

## Rebound Effect Conference

**Monday, 22 February 2016**  
**12:00 noon to 5:00pm**

**MEWR Hall**  
**40 Scotts Road, #25-00**  
**Environment Building**  
**Singapore 228231**

Please send us your name, organisation and email address via the ESI website [here](#). For enquiries, please contact Ms. Jan Lui at 65162000.

### **Abstract:**

Energy efficiency improvements have long been a strong policy pillar to reduce emissions of pollutants. However, a “rebound effect” for energy efficiency upgrades may limit the full potential of emissions reduction. The rebound effect refers to additional energy consumption resulting from energy efficiency improvements.

The economic argument is that energy efficiency upgrades reduce the effective cost of energy, therefore increasing the demand and thus consumption of energy. As long as the rebound effect remains below 100%, policies targeting energy efficiency shall remain effective. The challenge comes when the rebound effect exceeds the initial energy efficiency improvement, a phenomenon termed “backfire”. As such, estimation of the rebound effect is critical for accurate policy evaluation on national energy efficiency issues.

This conference aims to acquaint attendees with the definition of the rebound effect and discuss some existing studies on the issue in the residential sector.

## About the Speakers



Dr Harry Saunders is widely known as an international expert on energy efficiency and consumption and has also published articles in the fields of evolutionary biology and legal theory. Following Daniel Khazzoom and Leonard Brookes' work on energy consumption and behaviour, Dr Saunders coined the "Khazzoom-Brookes Postulate" which broadly states that increased energy efficiency leads to increased energy consumption. Most recently, he surveyed and analyzed thirty sectors of the United States economy for historical evidence of rebound. Based on his analyses and historical records, he argues that the Intergovernmental Panel on Climate Change's estimates for carbon emissions reduction are based on improper estimations of the rebound effect. A former Manager of Strategy at Tosco Corporation. Dr Saunders has also worked at the U.S. Department of Commerce and the International Energy Agency.



Dr Mona Chitnis joined the School of Economics in University of Surrey and Surrey Energy Economics Centre (SEEC) as a Lecturer in Energy Economics in 2014. She was a Lecturer in Economics at Department of Economics in University of Aberdeen and Aberdeen Centre for Research in Energy Economics and Finance (ACREEF) from 2013 to 2014. Prior to this, Dr Chitnis was a Research Fellow in the multidisciplinary Sustainable Lifestyle Research Group (SLRG) and Research Group on Lifestyles, Values and Environment (RESOLVE) at the Centre for Environmental Strategy (CES) in University of Surrey from 2006 to 2013. Before joining CES, she worked for almost nine years in the Management and Planning Organization (MPO) of the Iranian Government-Tehran as an Expert in Economics and State Planning and lectured at Alzahra University in Iran-Tehran. She did her BSc, MSc and Ph.D. in Economics at the University of Tehran in Iran. Her current research interests include energy demand modelling, rebound effects, energy efficiency and emissions.

## **Programme:**

12:00 - 12:15      Registration

12:15 –13:30      **Lunch**

### **Opening Remarks**

Chaired by: Professor Anthony D. Owen, Head of the Energy Economics Division, Energy Studies Institute, National University of Singapore

13:30 –13:45      **Welcome Address**

Professor Chou Siaw Kiang, Executive Director,  
Energy Studies Institute, National University of Singapore

13:45 –14:15      **Energy Efficiency and the Rebound Effect**

Professor Anthony D. Owen, Head of the Energy Economics Division,  
Energy Studies Institute, National University of Singapore

14:45 –15:15      **General Overview of Rebound**

Dr Harry Saunders, Senior Fellow, The Breakthrough Institute and Founder,  
Managing Director of Decisions Processes Incorporated

15:15 - 15:30      **Coffee/Tea Break**

15:30 –16:30      **Rebound Effects from Improved Energy Efficiency for UK Households**

Dr Mona Chitnis, Lecturer in Energy Economics, School of Economics at the  
University of Surrey

16:30 –17:00      **General Discussion and Closing Remarks**

Professor Anthony D. Owen, Head of the Energy Economics Division,  
Energy Studies Institute, National University of Singapore

**End of Programme**