

# Melting-pots and salad bowls: the current debate on electricity market design for RES integration

EPRG Working Paper 1329

Cambridge Working Paper in Economics 1354

**Jean-Michel Glachant and Arthur Henriot**

## Abstract

This paper discusses a series of issues regarding the economic integration of intermittent renewables into European electricity markets. This debate has gained in importance following the large-scale deployment of wind farms and photovoltaic panels. As intermittent renewables constitute a significant share of the installed generation capacity, they cannot be kept isolated from the electricity markets.

We argue that RES integration is first and foremost an issue of economic efficiency, and we review the main debates and frameworks that have emerged in the literature. We first consider to what extent intermittent resources should be treated the same way as dispatchable resources. We then analyse the different tools that have been proposed to ensure the required flexibility will be delivered: finer temporal granularity and new price boundaries, integration of a complex set of balancing markets, and introduction of tailor-made capacity remuneration mechanisms. Finally we introduce the topic of space redistribution, confronting cross-continental markets integration to the emergence of a mosaic of local markets.

**Keywords** *Electricity market design, large-scale renewables, intermittency*

**JEL Classification** L94, Q20, Q40

Contact arthur.henriot@eui.eu  
Publication November 2013