Economy-wide effects of international and Russia's climate policies

Anton Orlov, Asbjørn Aaheim

PII: S0140-9883(17)30322-5
Reference: ENEECO 3767

To appear in:

Received date: 21 August 2016
Revised date: 22 September 2017
Accepted date: 28 September 2017

Please cite this article as: Anton Orlov, Asbjørn Aaheim, Economy-wide effects of international and Russia's climate policies. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Eneeco(2017), doi:10.1016/j.eneco.2017.09.019

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.
Economy-wide effects of international and Russia’s climate policies

Anton Orlov and Asbjørn Aaheim

Abstract

The objectives of this paper are to analyse the economy-wide effects of international climate policy on the Russian economy as well as the effects of Russia’s climate policy on European economies. Our analysis is based on a general equilibrium model that includes inertias, such as imperfect sectoral labour mobility and vintage capital, and has a detailed depiction of the power generation sector. We found that international climate policy could reduce Russia’s private welfare by 1.8% annually due to lower revenues from exports of fossil fuels. At the sectoral level, Russia could gain a comparative advantage in producing energy-intensive commodities and hence Russia’s producers of those commodities increase their production and export supplies. This could result in a carbon leakage in Russia. Eliminating implicit subsidies on domestic consumption of gas and petroleum products could reduce Russia’s private welfare loss by 0.6% points and eliminate the carbon leakage. Nevertheless, eliminating implicit subsidies on gas and petroleum products might not be sufficient to achieve the pledged emission reductions by 2030. Moreover, this leads to an undesirable increase in coal consumption and therefore, some additional climate policy such as a carbon tax or an emission trading system might be required. We also found that Russia’s climate policy could have positive but moderate effects on the European economies; in particular, countries such as Lithuania, Slovakia, and Hungary benefit due to decreased export prices for gas, crude oil, and petroleum products from Russia.

Key words: Economy-wide effects; NDC; Paris agreement; EU; Russia; CGE model

1 We would like to thank two anonymous referees for their very helpful comments and suggestions, which substantially improved the paper. The contents of this paper are the authors’ responsibility. They do not necessarily represent the views of the Center for International Climate Research (CICERO).

2 Center for International Climate Research (CICERO), Gaustadalléen 21, 0349 Oslo, Norway. E-mail addresses: anton.orlov@cicero.oslo.no, anton-orlov@hotmail.com.
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات