AASG Energy Positions

Oil and Technology Application

Availabilty 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 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.

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 encourage 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 basalt. 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.