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Electricity Market Integration, Decarbonisation and Security of Supply: Dynamic Volatility Connectedness in the Irish and Great Britain Markets

EPRG Working Paper 2003

Cambridge Working Paper in Economics 2007

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Abstract

This study investigates the volatility connectedness between the Irish and Great Britain electricity markets and how it is driven by changes in energy policy, institutional structures and political ideologies. We assess various aspects of this volatility connectedness including static (unconditional) vs dynamic (conditional), symmetric vs asymmetric characteristics between 2009 and 2018. We find that volatility connectedness is time varying and is significantly affected by important events, policy reforms or market re-designs such as Brexit, oil price slump, increasing share of renewables, and fluctuations in the exchange rates. Our asymmetric analysis shows that the magnitude of the good volatility connectedness is marginally larger than that of the bad volatility connectedness. Our result suggests that good volatility levels would be even higher once the Irish market adopts the carbon price floor. Therefore, supporting renewable generation by setting an appropriate carbon price in interconnected wholesale electricity markets will improve market integration.

Keywords : Market integration, electricity, renewable, energy policy, volatility.
JEL Classification D4, L94, Q2, Q4.

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Publication February 2020