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MERCHANT TRANSMISSION INVESTMENT IN EUROPE. OPPORTUNITIES FOR PRIVATE INITIATIVES IN A REGULATED MARKET SEGMENT

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Overview

Although in the liberalized markets almost all transmission investments have been made on a regulated basis, the opportunities for private initiatives have drawn attention in the last few years. Joskow (2005) expects only a “very small contribution” from merchant interconnectors to the overall portfolio of transmission investment projects. The main reason for opening transmission investment to profit-motivated investors is that this may address the perceived problem of under-investment in transmission (Brunekreeft and Newbery, 2005). For example, merchant interconnectors may be an interesting option where TSOs are reluctant or not allowed to invest and/or where lasting price differences (and thus a lasting trade potential) exist.

On 27 april 2004, the European Commission gave green light to the Estlink submarine cable project between Estonia and Finland (Eesti Energia, 2005). The Estlink (See Figure 1) is in fact the first European merchant interconnector (exempted from regulated TPA) and connects Estonia to Finland.



Figure 1: Estlink

This paper analyzes the process of transmission investment and identifies current economic and regulatory issues with respect to merchant investment (in Europe). First, we reflect upon the role of interconnectors in the process of market integration. After this, the transmission investment process is modeled (both for regulated and merchant investment) and decomposed into different process steps. To verify the relevance of each individual stage, various real-life cases of transmission investment are analyzed, amongst others NorNed and Estlink. The identified process steps are then analyzed separately. Amongst others, the (socio) economic cost-benefit analysis is discussed in detail. Special attention is paid to the question how to incorporate investment risk in the cost-benefit analysis of a (merchant) transmission investment. In addition, the European regulatory framework for transmission and the special regime for merchant interconnectors are discussed. Here, we discuss the special regime that has been granted to Estlink, which is to date the only example of an exception pursuant to the Regulation granted to a merchant interconnector for electricity. To conclude, the paper identifies current relevant regulatory issues with respect to European transmission investment.

Methods

On the basis of a basic model representing the overall transmission investment process (Figure 2), the various relevant process steps are identified. To gain insight in these different process steps different world-wide case-studies are used as well as existing literature on transmission investment and investment economics. Based on the existing European regulatory framework (Regulation 1228/2003) regarding transmission investment, the Estlink case is analysed in depth and regulatory issues are identified.

Results and Conclusions

Both for regulated and merchant transmission investment projects, the transmission investment process can be divided in four different process steps: an *economic* step (first rough cost-benefit analysis), a *financial* step (cost-benefit analysis including uncertainty/risk), an *institutional* step (regulatory check/approval) and a *commercial* step (the final decision of private parties with respect to the regulatory requirements or, regarding a regulated cable, final decision of both systems/countries/TSOs involved).

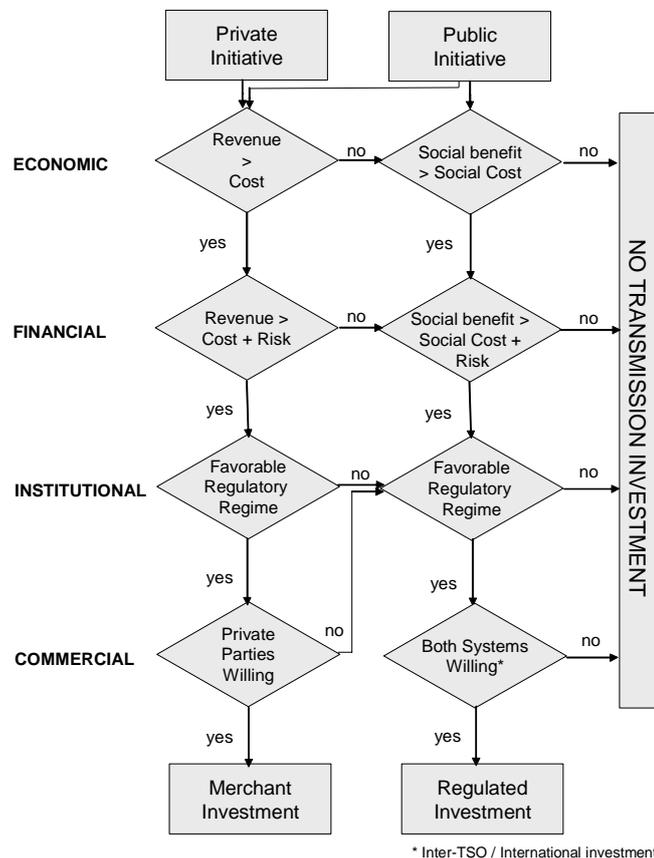


Figure 2: Investment process

From analyzing the process steps we conclude that:

- Interconnectors are transforming into intraconnectors which causes more pressure, first, to coordinate the institutional issues at different sides of the interconnector, and, next, to really integrate the different markets.
- If additional transmission capacity is established between two nodes (with a price-difference) the project benefits from a private perspective are different than from a social perspective. To stimulate private initiatives, the public body concerned could consider passing on a certain part of the additional positive prosperity effect to the private investor.
- The specific project risk (β) for inter-TSO transmission investment is (extra) difficult to determine because each situation is unique and consequently few comparable projects exist. The unleveraged project beta (market risk) of an inter-TSO merchant transmission project will generally be higher than the unleveraged project beta of a generation capacity project.
- The go/no go decision of a regulated investment should take the project risk into account as if the project is a merchant investment without cost-recovery guarantees.
- Considering merchant investment, the choice of the capacity of the interconnector, market power and regulatory uncertainty are important regulatory issues.
- Merchant transmission may form a Trojan Horse; where merchant transmission investment is generally seen as an instrument to stimulate market integration, the private parties involved have a considerable interest to keep the markets disintegrated.