

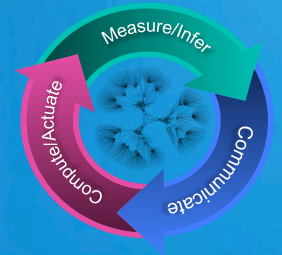


# Empowering CSE-driven Sustainability

*An Industry Perspective*

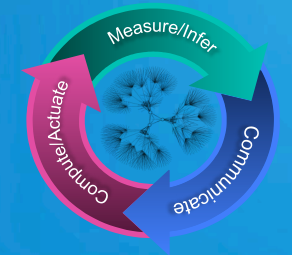
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02/03/2011

# Transform the Discussion: *From Energy Efficiency to Self-Sustainability*



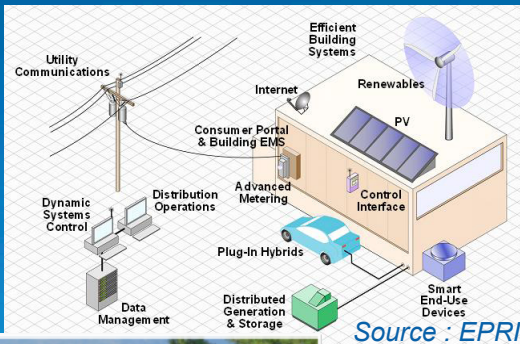
- (Re) establish the goal of closed-loop, self-contained systems
  - Analyze then recommend how to attain equilibrium
- Consider developing nations
  - Redefine infrastructure
- Investigate “clean slate”
  - Revisit cyber architecture, policies, governance

*Goal: The Smart Grid “biosphere” at a variety of scales  
(microgrid, nanogrid, picogrid)*

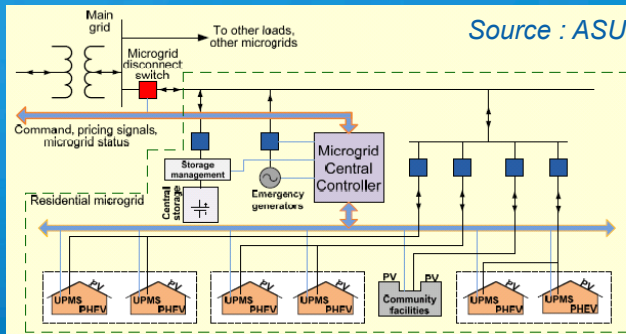


# How to get people to care? *Personalization*

- Identify places consumers have an impact and are impacted by resource usage
  - Use social science to understand consumer attitudes
  - Make sustainability economically relevant
- Identify reasons for industry to care, e.g.,
  - Perception as Environmental Leader
  - Energy reductions in operations and products
  - New markets, products, services
- Address tussle between Security & Privacy of data
  - Facilitate ubiquitous monitoring-inferencing-actuation
  - Simplify device and data management for mere mortals



Source : EPRI



Source : ASU

*Goal: Trusted Personal Energy Management at the edge of the Smart Grid*