

Human Factors 2.0: Revisiting the Role of Behavioral Science and Human Behavior in Energy and Environmental Policy

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Abstract

Human behavior, from the adoption of new technologies to the uptake of government programs and other policy initiatives, crucially shapes and constrains the way in which innovation can contribute to a more sustainable future. There is growing evidence that people's decisions related to energy and the environment often deviate from what rational choice theory would predict. Greater awareness and use of the full range of human objectives and decision processes, as provided by the behavioral sciences and humanities, has tremendous potential for more effective engineering and policy design, new technology adoption, and policy implementation. Reuven Sussman will talk about the psychology of behavior change and decision-making, focusing specifically on behavior change programs encouraging energy efficiency. Leidy Klotz will discuss decision-making biases and the choice structures that shape them for "upstream" decisions about buildings and civil infrastructure. Such decisions have large and long-term impacts on energy consumption, climate changing emissions, and other environmental concerns. Paul Ferraro will offer insights into the benefits and costs of embedding experimental designs into existing energy technology programs in order to generate better evidence about their environmental and economic impacts. Rob Nixon will discuss the importance of cultural history in relation to human decision-making. He will also talk about the way artists have sought to bring to life the emergencies of the long term, for example climate change, which is sometimes described as "abrupt," but often experienced as slow-moving and far off.