U.S. National Energy Policy: Is the Gulf Widening?

by

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A new era of National Energy Policy?

• The aim of this paper to offer a long-term perspective on U.S. energy policy
• In particular, we concentrate on world oil production and its consequences for US energy independence, US energy prices and environmental protection
Energy policy and international tension

• U.S. energy policy is conflict-sensitive: Arab oil embargo of 1973 underlined national vulnerability to global hostilities and hostile trading partners (35% imported oil)

• Trans-Alaska Pipeline (Congressional findings and declaration - 1973): “The early development and delivery of oil and gas from Alaska's North Slope to domestic markets is in the national interest because of growing domestic shortages and increasing dependence upon insecure foreign sources.”
National Energy Plan (April 1977)
NEP II (May 1979)

• reduce dependence on imports
• develop renewable (inexhaustible) energy resources
• SPR (and IEA sharing) to counteract “The Security Threat” that would come from oil imports reaching 50% of consumption (NEP II). (Oil imports were 47% in 1977).

• More of the same, but in greater detail, e.g., “energy stability, energy security, energy strength”
• With it all, by 1991 oil imports were back up to 40% of consumption
Energy policy and global resource scarcity

• U.S. energy policy is environment-sensitive: Fears of earth, air and water pollution due to economic growth have been increasing since the 1960s

• Fears of fossil fuel exhaustion have been heightening since the 1960s
Clean Air Act Amendments (1970)
Energy Policy and Conservation Act (1975)

- low-lead, unleaded gasoline
- Corporate average fuel economy
- Renewables, alternatives, energy conservation and energy efficiency
In summary, 3 main goals of U.S. energy policy since the 1970s

• Energy security (independence, self-sufficiency)
• Low to moderate energy prices
• Environmental protection
...culminating in EPACT (1992) and rare political unanimity

- Desert Storm oil prices ~ $40/barrel
- EPACT signed October 24, 1992 -- 18 months after Desert Storm
- Senate (84-8) and House (363-60)
- Large spectrum of supply and demand provisions to meet all 3 goals
10 yrs. later – the Energy Security score

• net imports from OPEC have fallen
  – 72% in 1977
  – 61% in 1991
  – 51% in 2001

• but, world oil markets are fully integrated … and by 2001 oil imports are 54% of overall US consumption
Why not redefine “Energy Security”? 

[Graph showing trends in Total Petroleum Use, Net Imports, and Import Share over the years 80 to 00.]
Energy Prices are moderate *because of imports!*

![Graph showing energy prices and GDP trends from 1990-2000. The graph compares average annual price of oil per barrel with GDP in trillion 1996$. Notable events marked include the 1990-91 recession and the Desert Shield/Desert Storm period.](image-url)
Environmental Protection?

- The good news is that the Earth’s fossil fuel resources do not appear to be close to exhaustion
- The bad news is that atmospheric carrying capacity is in doubt
Mileage is increasing, fuel efficiency is flat
SUV’s are exempt from CAFÉ standards

![Graph showing fuel efficiency comparison between Passenger Vehicles and SUV, Van, Pickups from 1986 to 2000. The graph indicates that SUVs, Van, Pickups have consistently lower fuel efficiency compared to Passenger Vehicles across the years.](image-url)
What happened to alternative fuel? ethanol, methanol, etc.

![Bar chart showing billions of gallons of alternative fuels and gasoline from 1993 to 2002. The chart indicates a steady increase in alternative fuels, with a peak of 3.7% in 1999. Gasoline usage remains relatively constant.](chart.png)
What happened to alternative fuel? ethanol, methanol, etc.

1992 = 2.8%  
1999 = 3.7%  
2002 = 3.1%
What happened to renewable fuel?
solar, wind, biomass, geothermal energy

1992 = 10.9%
2000 = 9.2%
EPACT's Impact: Negligible?

• Policy provisions undercut by decade of low/moderate energy prices
• little pressure to bring SUV’s under CAFÉ
• little pressure to pursue alternative fuels/energy efficiency aggressively
National Energy Strategy 2001

• conceived during a period of energy market instability, marked by a sharp rise in gasoline prices that peaked in November 2000, a spike in natural gas prices that peaked in February 2001, and major electric service disruptions, including 38 blackout and service interruption days in California between November 2000 and May 2001.

• Energy Secretary Spencer Abraham, “Continuing and expanding programs that have been in place as the country drifted to the brink of an energy crisis does not appear to be a wise course of action. We need a better measure of success in the energy resource area.” (April, 2001)
déjà vu … national energy policy being debated in Congress has 3 goals

• energy security
• moderate energy prices
• environmental protection
“Energy Policy Act of 2003” features...

- ANWR
- subsidies for nuclear energy industry, oil and gas industries, renewables
- R&D for hydrogen car
- higher appliance standards, tax credits for energy efficiency
“Energy Policy Act of 2003” does not feature...

- treatment of energy-related environmental externalities via CAFÉ standards, aggressive energy efficiency or alternative fuel promotion
- does not redefine “energy security” -- thereby perpetuating a self-defeating policy
- ignores the possibility, and implications, of lower oil prices
National Energy Policy 2003
Assumptions: ANWR & environmentally friendly fuels profitable, leading to greater energy independence, lower GHG emissions

Post-Saddam Iraq – Long-Term Implications: Increased oil supplies, lower oil prices, ANWR & environmentally friendly fuels unprofitable, less energy independence, higher GHG emissions
So they, too, were saved by Operation Iraqi Freedom …
but unfortunately, so was H2....
“A Solution”
(isn’t it a bit windy to be playing here?)
“Or a Delusion?”
What lies ahead for the US ...

- increasing net imports
- lower fuel economy
- no reduction in GHG
- low level of energy efficiency/alternative fuels activity, and...

*A new Energy Policy Act in 2008*