OSS07-2007-000059

Abstract for an Invited Paper for the OSS07 Meeting of the American Physical Society

## Beyond Fossil Fuels: Options and Challenges

LEVI T. THOMPSON, Department of Chemical Engineering, University of Michigan

Securing our nations energy supply is arguably the most important challenge we face. The source and amount of energy that is available impacts nearly every aspect of our lives including our mobility, health and welfare. Presently, the U.S. depends heavily on foreign energy resources. For example, in 2006, nearly 60 percent of the crude oil consumed in the U.S. was imported; approximately one-quarter of this oil comes from the Persian Gulf. With growing demands from emerging economies, declining environmental quality and potential for global conflict, there is a pressing need to develop a more sustainable energy strategy. This presentation will review options for a sustainable energy economy including the use of hydrogen and fuel cells, and describe some of the key challenges