

TRANSMISSION INVESTMENT UNDER UNCERTAINTY: THE CASE OF GERMANY-NORWAY

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Overview

Electricity price differences between neighboring regions and countries motivate in part the construction of large transmission lines. Analysis of such investment are complicated by the fact that the electricity can flow in both directions, by uncertainty in exchange rates and prices, and not least by the fact that the price differences become smaller after the transmission line has been put into operation. We perform a real options analysis of a merchant investor holding an exclusive license to build.

We will use the framework of DeCamps, Mariotti and Villeneuve to analyse the irreversible investment in the transmission capacity when the investor has more than one alternative for investment project. When investing in the smaller alternative, the investor can upgrade to the bigger alternative, but the investor cannot downscale the bigger project if that is undertaken.

The paper will be organised as follows: After the introduction, the second section gives a brief overview of the special challenges transmission investors face. The third section comments briefly on the method chosen while the forth section reviews main results. Section five gives the conclusions of the paper while section six suggests further work on the are.

Methods

Real option valuation.

Results

The goal of the project is to estimate the value of timing the investment correctly, and to find the treshold prices for which each of the investments will be undertaken.

Conclusions

The project is a work in progress, and neither results nor conclusions have yet been drawn.

References

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