Modeling Demand Response and the Smart Grid
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• Research Goals
  – To model and optimize the pricing and behavioral aspects of energy consumption
  – To study demand response, dynamic pricing models

• Techniques
  – Real Time Optimization (RTO)
  – Statistical Analysis

• Tools
  – MATLAB/Simulink
  – Smart meters, controllers, and appliances

Demand Response- Electricity price reduction as an output of decreased load
Figure Credit: Pecan Street Project

Current generation home energy controller, this one produced by Cisco Systems, Inc.