A Global View From a LOCAL EXPERT

Guest Editorial by University of Georgia Professor and Environmental Engineer, David Gattie

Energy is ubiquitous. Not only is it physically embedded in the resources of oil, gas, coal, uranium, solar radiation and wind, it’s socially embedded in every aspect of the human endeavor: the economy, industrial and military capacity, national security and international geopolitics. Simply stated, without energy nothing moves and every nation in the world is working with a sense of urgency to secure for itself a strong energy disposition. However, tensions have developed. And, arguably, one of the most acute is in the space that separates energy-driven economic growth aspirations from energy-derived environmental concerns.

The U.S. is currently experiencing a resurgence in domestic oil and gas production, which, along with its vast coal reserves, could reposition the U.S. with considerable economic leverage on the global stage. At the same time, the specter of climate change has emerged, raising concerns about increased global CO2 levels. Consequently, the U.S. is at an unprecedented nexus where energy security, economic opportunity and environmental stewardship seem to be in an irreconcilable conflict that is proving to be problematic for energy policy. At question: “Should the U.S. develop its resources in order to secure an economically strong energy future or should it leave those resources in the ground and develop a low- or zero-carbon economy that moderates global CO2 levels?” If this was a U.S. issue alone, it might seem surmountable; but it isn’t—it’s global in every aspect.

The current economic growth of China and India, among other countries, is driven by oil, gas and coal, which projects as an increase in global CO2 emissions. Of equal concern, growth in these countries presents the real possibility of a future global society without the U.S. occupying the top economic position it has held since 1872. Meanwhile, volatility in the Middle East casts an ever-present shadow of geopolitical instability in a critical region. Climate is not the only global issue of concern; so are the economies and geopolitics that motivate the nations of the world to do what is in their own best interests. As such, U.S. energy policy must be developed within the context of these realities. It must project forward in a way that stimulates U.S. economic opportunities while maintaining national...
security and it must project across geopolitical divides in a way that demonstrates to developing economies how to support their own growth under emerging environmental constraints. This is particularly relevant to the power generation sector with respect to the incorporation of intermittent renewable energy and the development of nuclear power capacity and novel carbon capture and storage technologies. In this regard, Georgia’s power sector is strategically positioning itself with one of the country’s most diverse portfolios, including new nuclear capacity and solar. This bodes well for industry and economic growth in the state.

As U.S. energy policy evolves, it must be strategic, calculated and transitional with a balanced portfolio that maintains flexibility for the U.S. to respond and adjust to economic, geopolitical and national security undercurrents at home and abroad. Any policy that unnecessarily sacrifices economic capacity and national security for environmental concerns projects poorly for the U.S. and will likely result in consequences that are unanticipated or, worse, irreversible.

In the 1800s, the U.S. was the crucible where a still-fledgling democratic republic, a free-market economic philosophy, newly discovered energy resources and unbridled technological experimentation melded into a global industrial power that would define the 20th century and create unprecedented economic opportunities. This wasn’t without unanticipated environmental consequences, as certain aspects of air, water and land impacts from industrial activity and urban development were encountered and, subsequently, checked by regulatory action and novel engineering technologies. This ethic to preserve public and environmental health is a hallmark of U.S. environmental stewardship. We now have the opportunity to define the 21st century under new constraints, which we can do, provided we judiciously account for all global realities.