

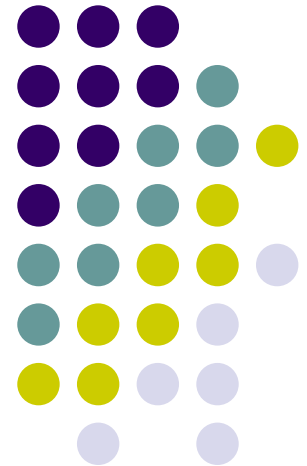
# Imported Oil - A Security, Economic and Environmental Threat to the United States



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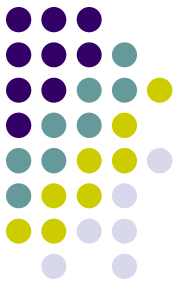
*American Chamber of Commerce in France*



# US Dependence on Energy Imports



- US dependence on foreign oil is growing
  - in 2008: 60% of oil was imported (10 million barrels a day in January 2009) → up from 40% during the First Gulf War
- the US produces 3% of global oil but consumes 25%



# The Dangers

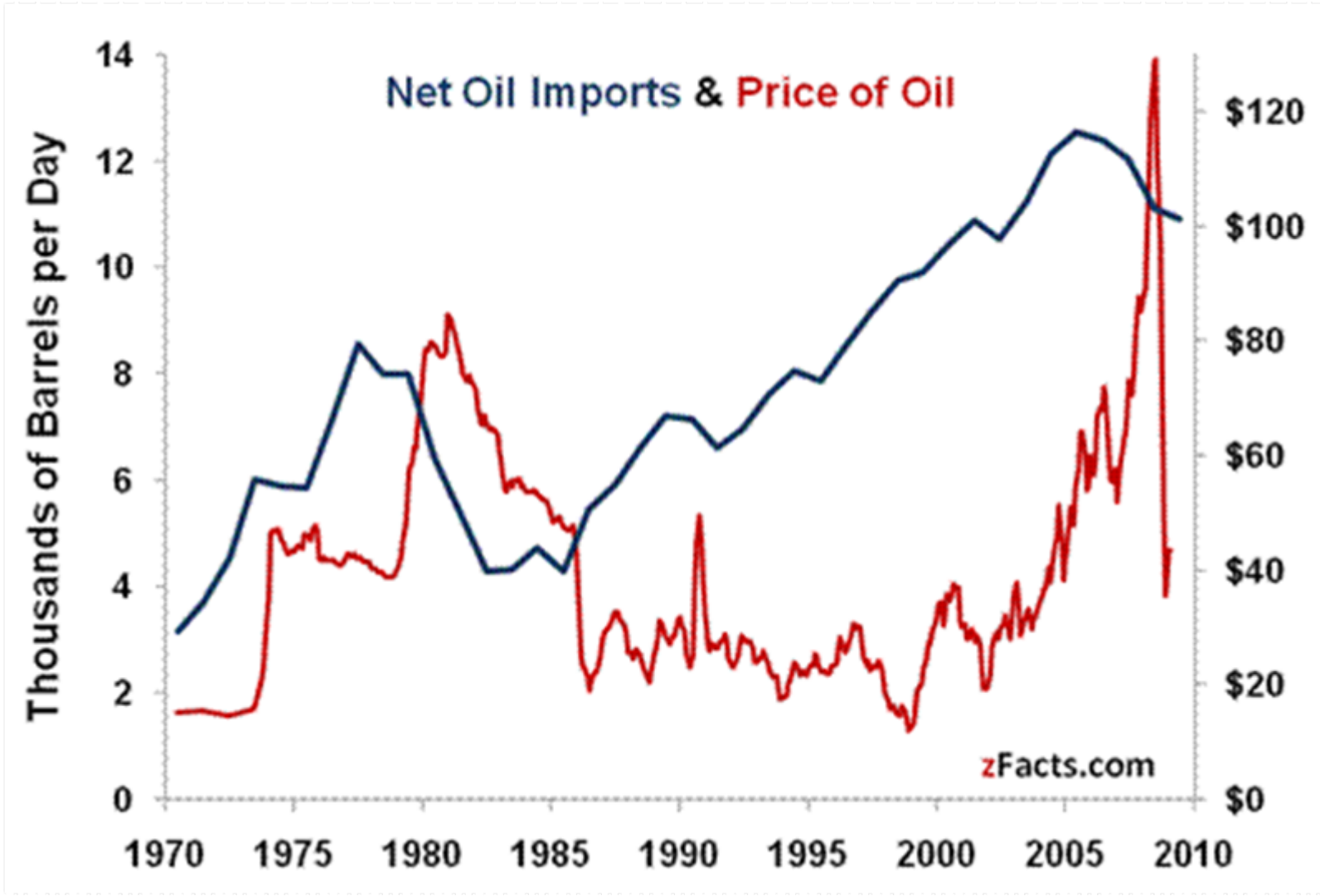
## Supply Security - Dependence on Questionable Partners

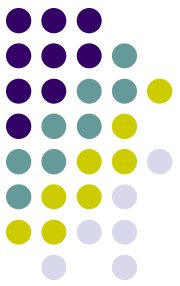
- the largest suppliers in 2008 were Canada, Saudi Arabia, Venezuela, Nigeria, Mexico, Iraq and Algeria
- all are OPEC members except for Canada and Mexico and some are unstable or unfriendly states

## Economic - Volatility of Gasoline and Oil Prices



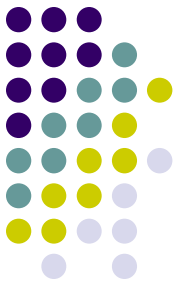
- yearly average oil prices per barrel
  - 1973: ~ US\$ 18
  - 1981: ~ US\$ 80
  - 1990: ~ US\$ 32
  - 1994: ~ US\$ 20
  - 2001: ~ US\$ 35
  - 2006: ~ US\$ 63 decrease to ~ US\$ 55
  - 2008: ~ US\$ 50 increase to ~ US\$ 80
  - 2009: ~ US\$ 130 decrease to ~ US\$ 35





- yearly average gas prices
  - 1973: OPEC oil embargo: ~ US\$ 1.80
  - 1981: Iraq-Iran war: ~ US\$ 3.31
  - 1990: Iraq invasion Of Kuwait: ~ US\$ 1.70
  - 1994: ~ US\$ 1.50
  - 2001: ~ US\$ 2.10
  - 2006: ~ US\$ 3.40
  - 2008: ~ US\$ 3.10
  - April 2009: ~ US\$ 2.57

## Climate Change

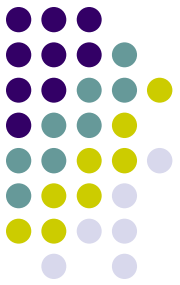


- main contributors to greenhouse gas (GHG) emissions: 32.4% electricity and heat generation; 21.6% road transport; 12.4% industry; 11.7% other fuel combustion; 6.2% agriculture; 3.3% air; 2.3% rail, ship and other transport
- reducing fuel demand through more efficiency will reduce both import dependence and lower CO2 emissions

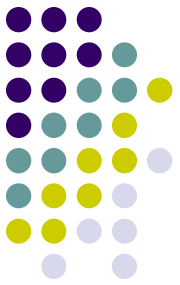
# Effects of Climate Change on the US Economy



- West
  - snowpack decline with earlier snowmelt leads to water shortages with an economy-wide loss of US\$ 6 billion
  - diminished value of farmland by 36%
  - decline in dairy cow productivity
  - decrease in timber yields
  - 50% increase in forest fires by 2020



- Midwest
  - drought-like conditions increase evaporation and contribute to decreases in soil moisture and reductions in lake and river levels
  - shipping connectivity could drop by 25%, with a necessity of more dredging
  - loss of timber species
  - potential losses of US\$ 5.6 billion in the dairy industry

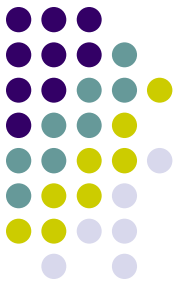


- Southeast
  - increasing natural disasters -- 29 of America's 58 natural disasters (hurricanes, floods, heat waves, droughts) – took place in the Southeast.
- Northeast and Mid-Atlantic
  - changes in water quality and temperature negatively affect the \$63 billion ocean economy sector

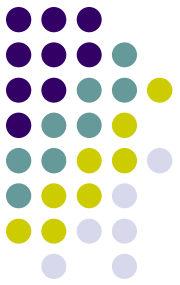
# The Responses Previous Administration



- for every dollar Washington allocated to climate change in the FY 2008 budget, \$88 was allocated for defense
- for every dollar spent on researching climate-related technologies, \$20 was spent on developing new defense systems
- lack of good cooperation between the Administration and Congress and between the federal government and the states on GHG
- absence of a clear link at the federal policy level between energy, environmental and security policies



- view that absolute emissions reduction is incompatible with continued economic growth
- refusal to place a value on CO2 emissions through a trading system or CO2 tax
- insufficient interaction between R&D community, Department of Energy and other parts of the Administration, when new programs are developed
- congressional earmarks reduced freedom of program managers to spend the money where most appropriate
- lack of incentives for energy-efficient behavior and decision-making



- market and regulatory obstacles that discouraged investment in new technologies
- distorted prices through lack of internalization of the CO2 emission costs (low taxes), and continued subsidies for fossil fuels
- lack of support for public transportation
- lack of international cooperation

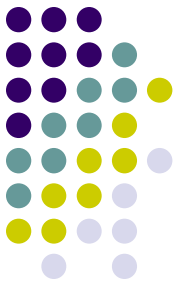
# Obama Administration Proposals



- \$49.7 billion: loans and investments into green energy technology
- \$11 billion: electric smart grid
- \$6.3 billion: state and local governments to make investments in energy efficiency
- \$5 billion: weatherizing modest-income homes
- \$3.4 billion: carbon-capture experiments
- \$2.5 billion: energy efficiency research
- \$2 billion: advanced car battery systems and components



- With White House backing, the Environmental Protection Agency (EPA) declared on April 17, 2009 that carbon dioxide and other greenhouse gases are a significant threat to human health and, thus, will be listed as pollutants under the Clean Air Act, a policy that the Bush administration rejected

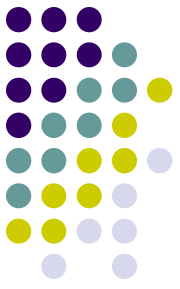


# The States

- 29 states have completed comprehensive Climate Action Plans
- half of all the states and the District of Columbia require that electric utilities generate specified amounts of electricity from renewable energy sources
- 17 states have greenhouse gas emissions reductions targets

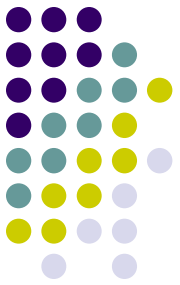
# Consumers

## Vehicle Transportation

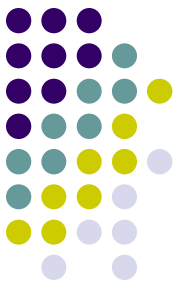


2008 (*at prices near \$4 a gallon*)

- cost to fuel a single vehicle for the American median household rose to 3.8% of income, compared to 1.9% in 2002
- Americans drove less for the first time in three decades
- Americans cut back on other household spending, bought more fuel-efficient cars and consolidated their daily errands to save fuel



- half of households with incomes below \$20,000 faced hardships
- three quarters of households making \$75,000 changed how they use their cars
- 8 in 10 Americans used their most fuel-efficient car whenever possible
- three quarters hunted for the cheapest gas available
- three quarters turned off air-conditioning or drove slower to improve mileage



# Best Case Scenario

- the world economy recovers, leading to a moderate rise in oil prices
- Obama's incentives and the valuation of carbon emissions lead to rapid development of alternative energy sources and energy conservation
- the oil price level remains high enough that alternatives are competitive and that consumers permanently change habits
- oil imports drop to a level securely available from stable sources
- improved energy security leads to a lower defense budget, with resources put to more constructive use