Therefore dominant generators should not face the risk of uncertain application of EC antitrust law, which in itself would deter MTI, as long as they respect the conditions imposed, i.e. a UIOLI mechanism.<sup>24</sup>

However, the non-compliance with the UIOLI principle would constitute an unlawful abuse of dominance and would be qualified as a refusal to deal or excessive pricing. Indeed, retention of transmission capacities will naturally qualify as refusal to deal but the setting up of excessive prices for the unused capacity may *de facto* create the same exclusionary effects. Similarly, if the imported electricity is offered at a too high price in the destination market, the lack of demand will also result in capacity withholding.

Price issues are never easy to deal with under antitrust law but European competition authorities are building expertise on this issue, as has been seen for instance in the German wholesale market where E.ON was obliged to commit to divest 4800 MW of generation capacities to address withholding concerns. However, the deterrence effect of EC antitrust law should offset this weakness. Indeed, if antitrust law is not perfectly equipped to deal with issues such as possible network externalities, which should thus be left to *ex ante* regulation, its ability to sanction should be relied on. To date, national competition authorities do not have jurisdiction on cross-border issues and their deterrence effect is also not as strong as the one of the European Commission. The European Commission can and does impose heavy fines,<sup>25</sup> up to 10% of a company's total revenues, which is increasingly ensuring a strong deterrence effect. The recent E.ON and RWE settlements have also shown that incumbent generators prefer bargaining satisfactory solutions with the European Commission than going through an uncertain and potentially very costly court trial.

Nowadays, the allocation of energy regulatory powers in the European Union is increasingly biased in favour of the *ex post* enforcement of EC antitrust law (Hauteclocque and Glachant, 2009). The European Commission should thus clearly and publicly state that it will enforce EC antitrust law in the case of non-compliance with the UIOLI condition. Finally, allocating transparency monitoring to national regulators and ACER would also provide more reliable proofs to ground an infringement of EC antitrust law in the case of court trial, especially if objective technical or business justification for capacity withholding are previously defined in Community guidelines.

The strict imposition of the UIOLI principle, coupled with a smart allocation of regulatory powers taking account of the respective strengths and weaknesses of new European regulatory tools seems the best way to go forward with the development of interconnection. This solution shows that complementarities must and can be found between the *ex ante* and *ex post* parts of the European regulatory framework for energy.

## **5. Conclusion: towards better *ex ante* / *ex post* complementarities to unlock investment in the network**

A new model for the regulation of MTI in Europe should take into account the opportunities brought up by the changes in both the energy mix and the evolution of competition tools. The European Union

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<sup>24</sup> The only case where EC antitrust law could be infringed seems when there are several promoters for the infrastructure which jointly market the capacity, without prior open season. This might amount to a hardcore restraint. Another problem may lie in the possible coordination (collusion) in the related markets of two generators jointly investing in a merchant line.

<sup>25</sup> Highly representative of this was when the European Commission imposed a fine of EUR 38 Mns on E.ON for the breach of a seal in E.ON's premises during an inspection.

should now clearly allow MTI by dominant generators and implement an enforcement regime based on a clear demarcation between transparency monitoring by ACER and antitrust enforcement by the European Commission. Even if some doubts remain on the practical implementation of the UIOLI principle, the wider benefits in terms of investments, both in transmission and generation, and the urgency of the situation require, it is submitted, a stronger approach.

Having a more integrated approach of competition policy to leverage the complementarities between the future ACER and the antitrust powers of the European Commission appears as the best way to bring a new impetus to interconnection investment in Europe. Similarly, better integrating policies regarding long-term supply contracts and MTI would enable European competition authorities to limit customer foreclosure, a major problem in European electricity markets, while facilitating the high-fixed costs generation investments much needed for the security of supply of Europe.

The theoretical foundations of the current strategy of the European Commission could be correct in a different institutional and political context but the policy implications are today largely misguided as the specific context of European liberalization is not rightly accounted for. Once again, this paper evidences that for regulation to be efficient, the underlying economic understanding must be correct, which is not the case in the case of MTI. True, allowing MTI by dominant generators indeed means creating a position of dominance in the cross-border transmission markets, but as long as potential market abuses can be mitigated, this is an acceptable improvement of regulation and probably the best way today to arbitrate between short and long-term efficiency criteria on this issue. ACER will not enjoy its full powers before 3 March 2011, Europe thus still has 18 months to consider revising its policy on MTI.

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