

Title: Renewable Generation and Wholesale Electricity Market Design**James Bushnell**

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Abstract

Over the last several years, there has been a nation-wide intensification of policies directed at increasing the level of renewable sources of electricity. These environmental policy changes have occurred against a backdrop of shifting economic regulation in power markets that has fundamentally redefined the mechanisms through which investors in power plants earn revenues. Rather than base payments upon costs, revenues in many regions are now based upon fluctuating energy prices and, in some cases, supplemental payments for installed capacity. This paper studies the interaction between these two major forces that are currently dominating the economic landscape of the electricity industry. Using data from the western U.S., we examine how the large-scale expansion of intermittent resources of generation could influence long-run equilibrium prices and investment decisions under differing wholesale power market designs.

Biography

James Bushnell is an Associate Professor in the Department of Economics and holder of the Cargill Chair in Energy Economics at Iowa State University. He was previously Research Director of the University of California Energy Institute in Berkeley. He received a Ph.D. in Operations Research from U.C. Berkeley in 1993. He has written extensively on the regulation, organization, and competitiveness of energy markets.

Dr. Bushnell has served as a member of the Market Monitoring Committee of the California Power Exchange and is currently a member of the Market Surveillance Committee of the California Independent System Operator (CAISO). He has testified on regulatory and competition policy issues before numerous state and Federal regulatory and legislative institutions and consulted on energy issues throughout the U.S. and internationally.