



Determining the optimal length of regulatory guarantee: A Length-of-Contract Auction

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<Governments have increasingly turned to the private sector to provide infrastructure services in road, railway, energy and water: sectors that were once delivered by the public sector. The private sector's involvement has become attractive to governments as a mechanism for delivering infrastructure investment since it can be a tool to stimulate innovation and competition and importantly, allows private finance to replace government spending.

A wide spectrum of models has emerged in how to involve the private sector in infrastructure investment. The public-private partnership (PPP) models or competitive tender processes are used to bring in private investments. Typical contract periods range from 5 to 50 years. For the duration of the contract, the private company provides the service in exchange for government transfers that compensate for upfront investments and other costs. Auctions have successfully been applied in the awarding of these contracts. Highway construction and the allocation of electricity transmission assets linking offshore wind farms to the onshore grid in the UK provide two examples of how such tenders work.

The key feature of an infrastructure tendering process is the long term nature of the contracts, 20 years for example, between the government and a private company. In offshore transmission, a successful bidder will receive a transmission licence and entitlement to an associated 20-year transfer value in return for purchasing the transmission assets from an offshore wind developer and operating them in accordance with the obligations of the licence.

However, one of the biggest challenges in the area of infrastructure investment is the provision of funding to finance activities. Therefore, infrastructure investments are calling for financial institutions that are willing to provide funding to finance the

activities. This is a challenge for many infrastructure investments, even though the investments are of interest to investors.

In order to make infrastructure investments more interesting in terms of providing capital to finance activities, a solution is to let the length of the regulatory funding period be determined via an auction. A longer period, say 25 or 30 years, may be desirable in terms of lending since a longer tender period gives the financial institutions the security of a long term secured revenue arrangement. A longer tender period means lower repayment per-unit debt in periods of underperformance and therefore, lowers probability of default. Hence, a longer tender period could result in a lower interest rate. However since the authorities have to offer a longer financial guarantee, longer regulatory funding periods may be seen as less desirable to the government.

This paper presents an auction design which can reduce the financing cost of infrastructure investments by allowing the length of the regulatory funding period to be determined via an auction. The auction allows bidders to submit bids against a payment for periods of varying length. Thus instead of, for example, a fixed 20-year contract period, some bidders might want to bid for financing over a longer period, say 25 or 30 years. This can be desirable in terms of securing more favourable terms in the financial markets. Our auction design can secure efficiency and lower financing costs. Our auction is motivated by the auctions currently being undertaken by the UK energy regulator (Ofgem) for financing offshore transmission assets. Although the auction was designed with electricity transmission in mind, the auction could be used in other areas of infrastructure investments.>

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