

COMPARING DIFFERENT COST ALLOCATION POLICIES FOR LARGE-SCALE RES-E GRID INTEGRATION IN EUROPE

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ABSTRACT

The EC-Directive 2003/54/EC (repealing EC-Directive 96/92/EC) on liberalization of electricity markets in Europe requires the electricity industry to be competitive, yet realises that many elements of the electricity supply chain are still natural monopolies. Consequently, separation of the competitive segments of electricity generation and customer supply from the grid infrastructure is seen as a precondition for non-discriminatory grid access for third parties (e.g. RES-E generators) as well as for transparent procedures for disaggregated cost allocation and grid regulation / grid tariff determination. However, legislation and definition of RES-E policy goals on national as well as EU level still face a variety of lacks (e.g. ignoring fundamental unbundling principles) in almost all European countries. In the ongoing EC-Project *GreenNet-EU27* these inadequacies are addressed comprehensively. Moreover, dynamic time paths of RES-E deployment are modelled in selected EU Member States up to the year 2020 for different degrees of unbundling and cost allocation policies in the context of RES-E grid integration. The modelling results clearly demonstrate that the degree of unbundling and the implemented allocation principles of different disaggregated cost elements significantly influence RES-E deployment both on national as well as EU level up to the year 2020. The major conclusion is that serious unbundling and correct allocation of RES-E related grid integration costs only guarantee fulfilment of the ambitious EC goals with minimal costs for society.