

Southern States Energy Board

Implementing A
National Initiative for
American Energy Security,
Freedom, and Independence



Presented to
Gasification Technologies Council
Workshop on Gasification Technologies
Indianapolis, Indiana
June 13, 2007



Kenneth J. Nemeth
Executive Director & Secretary to the Board

Background

- ◆ Established 1960, expanded in 1978
- ◆ Mission: "Through innovations in energy and environmental programs and technologies, the Southern States Energy Board enhances economic development and the quality of life in the South."
- ◆ 16 U.S. States and Two Territories
- ◆ Each jurisdiction represented by the governor, a legislator from the House and Senate and a governor's alternate
- ◆ Federal Representative Appointed by U.S. President



Background

- ◆ Study unanimously approved by the Board on August 29, 2005
- ◆ Partnership of experts assembled and approach defined
- ◆ Research and outreach conducted
 - ◆ Executive Panel: SSEB, DOE, DOD, State of Kentucky, Peabody Energy and other organizations
 - ◆ Major Contractors: A.J. Mayer International, MISI, Mitretek, General Bioenergy, Inc., Augusta Systems, Inc. and others
- ◆ Results
 - ◆ Statistics and scenarios
 - ◆ Recommendations



The Study's Focus

- ◆ Oil market analysis and forecasts
- ◆ U.S. resource assessment of biomass, coal, oil shale and CO₂ enhanced oil recovery (EOR)
- ◆ Technology assessments and cost estimates for biomass, coal and oil shale-to-liquid fuel production plants and CO₂ EOR
- ◆ Forecasts and analysis of the U.S. economy
- ◆ Environmental challenges and benefits
- ◆ Policy recommendations to stimulate growth of the alternative liquid fuels



Impacts on Variables of Interest

- ◆ GDP, inflation and interest rates
- ◆ Oil imports
- ◆ Price and price volatility of liquid fuels
- ◆ Federal, state and local government revenues
- ◆ Federal budget deficit
- ◆ U.S. trade deficit (\$763.6 Billion in 2006)
- ◆ Industry sales and profits
- ◆ Employment created (industries and occupations)
- ◆ Capital formation and requirements
- ◆ Export opportunities
- ◆ Personal income





No, we're facing a liquid fuels crisis.



american energy security study



Serious Oil Risks to America

- ✦ Excessive dependence on imported oil from OPEC and others.
- ✦ World oil supply is not keeping up with demand.
- ✦ Increased global competition from China, India and others.
- ✦ Supply disruptions by natural disasters or terrorism.
- ✦ Environmental consequences.



American's Oil Consumption 22 Million Barrels a Day

<u>Use by Sector</u>	<u>Percent of Total*</u>
Transportation fuels	67 %
Industrial	25 %
Residential	4 %
Commercial	2 %
Electricity generation	2 %

* Approximate.



AES Response to Serious Oil Risks

- ◆ AES plan provides national security through consistent, domestic supplies
- ◆ AES plan allows us to make our own fuels and control our own destiny (stable fuel prices)
- ◆ AES plan employs existing and rapidly emerging technologies, creating fuels that have a long shelf life, compared to gasoline, and are environmentally sound

**Bold American
Leadership
Required**

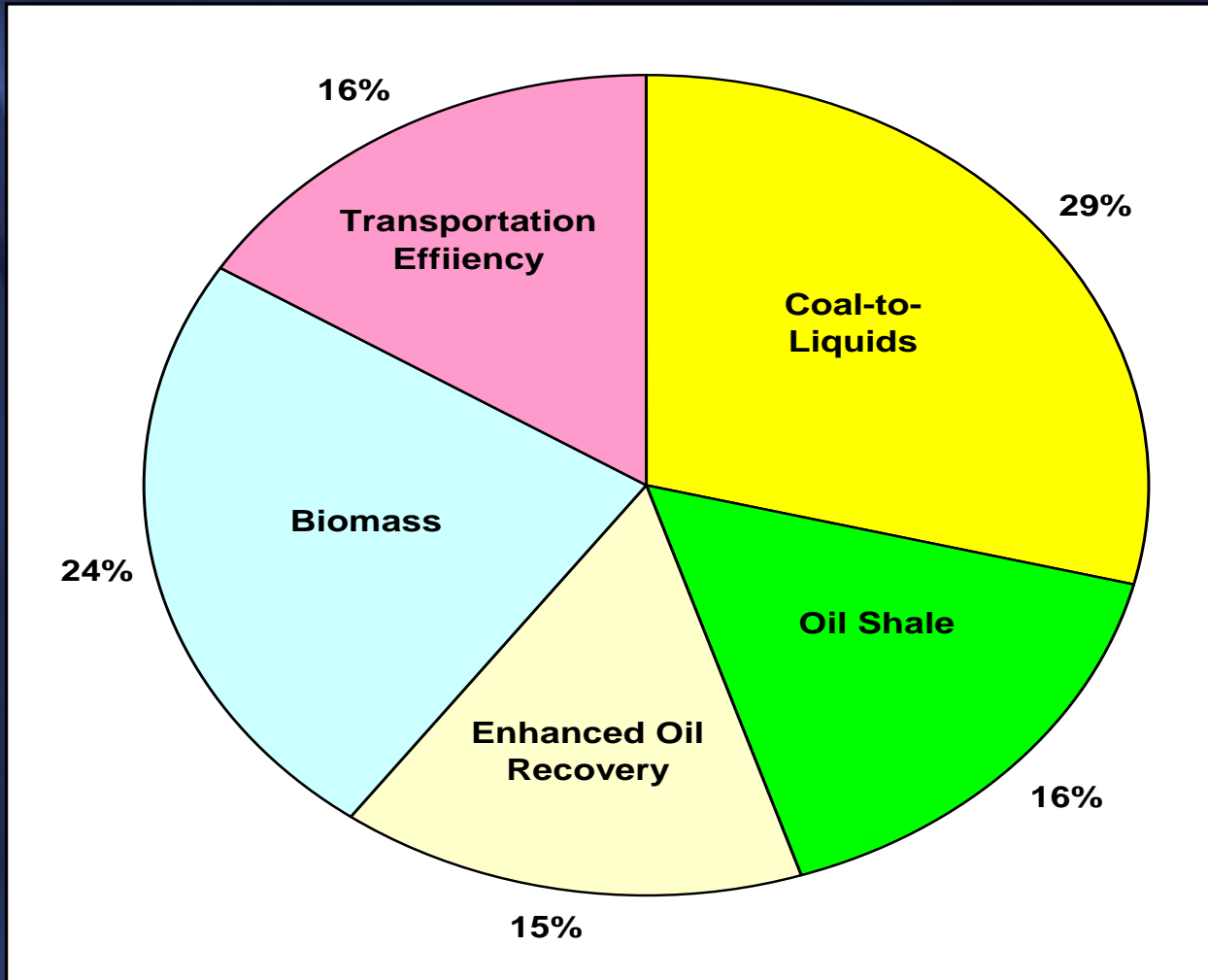


U.S. Dependence on Imported Oil – The Burden

- ◆ Military expenditures tied to defending Persian Gulf oil (\$70 billion)
- ◆ Lost employment/investment from diversion of financial resources (\$160 billion)
- ◆ Cost of periodic “oil shocks” (\$85 billion)
- ◆ Erosion of U.S. industrial base (830,000 jobs lost)
- ◆ 2006 U.S. Trade Deficit (\$763 billion)



Estimated Contributions of Each Resource to Eliminate U.S. Oil Imports in 2030



Source: Southern States Energy Board and Management Information Services, Inc., 2006.



Estimates of U.S. CTL Potential

- ◆ SSEB Study (July 2006)
 - ◆ 5.6 MMBPD by 2030
- ◆ USDOE/NETL Study (July 2006)
 - ◆ 5.1 MMBPD by 2027
- ◆ U.S. National Coal Council Study (March 2006)
 - ◆ 2.6 MMBPD by 2025
- ◆ USDOE Unconventional Fuels Task Force (November 2006)
 - ◆ 2.5 MMBPD by 2035

Bottom line: All studies indicate huge potential for CTL in the USA.



“Peaking” World Oil Production

2010 – with NO alternative fuels production programs, U.S. economy will lose (2010-2020):

- \$4.6 trillion in GDP
- 40 million job years of employment

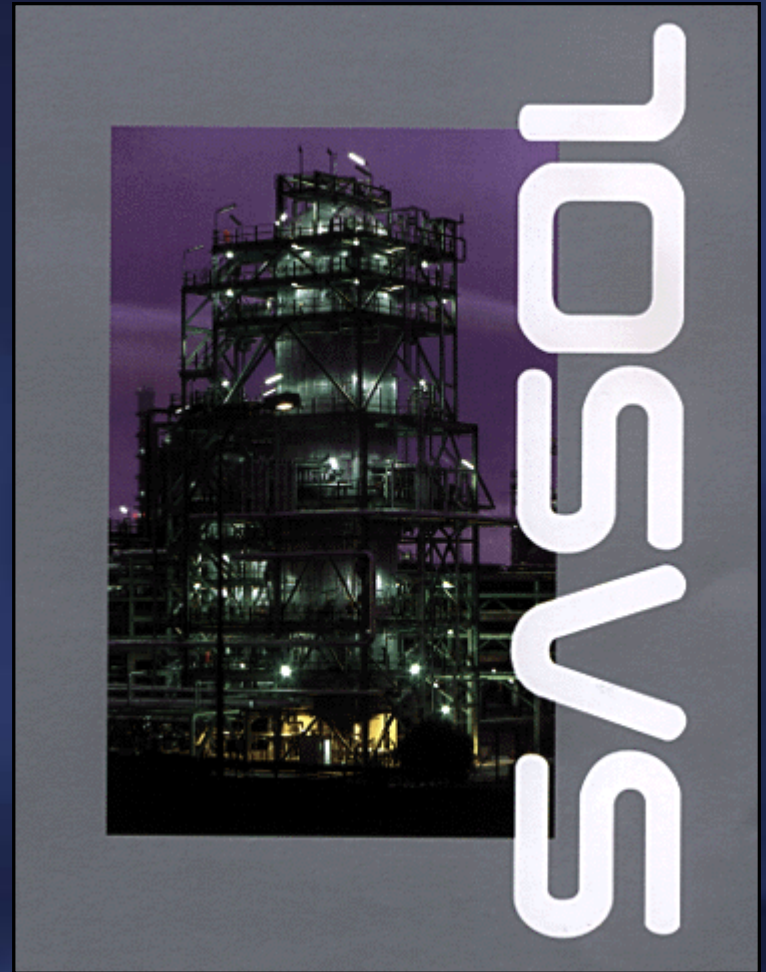
2020 – with NO alternative fuels production programs, U.S. economy will lose (2020-2030):

- \$13 trillion in GDP
- 100 million job years of employment
- \$4 trillion in federal, state and local tax revenues



Proven Technologies Are Available Today

- ◆ Commercial Coal-to-liquid fuels
- ◆ Biomass derived liquids (commercial and rapidly emerging)
- ◆ CO₂, EOR , ECBM, EGR and sequestration (commercial and rapidly emerging)
- ◆ Oil shale: surface retorting/in situ processing (rapidly emerging)



Economic Benefits from New Industry Investments

- ◆ **New investments and expenditures of nearly \$200 billion**
- ◆ **One-third of a trillion dollars in increased industry sales**
- ◆ **More than 1.4 million new jobs; \$14 billion in profits**
- ◆ **Federal/state/local government tax revenues increase \$100 billion**
- ◆ **A reduction of over \$600 billion in the U.S. trade deficit**



Federal Fiscal, Tax, Legislative and Regulatory Recommendations

- ◆ **Implement policies through federal legislation**
 - ◆ S 155: The Coal-to-Liquid Fuel Promotion Act of 2007
 - ◆ Bunning/Obama/Lugar/Burns/Pryor/Murkowski/Bond/Martinez/Thomas
 - ◆ HR 370: The Coal-to-Liquid Fuel Promotion Act of 2007
 - ◆ Davis/Rahall
 - ◆ Encouraging amendment language to Chapter 141 of title 10, United States Code, which gives the Armed Services long-term procurement authority for unconventional liquid transportation fuels.
 - ◆ Davis



Federal Fiscal, Tax, Legislative and Regulatory Recommendations *(continued)*

- ◆ Extend the \$.50 per gallon Alternative Liquid Fuels Excise Tax Credit
- ◆ Provide accelerated cost recovery to alternative fuel plant owners
- ◆ Incentivize refining of alternative liquid fuels
- ◆ Provide explicit DOE authority and appropriations for loan guarantees
- ◆ Fund the Military Alternative Fuels Testing and Development Program
- ◆ Authorize and fund military purchases of alternative fuels under long-term contract



Federal Fiscal, Tax, Legislative and Regulatory Recommendations *(continued)*

- ◆ Eliminate the \$10 million cap for tax exempt Industrial Development Bonds
- ◆ Provide regulatory streamlining for the production of alternative liquid fuels and for mine permitting
- ◆ Establish a self-sustaining government corporation to provide market risk insurance
- ◆ Expand the Strategic Petroleum Reserve (SPR) program to include alternative liquid fuels products
- ◆ Provide incentives for existing ethanol plants to convert to coal
- ◆ Provide incentives for enhanced oil recovery (EOR), enhanced gas recovery (EGR) and enhanced coalbed methane recovery using CO₂ captured from alternative fuel plants



State Fiscal, Tax, Legislative and Regulatory Recommendations

- ◆ **Authorize and fund multi-year state and local government purchases of alternative transportation fuels under long-term contract:**
 - ◆ Arrange for transportation fuel and electricity purchasing under multi-year contracts of at least 10 years
 - ◆ Arrange for state and local contractors to purchase fuel
 - ◆ Secure transportation fuels under multi-year contracts for first responders for use in case of emergency



State Fiscal, Tax, Legislative and Regulatory Recommendations *(continued)*

- ◆ Provide state loans or grants on matching basis with private industry to assist with preliminary engineering and site qualification
- ◆ Provide for tax incentives
- ◆ Incentivize the use of CO₂ for carbon capture and storage
- ◆ Provide regulatory streamlining and central state agency coordination of the permitting process for the production of alternative liquid fuels
- ◆ Involve state research and development enterprises



The SSEB American Energy Security Summit

April 16-18, 2007 in Alexandria, Virginia

- ◆ Governor Joe Manchin, West Virginia
- ◆ Governor Brian Schweitzer, Montana
- ◆ Governor Jim Gibbons, Nevada
- ◆ Governor Ted Strickland, Ohio
- ◆ Governor Jon Huntsman, Utah
- ◆ Governor Dave Freudenthal, Wyoming
- ◆ U.S. Senator Jim Bunning, Kentucky
- ◆ U.S. Congressman Nick Rahall, West Virginia
- ◆ U.S. Congressman John Duncan, Tennessee
- ◆ Assistant Secretary William C. Anderson, United States Air Force, Air Force Installations, Environment and Logistics
- ◆ House Majority Leader Rocky Adkins, Kentucky House of Representatives
- ◆ Fred Smith, CEO, FedEx Corporation
- ◆ Greg Boyce, CEO, Peabody Energy
- ◆ Mike Morris, CEO, American Electric Power
- ◆ Paul Evanson, CEO, Allegheny Energy, Inc.
- ◆ J. Brett Harvey, CEO, CONSOL Energy
- ◆ Hunt Ramsbottom, CEO of Rentech, Inc.
- ◆ And many other distinguished speakers...



american energy security study



Zogby Poll

- Telephone Survey
- Conducted April 9-11, 2007
- 1000 likely voters nationwide
- Margin of error: +/- 3.2%



american energy security study

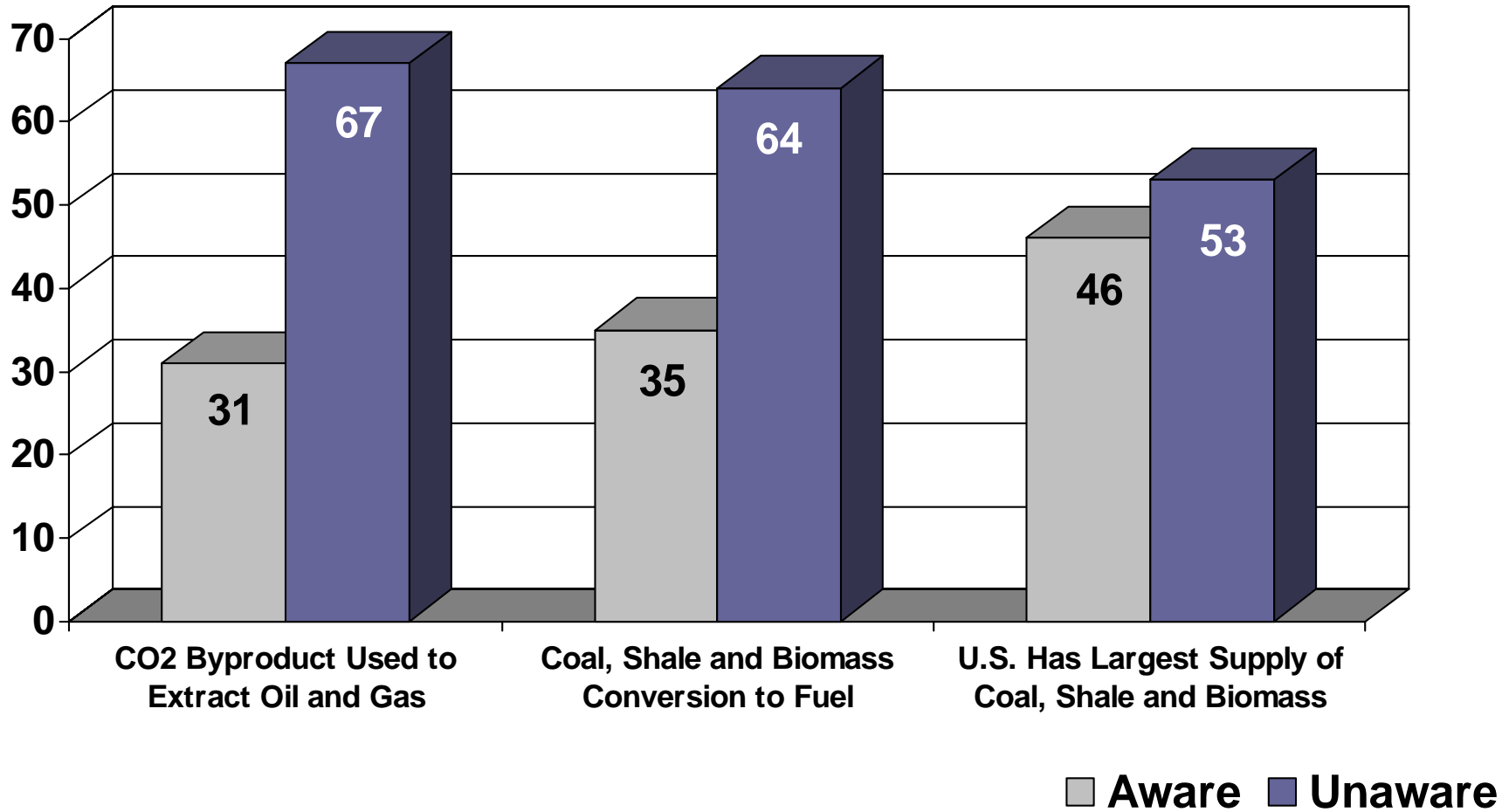


Zogby Poll: Interpretation of Data

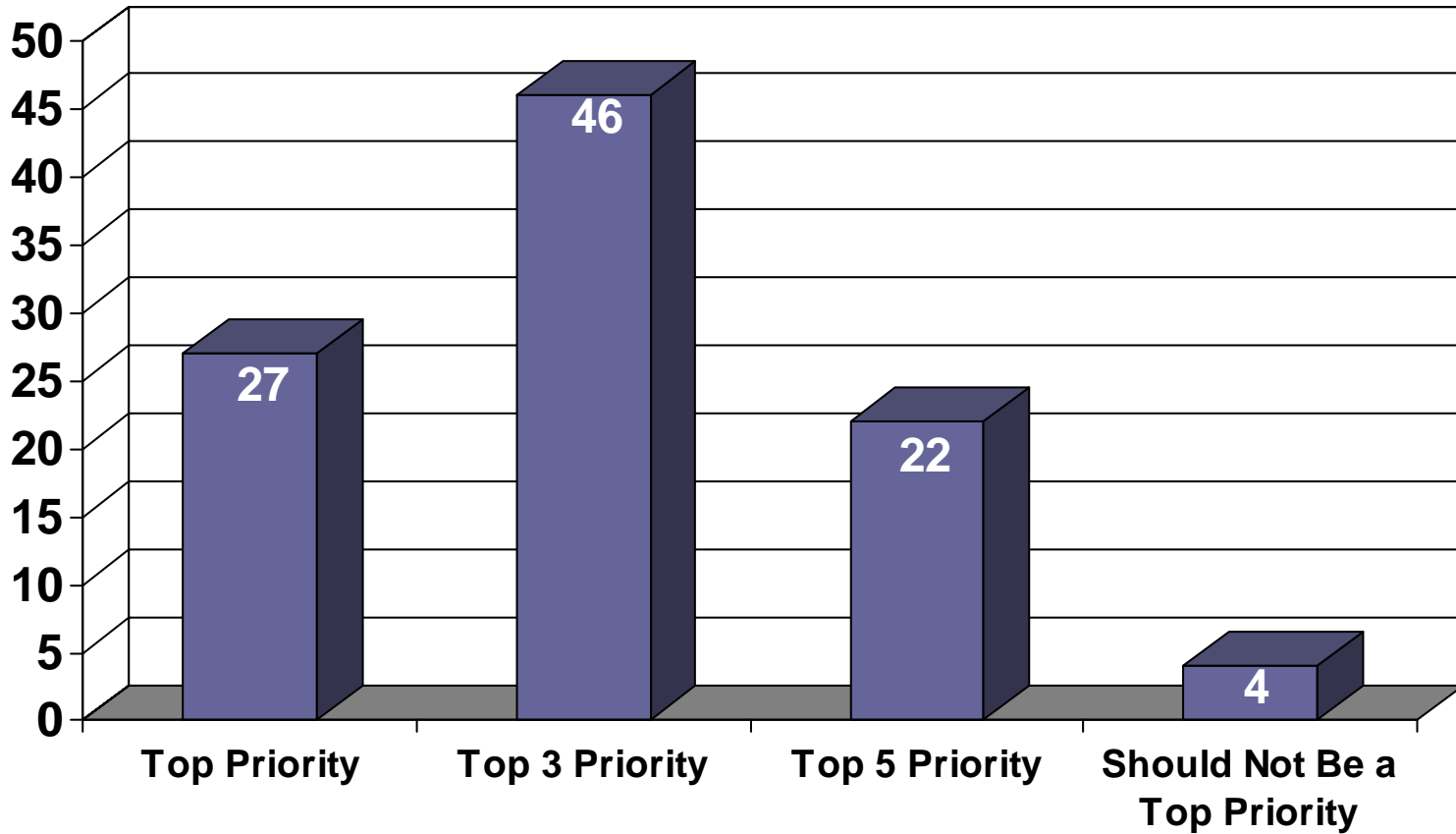
- ◆ Americans are clearly aware of U.S. dependence on foreign sources of non-renewable energy
- ◆ Americans believe federal and state governments need aggressive approaches to alternative energy development
 - ◆ There is also support for government subsidies
- ◆ **Alternative energy development is already an issue in the 2008 campaign**
 - ◆ This issue has broad appeal



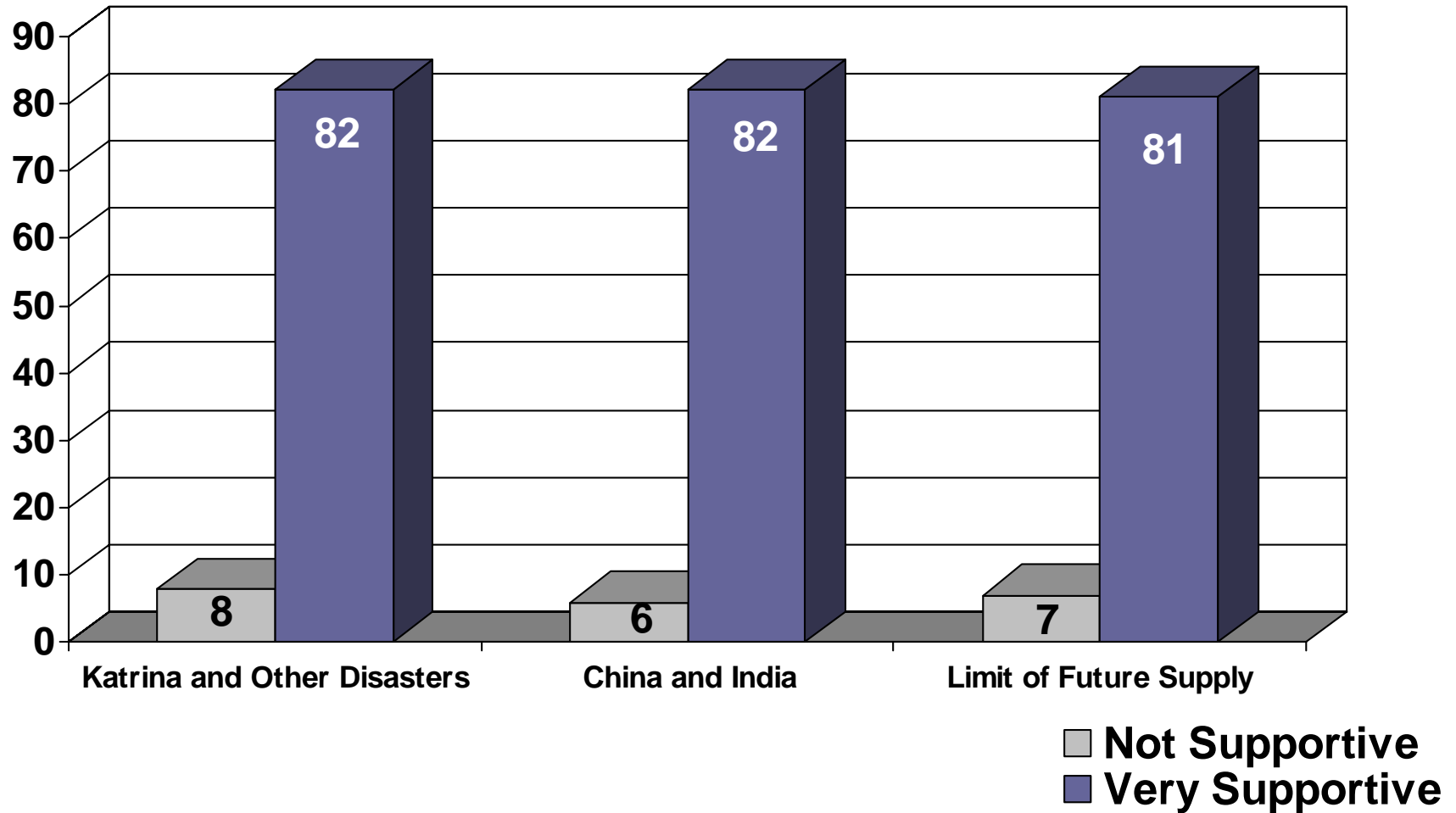
Awareness of Energy Issues



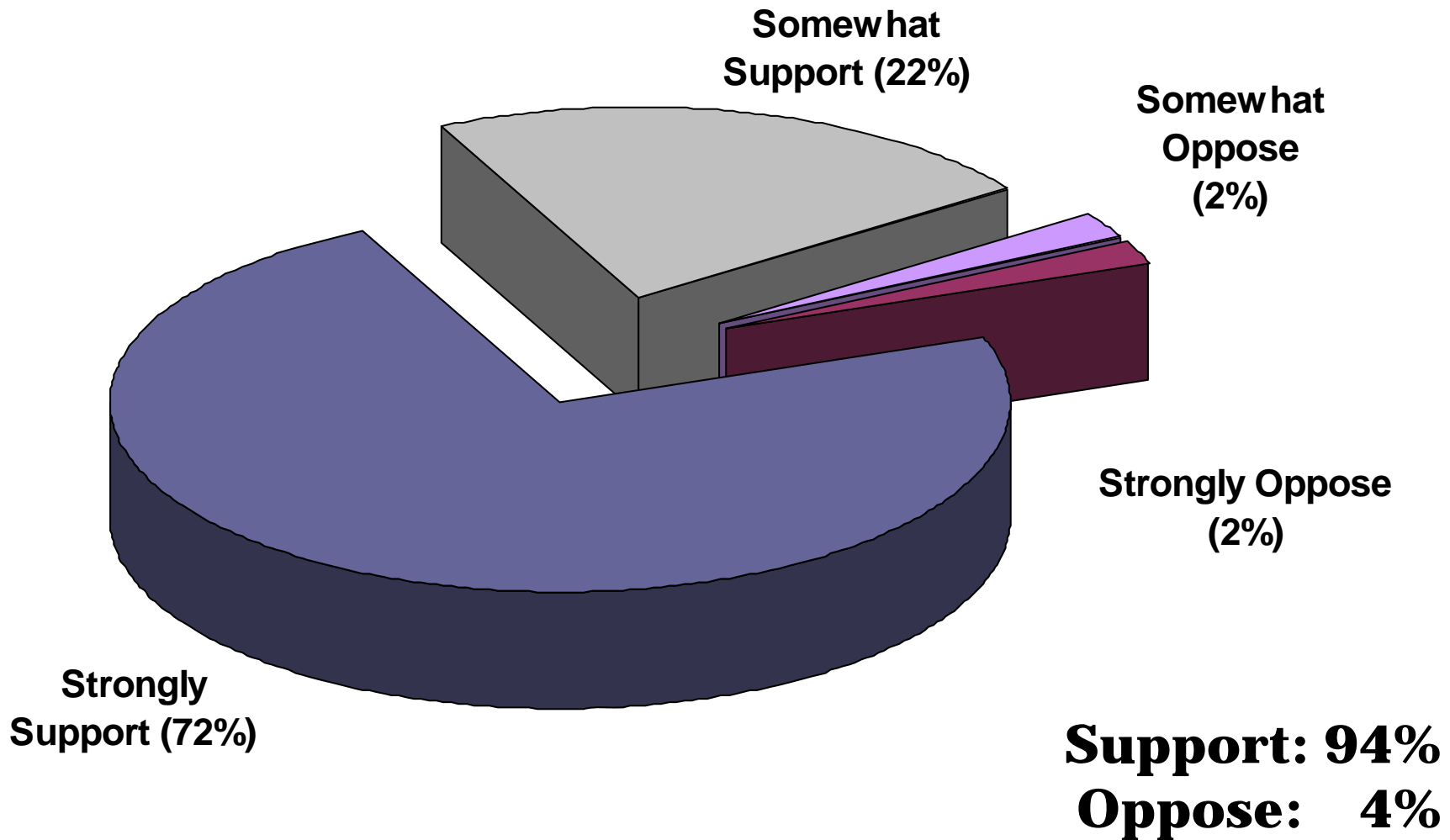
Importance of Reducing and Eliminating Dependence on Foreign Oil



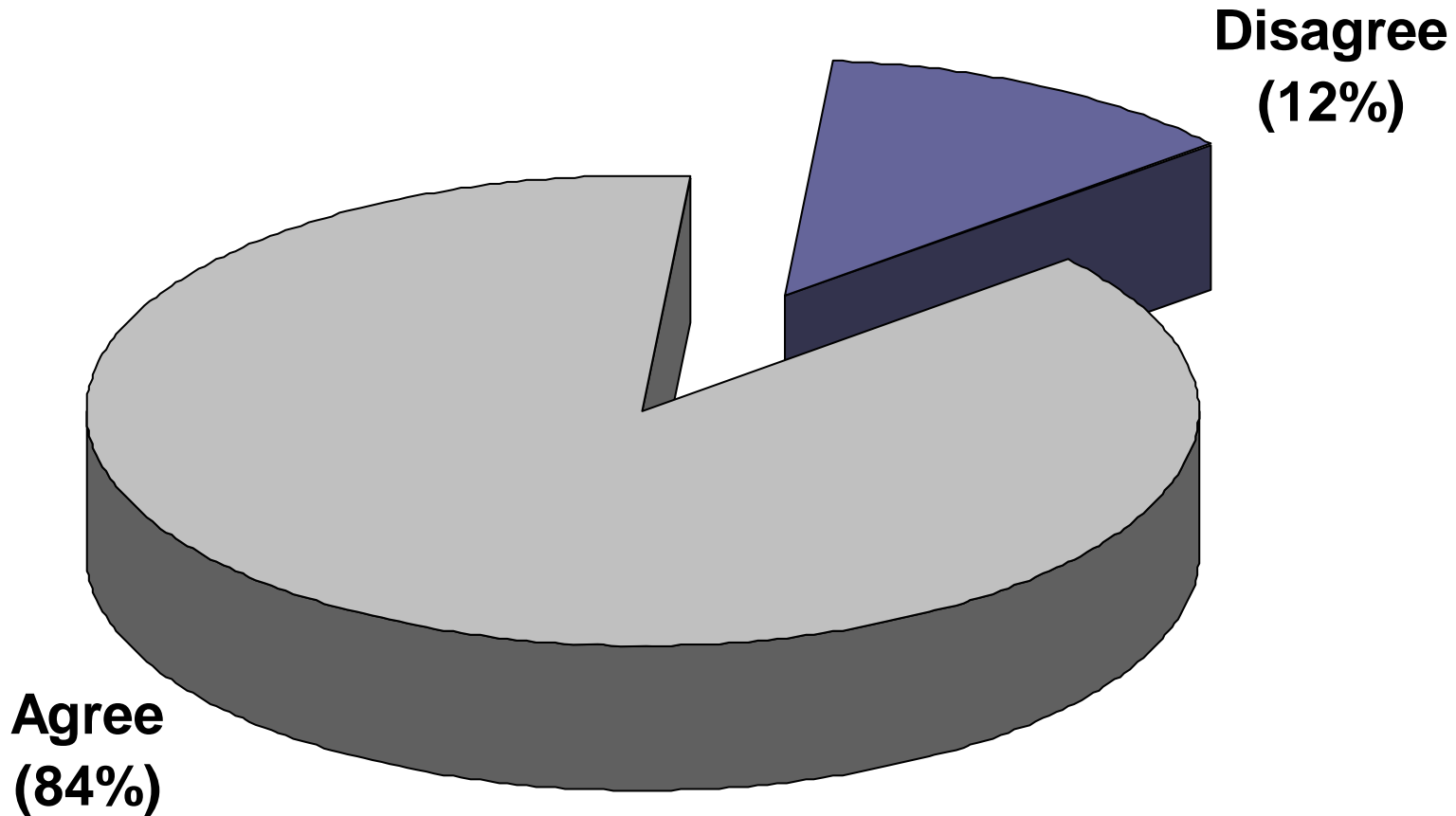
Support--Energy Independence as Top Priority Considering



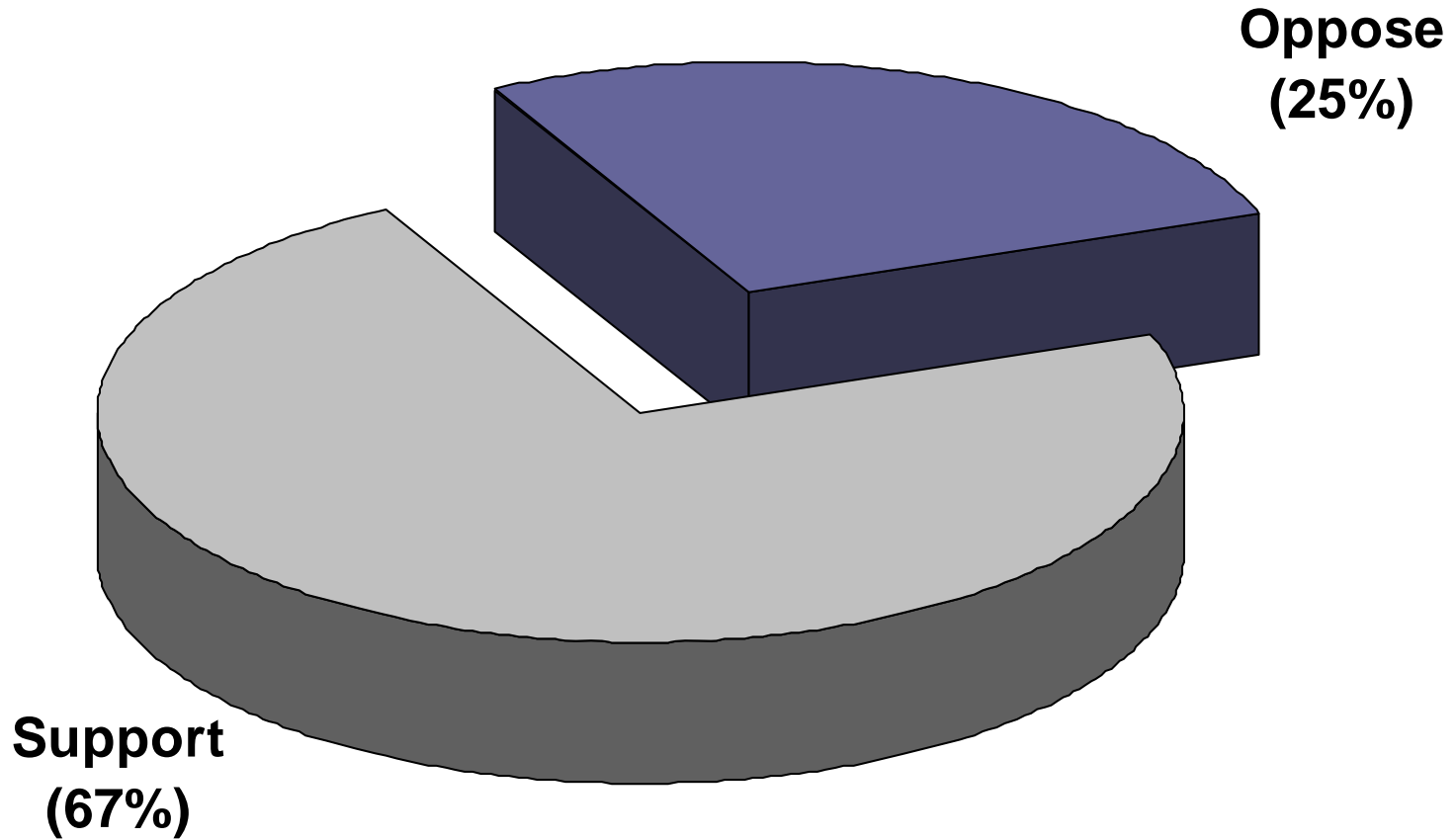
Support for Rapidly Expanding Production of Alternative Fuels



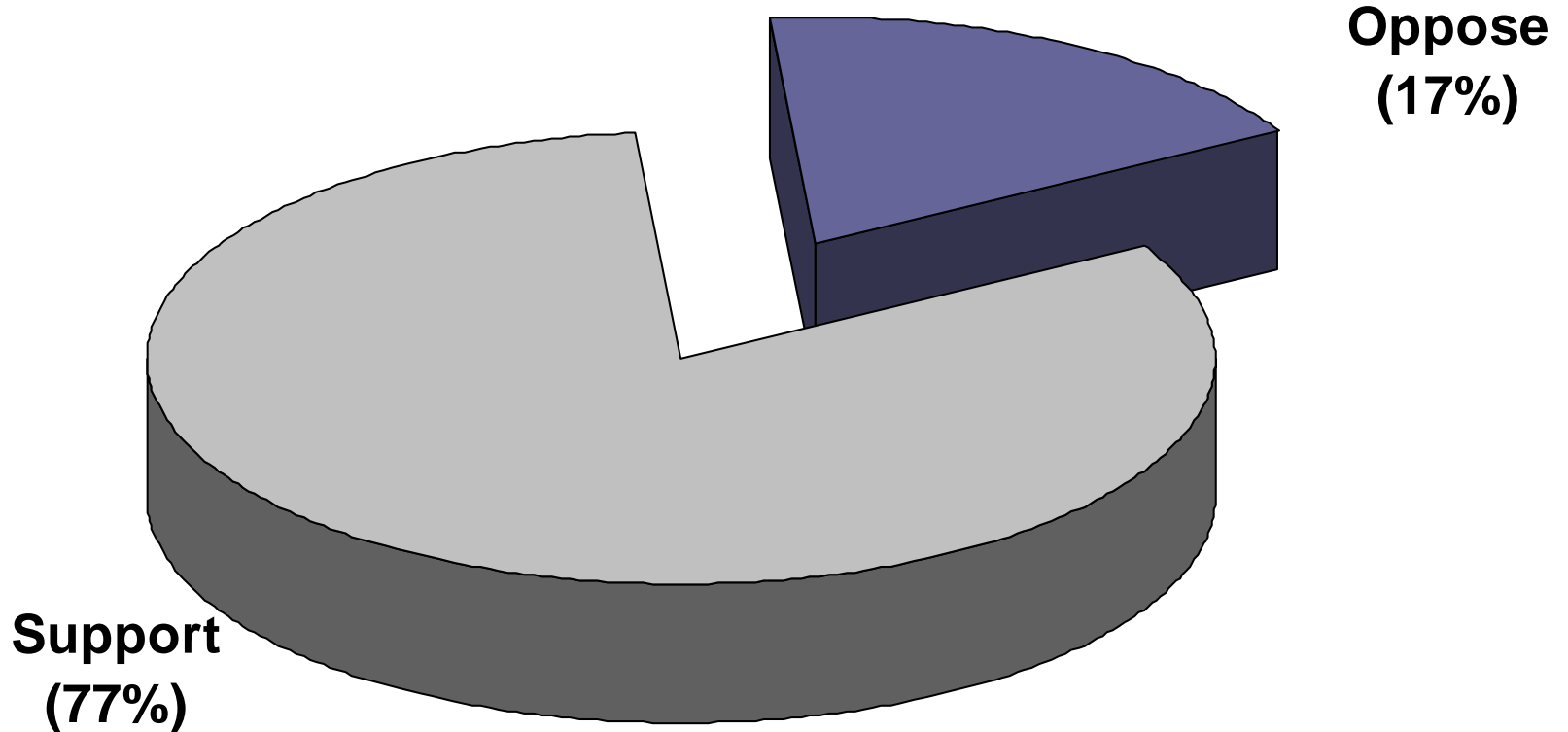
The Government Should Act to Ensure U.S. Has Domestic Fuel Production Alternatives



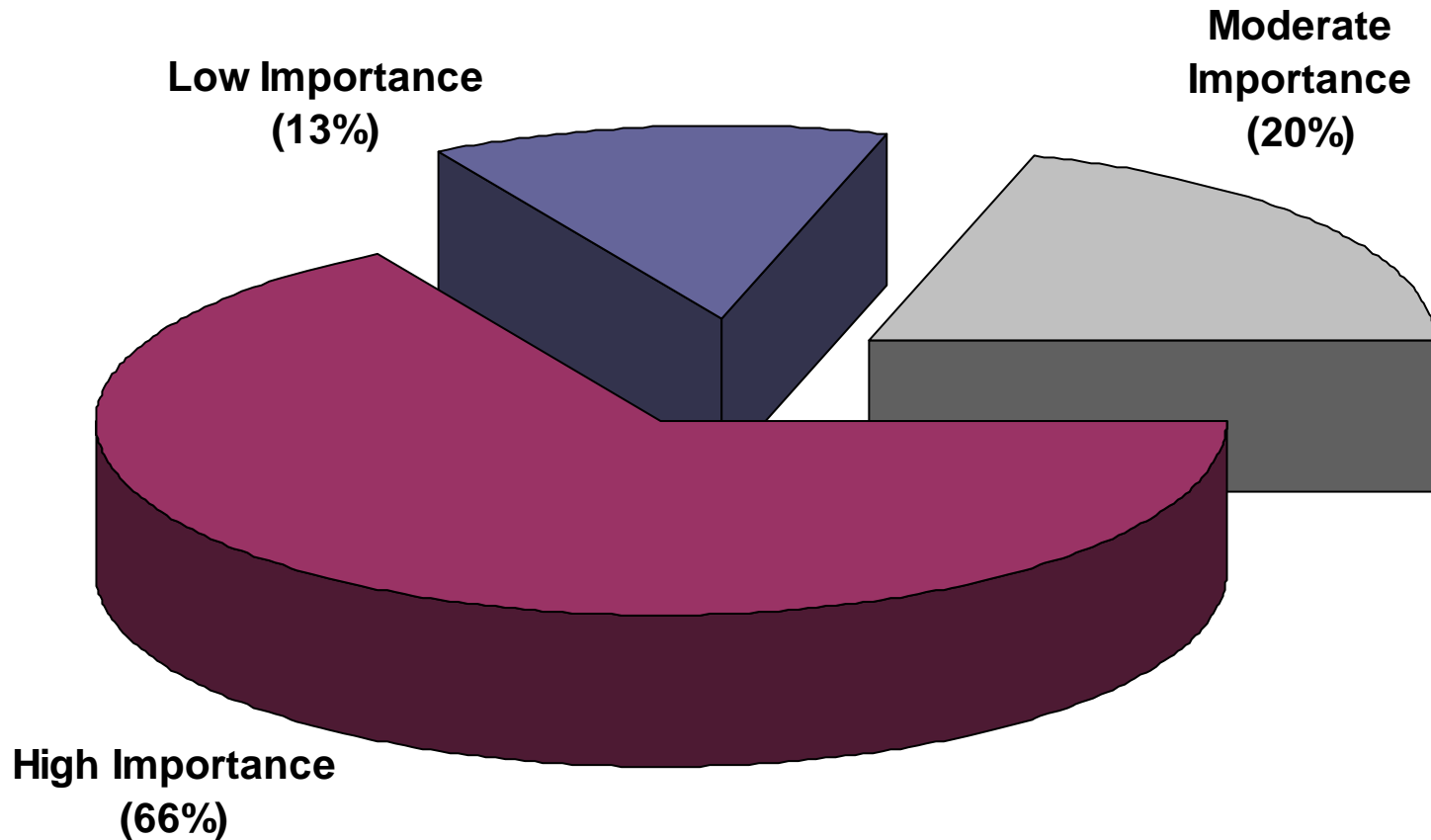
Support for Domestic Alternative Price Support Mechanism



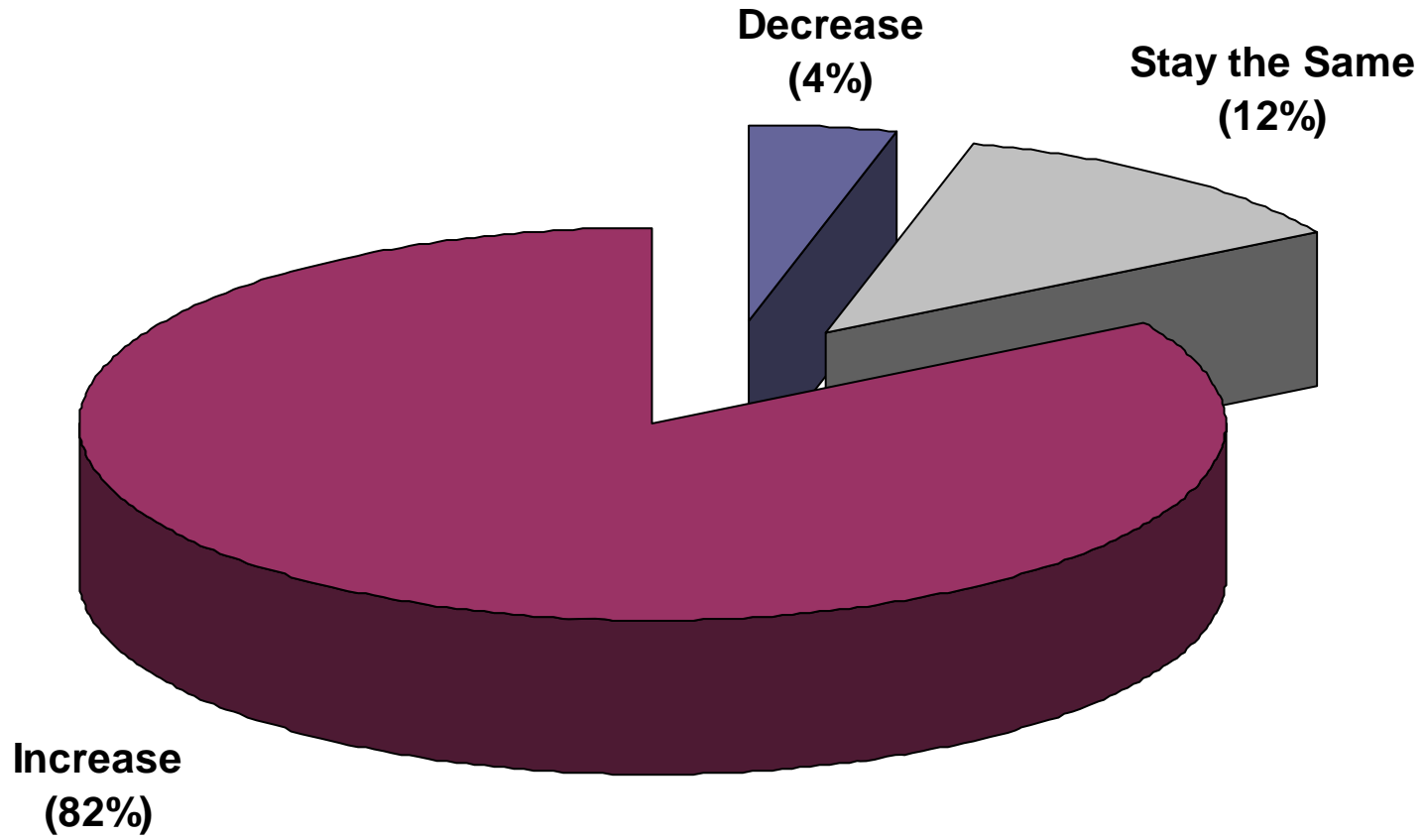
Support for Government Program to Authorize Long-Term Government Fuel Contracts



Importance of 2008 Election on U.S. Dependence on Foreign Oil



Price of Gas Over Next 5 Years



The Bright Future of Energy Security and Independence

- Protecting Against Peak Oil.
- Assuring Oil Supplies.
- Lowering Oil Prices.
- Hedging Against “Stagflation” and Depression.
- Expanding Oil Reserves.
- Increasing gross domestic product (GDP).
- Improving Balance of Payments.
- Increasing Employment.
- Favorable Fuel Qualities.
- Reducing Greenhouse Gas Emissions.
- Establishing Hydrogen Production Facilities.
- Increased State and Local Tax Revenues.
- Increased Federal Revenues.
- Development of Technologies for Export.
- Greater Supply Diversity.
- Eliminating Oil as a Weapon.
- Eliminating Oil As a Weighty Consideration in Foreign Affairs.
- Eliminate Funding Sources (Oil Exports) For Terrorism.
- Reducing the Chance of Military Conflict Over Oil Supplies.
- Providing Reliable Sources of High-quality Military Fuels.
- Reducing Military Expenditures and Over-commitment.
- Saving Vital Industries.
- Creating an Industrial and Technological Boom.



What is next?

AES Implementation Phase: Principal Elements

- ◆ Federal Legislation Shaping and Implementation
- ◆ State Legislation and Incentives Assessment, Shaping, Model Legislation Development, and Implementation
- ◆ Oil Price Insurance Corporation Shaping, Development, and Legislative Implementation
- ◆ Expanded Environmental Analysis of the AES Plan
- ◆ Coal-to-Liquids (CTL) Plant Financing Analysis and Strategy Development
- ◆ Expanded Coal/Biomass Gasification/FT Analysis
- ◆ Financial Community Outreach, Education, and Briefings
- ◆ National AES Education Program Implemented Through Media Outreach
- ◆ National Educational Research Survey on Liquid Fuels Import Dependence
- ◆ Educational American Energy Security Documentary Film or Film Series Produced and Aired
- ◆ Development of Targeted Contact Databases
- ◆ Website Content Development and Outreach



Presented by:

Kenneth J. Nemeth

Southern States Energy Board

nemeth@sseb.org

www.americanenergysecurity.org

