AASG

Association of American State Geologists

ENERGY

AASG

The Association of American State Geologists (AASG) represents the State Geologists of the 50 United States and Puerto Rico. Founded in 1908, AASG seeks to advance the science and practical application of geology and related earth sciences in the United States and its territories, commonwealths, and possessions.

AASG and Energy

AASG represents all 50 states and, thus, our positions on energy are broad and inclusive. AASG maintains that all forms of energy are necessary to provide adequate resources to secure America's future. AASG believes strongly in energy efficiency, environmental stewardship, and conservation of critical resources, particularly those that are not renewable, such as fossil energy resources (oil, gas, and coal).

Photo by Scott W. Tinker, Bureau of Economic Geology, The University of Texas at Austin.

AASG recognizes that approximately 85% of all energy consumed in the U.S. today comes from fossil fuels and that we now import nearly 60% of the oil and almost 11% of the natural gas consumed by the nation. Our energy future will involve a slow transition away from oil and coal, increased utilization of natural gas, and eventual movement to other fuel sources. This transition will take many decades, especially in the face of increasing global energy demand.

AASG strongly encourages the reinstitution of Federal oil and gas initiatives to support university research designed to prolong the life of existing domestic fossil energy resources—including enhanced oil recovery, further development of conventional and unconventional natural gas resources, and clean coal technology—and allow a smooth transition in coming decades to a sustainable energy future. AASG supports Federal-State-private-university partnerships for research and development of energy resources and holds that Federal energy budgets should support activities that serve to enhance domestic energy production from all sources.

Photo by Scott W. Tinker, Bureau of Economic Geology, The University of Texas at Austin.

AASG supports continued development of a comprehensive energy strategy for the United States. In that AASG has representatives from all 50 states, we recognize, perhaps as well as any organization, the challenges of reaching a consensus on our energy future. In that adequate energy supply is among the greatest challenges facing humanity today, compromise should be embraced, and a comprehensive national plan should move forward. America can no longer afford to allow partisan politics to prevent the development of a comprehensive national energy strategy that promotes national security, while facilitating economic prosperity. The consequences of inaction are simply too great.

AASG Energy Positions

Oil and Technology Application

Availability of near-term oil resources will be determined by economics, efficiency, and technology, rather than resource limits. On average, only 35% of discovered in-place resources of oil are being recovered. Future production will rely heavily on development and application of technology. Although the oil industry is mature, technology developed and used in the industry is some of the most advanced in the world. Small and midsized independent producers, which account for a significant proportion of domestic onshore activity, can benefit greatly by applying advanced technology developed by major energy companies, service companies, and universities. Federal support should focus on implementing technologies supporting the independent oil producer through demonstration and implementation projects, consortia, and organizations such as the successful Petroleum Technology Transfer Council (PTTC).

AASG Energy Positions (continued)

Natural Gas Supply

AASG supports increasing use of natural gas in the total energy portfolio and recognizes that a progressively greater proportion of natural gas production is from unconventional sources such as coalbed natural gas, shale natural gas, and "tight" gas. In fact, recent developments have demonstrated significant domestic unconventional natural gas reserves that far exceed expectations of just a few years ago. The trend toward natural gas will benefit the environment by reducing emissions and benefit the economy through enhanced utilization of domestically produced energy resources. Federal positions and policies vital to ensuring adequate future gas supplies include support of an educated workforce, greater access to Federal lands currently off limits, increased natural gas storage capacity, more efficient and competitive fiscal and regulatory regimes, efficient permitting, investment in regional infrastructure and global transportation infrastructure, and rapid technology improvements—especially development of conventional reservoirs and conventional deepwater and frontier resources. AASG recognizes the inherent "above-ground" impacts caused by development of unconventional resources—including noise, light, traffic, land use, water use, and water disposal—and encourages transparency from the oil and gas industry; rigorous, independent, and balanced scientific studies of salient issues; and public education with regard to alternatives to natural gas—namely coal and nuclear—recognizing that no source of energy is without some level of environmental disturbance.

Offshore Leasing and Development

Major U.S. recessions in the past 4 decades can be correlated with spikes in oil prices. Nothing hurts environmental stewardship more than recession because of reduction in tax base and minimization of voluntary action and support by industry and the private sector. Although there are always risks, as so emphatically illustrated by the Deepwater Horizon incident, the industry's overall safety and environmental record in recent decades has been excellent. Further, reforms in regulations, better monitoring for compliance, and technological innovations resulting from "lessons learned" during the spill and aftermath should lead to better and safer offshore operations in the future. AASG supports environmentally sound exploration for and development of fossil fuel resources in appropriate areas of the Outer Continental Shelf and Slope regions of the U.S. Further, we support adequate safeguards to assure that risks associated with offshore exploration and development are minimized. The economy—and the environment—will benefit from prudent development of these domestic natural resources.

Research and Development

Oil and natural gas research programs within DOE's FY2012 budget are targets for elimination, culminating a trend of decreased funding over a number of years. Although we support significant proposed expenditures for other energy sources as necessary and appropriate, AASG strongly advocates for a more balanced approach that acknowledges that oil and natural gas account for more than 60% of U.S. energy demand. Further, there are basic questions and serious issues remaining, such as improving the efficiency and environmental impacts of extraction and sustaining long-term supply. The recent elimination of all Federally supported oil and gas research is disproportionally "long sighted" and will disadvantage U.S. universities and industries for many decades to come. Appropriate Federal investment in oil and gas energy research would foster critical Federal-State-private-university partnerships, as well as serve to help attract young people into energy sciences and engineering. Investment in energy is sometimes labeled "corporate welfare." Federal investment in energy research—just like biomed, high tech, autos, banking, agriculture, or other industries—is not welfare; it is a wise investment that is returned via taxes and royalties at significant multipliers.

Tax Reform and Incentives

The exploration and production business is capital intensive. AASG supports taxation of energy companies at levels commensurate with, but not exceeding, those borne by comparable industries. Incentives for exploration, such as royalty relief for drilling the deep Gulf of Mexico Shelf and historical incentives to explore for natural gas in tight gas sands, are effective, and they should be used strategically to encourage high-risk investment. Incentives for renewable energy should continue to promote their increasing role in the energy mix. Policies should ncourage prudent and environmentally sound resource development without being punitive.

Data Preservation

Geological and geophysical data, collected at great expense, are at risk of being lost owing to inadequate facilities and programs to maintain these critical data into the future. The 2002 National Research Council report titled *Geoscience Data and Collections: National Resources in Peril* highlights the issues related to geoscience data preservation and proposes solutions. AASG strongly encourages Federal support of data preservation and curation. Properly archived and curated geological and geophysical data will be used by students, researchers, and resource scientists well into the future. These data are unique—the result of significant financial investments in decades-long data collection—and they are too important to our nation's future security to be lost.

Carbon Sequestration and Climate Change

Fossil fuel combustion releases CO_2 into the atmosphere, and ongoing research into climate change is designed to study the effects of anthropogenic CO_2 emissions on climate. AASG supports efforts to help control the release of CO_2 to the atmosphere and encourages additional research in the use of CO_2 in enhanced oil recovery and geologic sequestration of CO_2. CO_2 has been demonstrated to be effective in recovering residual oil from reservoirs with certain characteristics. Because current production practices typically leave 65% of the original oil in place, enhanced oil production using CO_2 as a solvent could result in recovery of additional reserves. Part of the solution to CO_2 emission control could be geologic carbon capture and storage. AASG supports research in this area, particularly geologic sequestration of CO_2, in hydrocarbon-bearing zones—including oil, natural gas, and coal—saline aquifers, or unconventional reservoirs such as basalts. AASG also supports research to model, monitor, mitigate, and verify the real impacts of CO_2 sequestration and, most important, to model the economic costs of large-scale sequestration.

Produced Waters

On average, 5 to 10 barrels of water is produced for each barrel of oil recovered. Pumping produced water to the surface and reinjecting it into disposal units are expensive processes and in some instances lead to further degradation of the waters. In many arid regions, produced waters, such as low-salinity waters from coalbed natural gas fields, could be cleaned and used to supplement fresh-water supplies. AASG supports research on produced water cleanup and associated brine disposal that will allow such beneficial water usage.

Alternative Energy

AASG recognizes that the transition to nonfossil energies will take decades and must be balanced in order to avoid significant economic disruption. AASG supports and can contribute to research on (1) geologic means of storing energy, such as compressed air or pumped water; (2) geothermal potential of the U.S.; (3) geologic options for nuclear-waste disposal; and (4) rigorous cost/benefit and full-cycle, net-energy studies of all major forms of energy supply, including fossil energy, nuclear, wind, solar, hydro, and biofuels.

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