Energy Efficiency Policy Approaches

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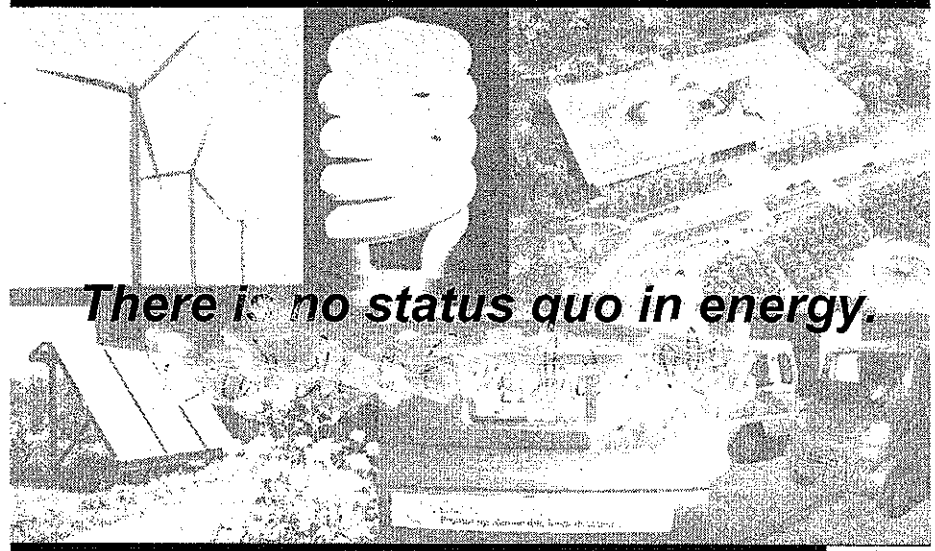
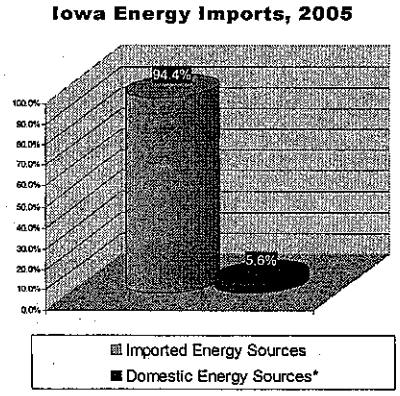


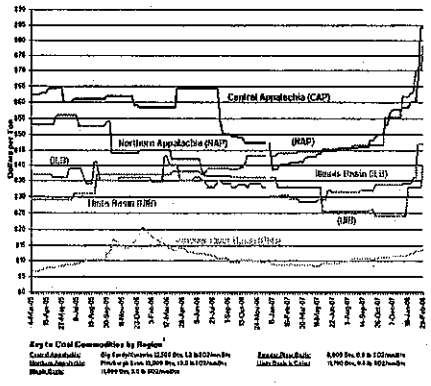
The Time is Now



* The domestic energy total includes "biomass", "ethanol", "hydroelectric power", and "other".

- U.S. energy demand expected to increase by more than 1/3 by 2030
- Market fluctuation creates instability
  - Heating oil prices up 117% from 5 yrs ago
  - Propane prices up 86% from 5 yrs ago
  - FY08: largest fluctuations in oil prices

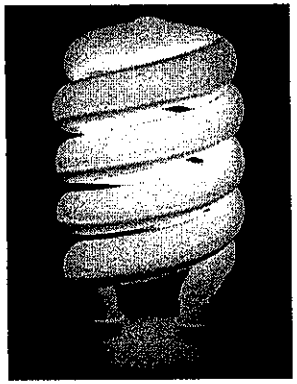
Cost of Coal



- Increasing costs of coal
- Average 500 MW coal-fired power plant emissions ~ 3 million tons of CO2/yr
- If implementing carbon charge for coal, low estimates = $7/ton in 2010
  - Increasing at 5% thereafter
- Transmission upgrades vary greatly
  - Bloomberg News estimates $75 billion investment

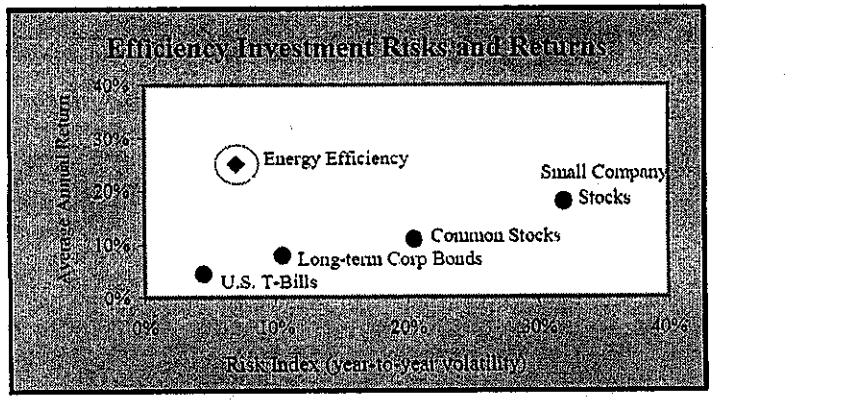
Consumer Viewpoint

- Purchase energy for what it does
- Source of energy is unimportant
- Cost: most important issue for many consumers



Why Energy Efficiency Programs

- EE is a *First Fuel* but not a *Silver Bullet*
- Low risk, high return
  - EE costs less than generation from new power plants by about ½. (EIA 2006)
  - Sizeable savings in 3 years or less
- Indicates Productivity
  - More output for less input



Source: ACEEE estimates adapted from the U.S. EPA and the Vanguard Group

ACEEE

Investment/Technical Potential

- EPA National Energy Plan (2006):
  - Economic potential of more than 20% savings in total electric demand by 2025
  - 50% or greater reduction in natural gas demand growth
  - Potential for nearly $20 billion in energy savings over 10-15 yrs
  - Defer need for 20,000 MW of new generation

Energy Efficiency Potential

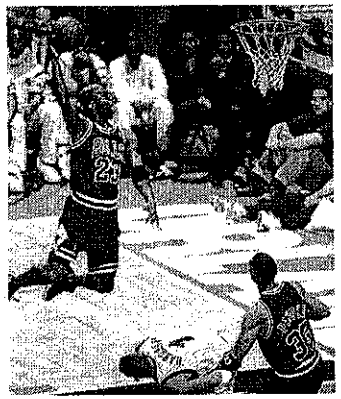
Table 1. Summary of Results from Recent Technical, Economic and Achievable Energy Savings Potential Studies.

Region	Year	Fuel	# Years	Potential (%)		
				Technical	Economic	Achievable
California	2003	Electric	10	18%	13%	10%
Massachusetts	2001	Electric	5		24%	
New York	2003	Electric	20	36%	27%	
Oregon	2003	Electric	10	31%		
Puget	2003	Electric	20	35%	19%	11%
Southwest	2002	Electric	17			33%
Vermont	2003	Electric	10			31%
U.S.	2000	Electric	20			24%
Median		Electric		33%	21.5%	24%
California	2003	Gas	10		21%	10%
Oregon	2003	Gas	10	47%	35%	
Puget	2003	Gas	20	40%	13%	9%
Utah	2004	Gas	10	41%	22%	
U.S.	2000	Gas	20			8%
Median		Gas		41%	22%	9%

Note: This table only includes the longest time periods and more aggressive scenarios covered in each study.

Michael Jordan Approach

- Elements to MJ's success
  - Game plan
  - Follow-through
  - Teamwork



EE Policy Impacts

- Have short-term and long-term impacts on:
  - Economy
    - •j ob creation
    - •se curity
  - Environment
    - •e missions reductions
  - Energy security
    - •i mport reductions

Energy Independence Policy Recommendations

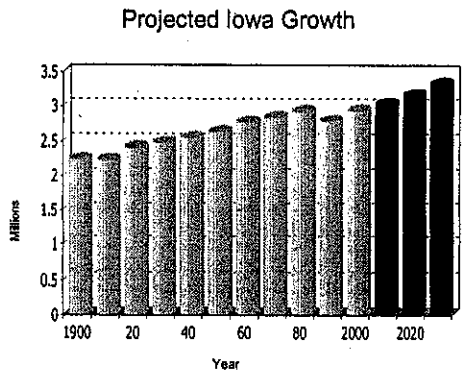
- Create energy efficiency portfolio standard (EEPS)
- Promote smart growth
- Coordinate core energy efficiency programs
- Make energy efficiency a priority over new generation

Energy Efficiency Portfolio Standard

- Encourages efficient:
  - Generation
  - Transmission
  - Usage

Promotion of Smart Growth

- By 2020: population size/density and transportation patterns will change
- Creates the need for smart growth techniques
  - Reduce vehicle miles traveled (VMTs)
  - Encourage urban area density

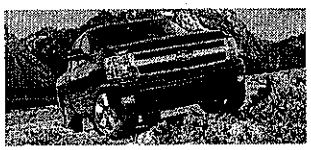


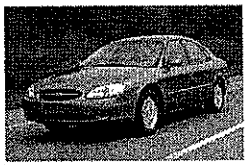
Projections from Woods & Poole Economics, Inc., 2004 (Iowa State University presentation)

Smart Growth Techniques

- Planning is Key
  - Compact growth
  - Transit-oriented development
  - Integrated transit networks
  - Mixed use development
- Low or no incremental cost

GHGs avoided by decreased VMTs





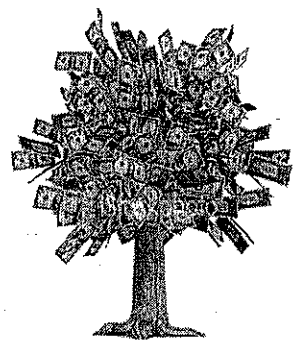
Vehicle	CO2 emissions 10,000 miles/yr	CO2 emissions 8,000 miles/yr
Chevy Silverado	13,043 lbs/yr	10,434 lbs/yr
Ford Taurus	9,316 lbs/yr	7,453 lbs/yr

Core Utility EE Programs

- Simplification needed in a confusing marketplace
- Set standards for industry-wide programs
- State leadership
- Creates infrastructure
  - Training
  - Business availability

Make Energy Efficiency a Priority

- Require Iowa utilities to do least cost planning for new generation
  - Need to demonstrate pursuit of all efficiency resources before new generation



Questions & Comments Are Welcomed