Modelling Western Australia’s domestic gas reservation policy

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30 June 2015

Abstract
Western Australia introduced a domestic gas reservation policy in 2006, which essentially requires new gas developments to supply the equivalent of 15 per cent of their gas exports to the Western Australian domestic gas market. The aim of the policy is to secure additional domestic gas supply and thereby maintain lower domestic gas prices than may otherwise prevail. One of the key justifications given for the policy is to offset the perceived market power held by domestic gas suppliers.

A theoretical model is developed to represent the most important features of the upstream gas market. Individual gas developments have very large fixed costs and exhibit increasing returns to scale, at least up to some point. Many projects are large compared to the overall Western Australian market, and therefore exhibit oligopolistic pricing power on the domestic market.

This partial equilibrium model is used to quantitatively assess the economic impact of Western Australia’s domestic gas reservation policy. The analysis shows that, while gas consumers may benefit, this trade restriction is likely to impose a net cost across all Australian households, since gas resources would be diverted inefficiently.

More specifically, the short run impact of the domestic supply requirements placed on the Gorgon and Wheatstone export projects are estimated. Results include the effects of the policy on production and prices as well as the overall welfare impacts.