

## **Volume 23, Issue 2**

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*Pages 1-26*

### **Designing a Tradable Permit System to Control SO<sub>2</sub> Emissions in China: Principles and Practice**

by A. Denny Ellerman (Center for Energy and Environmental Policy Research, Massachusetts Institute of Technology, Cambridge, MA, USA)

#### **Abstract**

This paper discusses the problems of implementing a cap-and-trade system for controlling SO<sub>2</sub> emissions in China. It describes the evolution of current air emissions policy for SO<sub>2</sub> emissions and focuses on two critical aspects for establishing a tradable permits system in China: the transition from (non-tradable) facility-specific permits to tradable (emission) permits and the integration of tradable permits with the pre-existing pollution levy system. A major theme throughout the paper is that the requirements for establishing an effective tradable permits system do not differ greatly from those for an equally effective tax or command-and-control regime. Although each instrument has distinctive features, the differences among them are mainly ones of form. All require that the same fundamental problems be solved: How to allocate the cost burden of reducing emissions, what specific requirements to place on emitting sources, and how to ensure compliance.

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### **Interfuel Substitution within Industrial Companies: An Analysis Based on Panel Data at Company Level**

by Thomas Bue Bjørner (AKF, Institute of Local Government Studies - Denmark) and Henrik Holm Jensen (COWI, Kongens Lyngby, Denmark)

#### **Abstract**

In this paper we estimate two models for interfuel substitution between electricity, district heating and (other) fuels using a micro panel data set containing information for most Danish industrial companies in the period between 1983 and 1997. The main finding of the study is that interfuel substitution is low within the companies, especially between electricity and other fuels. The partial own-price elasticities estimated are small (between -0.04 and -0.13) both for electricity and other fuels, while it is between -0.44 and -0.50 for district heating. The partial own-price elasticity for electricity is smaller than generally found in macro studies. One explanation may be that the macro studies, in addition to technical substitution, capture some derived demand effect (i.e., aggregation bias).

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### **Climate Politics from Kyoto to Bonn: From Little to Nothing?**

by Christoph Böhringer (Head of Department, Environmental and Resource Economics, Centre for European Economic Research, ZEW, Mannheim, Germany)

### **Abstract**

We investigate how the U.S. withdrawal from the Kyoto Protocol and the provisions of the Bonn climate policy conference on sink credits and emissions trading will change the economic and environmental impacts of the Protocol in its original form. Based on simulations with a large-scale computable general equilibrium model, we find that the U.S. withdrawal and amendments of Bonn reduce the Kyoto Protocol's impact to business-as-usual without binding emission constraints. U.S. compliance under the new Bonn provisions, on the other hand, would accommodate a substantial cut in global emissions at relatively small compliance costs for OECD countries.

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## **Will Cross-Ownership Re-Establish Market Power in the Nordic Power Market?**

by Eirik S. Amundsen (Department of Economics, University of Bergen, Bergen, Norway) and Lars Bergman (Professor of Economics, Stockholm School of Economics, Stockholm, Sweden)

### **Abstract**

The integration of the power markets in Norway and Sweden in 1996 significantly constrained the major power companies' ability to exercise market power within their national borders. In recent years, however, mergers and reciprocal acquisition of shares have reduced the number of independent players on the Norwegian-Swedish power market. The aim of this paper is to explore to what extent increasing cross-ownership among the major power companies in Norway and Sweden might re-establish the market power that was lost when the two national power markets were integrated. The analysis is based on a numerical model, assuming Cournot quantity setting behavior, of the Norwegian-Swedish power market. The simulation results suggest that partial ownership relations between generators tend to increase horizontal market power and thus the market price of electricity.

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## **The Curious Role of "Learning" in Climate Policy: Should We Wait for More Data?**

by Mort Webster (Department of Public Policy, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA)

### **Abstract**

Given the large uncertainties regarding potential damages from climate change and the significant but also uncertain costs of reducing greenhouse emissions, the debate over a policy response is often framed as a choice of acting now or waiting until the uncertainty is reduced. Implicit in the "wait and learn" argument is the notion that the ability to learn in the future necessarily implies that less restrictive policies should be chosen in the near term. I demonstrate in the general case that the ability to learn in the future can lead to either less restrictive or more restrictive policies today. I also show that the initial decision made under uncertainty will be affected by future learning only if the actions taken today change the marginal costs or

marginal damages in the future. Results from an intermediate-scale integrated model of climate and economics indicate that the choice of current emissions restrictions is independent of whether or not uncertainty is resolved before future decisions, because, like most models, the cross-period interactions are minimal. With stronger interactions, the effect of learning on initial period decisions can be more important.

## **BOOK REVIEWS**

*Pages 121-122*

### ***Oil and Gas in the Caucasus and Caspian: A History***

by Charles van der Leeuw, Curzon Press, 2000. (Book Review by Douglas B. Reynolds)

*Pages 123-125*

### ***The Kyoto Mechanisms and Russian Climate Politics***

by Arild Moe and Kristian Tangen, Royal Institute of International Affairs, Great Britain, 2000  
(Book Review by Carol Dahl)