Strategies for OPEC's Pricing and Output Decisions

by Dermot Gately (New York University)

Abstract

This paper examines OPEC pricing and output strategies, both to provide an understanding of OPEC's unwise price doubling in 1979-80 and also to analyze what strategy might serve it best for the future. We focus on the unavoidable uncertainty regarding the underlying parameters that characterize the world oil market (price elasticities, income growth rates), and the sensitivity of discounted OPEC revenue to changes in these parameters, for various pricing strategies.

In 1979-80, OPEC chose a high-price strategy, which could have yielded good results (like many other price-paths) if the market's underlying parameters had been more favorable. But the price elasticities of demand and non-OPEC supply were much higher than anticipated, so that OPEC did very poorly—not only in absolute terms, but also relative to what it could have achieved if it had set its price more cautiously.

We search for a robustly optimal strategy for OPEC in the future, which will serve it well relative to other strategies, regardless of the true parameter values underlying the market (within some plausible range). We conclude that OPEC's interests will be served best by a policy of moderate output growth, at a rate no faster than that of world income growth. This will require that OPEC slow its rate of output growth since 1985, cutting it at least in half. Slowing its output growth will allow OPEC gradually to regain the market share lost after its disastrous 1979-80 price doubling, but without jeopardizing its revenue, as might a policy of more rapid increases in output. This will yield a consistently good result for OPEC, relative to alternative strategies, over a fairly wide range of demand and supply conditions.
Abstract

Privatization was intended to make the English bulk electricity market sufficiently competitive to avoid the need for regulation, but two generators set the spot price over 90% of the time though they supply less than 60% of total electricity generated. Their market power depends on their share of non-baseload plant, and agreed divestiture here should increase competition. The paper argues that the contract market, which makes entry contestable, will ensure that long-run average prices are kept at the competitive entry level, with increased competition mainly increasing medium-run volatility and short-run economic efficiency.

Pages 67-87

Regrets or No Regrets--That is the Question: Is Conservation a Costless CO₂ Mitigation Strategy?

by Adam Rose (Pennsylvania State University) and Shih-Mo Lin (Chung Yuan Christian University)

Abstract

Based on sectoral, or partial equilibrium, analyses, energy conservation has been offered as a "no regrets" CO₂ mitigation strategy. Ours is the first study to isolate key features of conservation strategies in a general equilibrium context. The results indicate that conservation would have slightly negative effects on the U.S. economy overall, in addition to sizable negative effects on most energy industries. Thus, while conservation may be a worthy CO₂ mitigation strategy, it should not be oversold as costless.

Pages 89-111

Forecasting the Market for Electric Vehicles in California Using Conjoint Analysis

by Robin Segal

Abstract

Beginning in 1998 a percentage of large auto companies' sales in California must include zero-emission vehicles (ZEVs), which at this time are synonymous with electric vehicles. Data on consumer values and the level of consumer acceptance for alternative fuel vehicles are necessary to determine the practicality of the State's policy. This paper presents the results of a forecast for alternative fuel vehicle purchases in California. This forecast uses conjoint analysis, a multi-attribute utility market forecast methodology
developed within the field of marketing research. The forecast yields several types of results, including market simulations of the alternative fuel vehicle market, relative preferences among vehicle attributes, and the identification of market segments most likely to purchase each type of vehicle. The research suggests a market for electric vehicles too small to support California's ZEV sales mandate, and a very large market for natural gas vehicles. This paper concludes with a discussion of automobile and electric utility industry interests with regard to these forecast market consequences.

Pages 113-124

Regional Limitations on the Hedging Effectiveness of Natural Gas Futures

by Emile J. Brinkmann and Ramon Rabinovitch (University of Houston)

Abstract

This paper examines the extent to which limitations in the transportation system for the natural gas market in the United States narrows the effectiveness of the NYMEX natural gas future contract as a hedging instrument and why a second contract with a different delivery point was approved during 1995. We find that the NYMEX contract is an effective hedging instrument for gas sold into pipelines for consumption in southern, eastern and midwestern states, but does not provide an effective hedge for gas sold for Rocky Mountain and West Coast states.

Pages 125-139

Understanding the Oil Industry: Economics as a Help or a Hindrance

by Paul Stevens (University of Dundee)

Abstract

This paper examines how economics has contributed to an understanding of the international oil industry. After considering why knowledge of the oil industry is a subject worthy of interest, the paper develops a stylized version of economic methodology. It then tries to apply this to the oil industry. However, the paper observes that in the past, because of secrecy and lack of data, there have been serious problems which inhibit the use of standard methodology. The result has been a tendency among some economists to apply untried theory to the industry with damaging results. The paper then considers how other economists have adopted a different approach and in doing so, have made significant contributions. The paper concludes by considering future avenues for the further application of economic analysis to the oil industry.
Book Reviews

Pages 141-143

The Extra Mile: Rethinking Energy Policy for Automotive Transport
by Pietro S. Nivola and Robert W. Crandall (book review by Ronald J. Planting)

Pages 143-145

Competition in the Electricity Supply Industry: Experience from Europe and the United States
by Ole Jess Olsen (ed.), (book review by Lori M. Megdal)