

# Accepted Manuscript

Fair division of costs in green energy markets

Jens Leth Hougaard, Dorte Kronborg, Aleksandrs Smilgins

PII: S0360-5442(17)31119-2

DOI: [10.1016/j.energy.2017.06.122](https://doi.org/10.1016/j.energy.2017.06.122)

Reference: EGY 11130

To appear in: *Energy*

Received Date: 15 February 2016

Revised Date: 7 June 2017

Accepted Date: 20 June 2017

Please cite this article as: Hougaard JL, Kronborg D, Smilgins A, Fair division of costs in green energy markets, *Energy* (2017), doi: 10.1016/j.energy.2017.06.122.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



# Fair division of costs in green energy markets

Jens Leth Hougaard

Department of Food and Resource Economics  
University of Copenhagen,

Dorte Kronborg

Center for Statistics, Department of Finance  
Copenhagen Business School,  
and

Aleksandrs Smilgins

Department of Economics  
Copenhagen Business School.

## Abstract

This paper considers cost allocation in networks where agents are characterized by stochastic demand and supply of a non-storable good, e.g. green energy. The grid itself creates possibilities of exchanging energy between agents and we propose to allocate common costs in proportion to the economic gain of being part of the grid. Our model includes a set of fundamental requirements for the associated trading platform. In particular, it is argued that a suitable mechanism deviates from a traditional market. The approach is illustrated by simulations.

**Keywords:** Cost allocation, Networks, Gains, Electricity, Smart Grids.

**JEL-codes:** C63, D47, D63, L94

**Correspondence:** Aleksandrs Smilgins, ECON, Copenhagen Business School, Porcelaen-shaven 16 A, 2000 Frederiksberg, Denmark.

E-mail: ams.om@cbs.dk

Download English Version:

<https://daneshyari.com/en/article/5475600>

Download Persian Version:

<https://daneshyari.com/article/5475600>

[Daneshyari.com](https://daneshyari.com)