Negotiating a uniform emissions tax in international environmental agreements

David M. McEvoy, Matthew McGinty

PII: S0095-0696(17)30588-0

DOI: 10.1016/j.jeem.2018.06.001

Reference: YJEEM 2136

To appear in: *Journal of Environmental Economics and Management*

Received Date: 28 August 2017

Revised Date: 31 May 2018

Accepted Date: 1 June 2018

Negotiating a Uniform Emissions Tax in International Environmental Agreements

David M. McEvoy (corresponding author)
Department of Economics
Appalachian State University
Boone NC 28608
Email: mcevoydm@appstate.edu

Matthew McGinty
Department of Economics
University of Wisconsin-Milwaukee
PO Box 413
Milwaukee, WI, 53201
Email: mmcginty@uwm.edu

Abstract: A consensus appears to be emerging that a global carbon tax is the best policy for managing greenhouse gas emissions. Emissions tax systems are relatively straightforward, cost effective and can generate revenues used to offset other distortionary taxes. Moreover, recent theoretical research (Weitzman 2014) has demonstrated that under some conditions the globally efficient tax rate can be implemented through a majority voting rule. We extend this area of research by examining a uniform emissions tax system in the framework of an international environmental agreement in which only countries that voluntarily participate are subject to the tax. We show that in the simplest situation in which countries have identical marginal benefit and cost functions, the largest stable agreement consists of two countries and the tax system has little impact on abatement levels. Our analysis highlights that by ignoring the participation decision and assuming commitment by all parties, the efficiency gains from a uniform emissions tax system are overstated.

Keywords: global public goods, uniform emissions tax, international environmental agreements, externalities

JEL classification: C7, D7, F5, H4