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Special Issue in Honor of Hans Landsberg and Sam Schurr

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Preface

by G. Campbell Watkins (Joint Editor, *The Energy Journal)*

Hans Landsberg and Sam Schurr died within six months of each other (October 2001 and March 2002). Both had enjoyed a long innings – they were in their eighties. Both received the IAEE's "Outstanding Contributions" award. And both had held important positions in the natural resources field, the longest with Resources for the Future (RFF). Moreover, Sam was the first President of the IAEE in its inaugural year of 1979. It is entirely fitting that the passing of these two stalwarts of the energy economics profession be marked by a set of essays dedicated to them. The following four invited essays do just that. Joel Darmstadter of RFF kindly agreed to act as editor, and also to contribute an introductory paper.

Pages 1-16

Hans H. Landsberg and Sam H. Schurr: Reflections and Appreciation

by Joel Darmstadter (Resources for the Future, Washington, DC, USA)

With some notable exceptions – see the accompanying biographies – the career paths of Hans Landsberg and Sam Schurr diverged in some significant ways, as I'll note momentarily. (Never mind the personality angle: Hans, the raconteur, with an extraverted side; Sam, more low key and reserved.) Even so, we deem it fitting to commemorate their careers and professional contributions jointly in this dedicated issue of the *Journal*. There is, of course, the fact that Hans' and Sam's life spans – both lived well into their eighties – were almost entirely overlapping, their deaths just a few months apart. There is also the fact that both found themselves (though by utterly different odysseys) out of work in New York City in the latter part of the 1930s: the Great Depression wasn't always that much kinder to America's unemployed than to its immigrant community. (Hans had not long before experienced a harrowing exposure to and escape from Nazism.) In any case, both managed independently to attract the attention of senior researchers at the National Bureau of Economic Research, then housed at Columbia University and headed by Arthur Burns. This contact led to gainful employment, lasting until close to the outbreak of World

War II when – again through sheer coincidence – each was recruited for wartime duty by the OSS.

Pages 17-49

Energy Policies and Their Consequences After 25 Years

by Paul L. Joskow (Department of Economics, Massachusetts Institute of Technology, Cambridge, MA, USA)

Abstract

Hans Landsberg and Sam Schurr each led research teams that produced two important energy futures policy studies that were published in 1979. The conclusions, policy recommendations, and energy demand, supply, and price forecasts contained in these studies are reviewed. Developments in U.S. energy policy over the last 25 years are discussed and compared with the recommendations contained in the two studies. The projections of energy demand, supply, and prices for 2000 contained in the studies are presented and compared to actual realizations. The nature, magnitudes, and reasons for the differences between the studies' forecasts and what actually emerged 25 years later are discussed. All things considered, the Landsberg and Schurr studies have stood the test of time very well.

Pages 51-74

The Role of Knowledge: Technological Innovation in the Energy System

by Robert W. Fri (Visiting Scholar, Resources for the Future, Washington, DC, USA)

Abstract

Technological innovation will continue to be essential in the energy system for both economic and public policy reasons. The process of innovation is typically incremental, cumulative, and assimilative. Innovation may produce revolutionary outcomes through the accumulation of small steps, or because it introduces new performance characteristics that the market values. In some circumstances, public policy intervention to overcome obstacles to innovation may be justified to secure public benefits. One obstacle is that innovators may be unable to capture all of the available economic benefits of innovation. Another is that economic benefits may not be available and the value of the public good has not been internalized in the market. Experience with energy innovation suggests government intervention works best when it is carefully targeted on specific obstacles. Why some government policies have not been successful and suggestions for new policy approaches that might be useful are also discussed.

Pages 75-92

Improving Long-Range Energy Modeling: A Plea for Historical Retrospectives

by Jonathan Koomey (Lawrence Berkeley National Laboratory, Berkeley, CA), Paul Craig (Professor Emeritus, University of California, Davis, CA, USA), Ashok Gadgil and David Lorenzetti (Lawrence Berkeley National Laboratory, Berkeley, CA, USA)

Abstract

One of the most striking things about forecasters is their lack of historical perspective. They rarely do retrospectives, even though looking back at past work can both illuminate the reasons for its success or failure, and improve the methodologies of current and future forecasts. One of the best and most famous retrospectives is that by Hans Landsberg, which investigates work conducted by Landsberg, Sam Schurr, and others. In this article, written mainly for model users, we highlight Landsberg's retrospective as a uniquely valuable contribution to improving forecasting methodologies. We also encourage model users to support such retrospectives more frequently. Finally, we give the current generation of analysts the kind of guidance we believe Landsberg and Sam Schurr would have offered about how to do retrospectives well.

Pages 93-112

Energy and Economic Development: An Assessment of the State of Knowledge

by Michael T. Toman (Inter-American Development Bank, Washington, DC, USA) and Barbora Jemelkova (Resources for the Future, Washington, DC, USA)

Abstract

In large part, the literature on energy and development focuses on how energy demand is driven by economic development and on how energy services can be improved for developing countries. In this paper we begin with a conceptual discussion to identify the channels through which increased availability of energy services might act as a "key" stimulus of economic development along different stages of the development process. We then examine some empirical work to see what evidence it might provide regarding the importance of the possible channels of influence. We do find some important illustrations of a disproportionate role for energy. However, that evidence also underscores the importance of energy development in concert with other forms of development. Moreover, the amount of relevant literature we found was fairly limited, and in many cases it was difficult to separate out various influences in the study to see how energy might be exerting

a disproportionate role relative to other influences. This underscores our conclusion that more work is needed to understand the magnitude of its importance for economic development at an economy-wide level.

BOOK REVIEW

Pages 113-116

Oil and the Economy: Recent Developments in Historical Perspective, a special issue of *The Quarterly Review of Economics and Finance* (Vol. 42, No. 2) edited by James L. Smith, New York: Elsevier Science Inc., 2002.
(Book Review by Graham A. Davis)

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