

The Economic and Environmental Implications of Russian Sustainability Policy

Victoria Alexeeva-Talebi
Alexeeva-Talebi@zew.de

Henrike Koschel
Koschel@zew.de

Christophe Heyndrickx
Christophe.Heyndrickx@tmleuven.be

Andreas Löschel
loeschel@zew.de

Russia is currently experiencing a turnaround in its energy and climate policy. In this paper, we analyse the effects of different environmental and energy policies on the Russian economy and the state of the environment at both federal and regional level. The core SUSTRUS model augmented by the environmental module will be used to assist policy makers in their choice of medium and long-term policies for sustainable development in Russia.

The development of the environmental module within the SUSTRUS model first involves the modelling of all relevant GHGs differentiated by regions, sectors and fuels. It thereby concentrates on environmental implications related to CO₂ emissions, deposition of acidifying emissions and ambient air quality. The module uses all emission information and translates it, when appropriate, into deposition, air-concentration and damage data both on federal and regional level. In a second step, the module assesses the effects of different policy instruments, *including taxes and tradable permits*, on the behaviour of economic agents. In particular, it analyses different mechanisms which cause behavioural changes affecting the emissions level: Thereby, abatement cost functions are specified differing between sectors and pollutants. Second mechanism affecting the emission level is related to the substitution of fuels in the production which occurs while input demand is linked to the relative prices of these inputs. Finally, there is an emissions reduction due to a demand driven adjustment in production quantity (through taxes or other instruments).

Keywords: Regional general equilibrium model, environmental taxes, tradable permits, Russia