

AN ECUMENICAL APPROACH

The Never-Ending Quest for Energy

By G. Tracy Mehan III

“On no one quality, on no one process, on no one country, on no one route, and on no one field must we be dependent,” argued Winston Churchill to Parliament in 1913. “Safety and certainty in oil lie in variety and variety alone.”

Churchill, as First Lord of the Admiralty, had previously made the consequential decision to stake Britain’s naval supremacy upon oil rather than coal. This meant “more gun-power and more speed for less size or cost.” Churchill argued that only diversification of supply would justify his decision to avoid reliance on coal mined in Wales.

“There is much to be said for an ecumenical approach that recognizes the contribution of the range of energy options,” writes Daniel Yergin in his latest magnum opus, *The Quest: Energy, Security, and the Remaking of the Modern World*. “Churchill’s famous dictum about supply — ‘variety, and variety alone’ — still resounds powerfully.”

“Diversification of oil resources needs to be expanded to diversification among energy sources — conventional and ‘new,’” writes Yergin. “This represents a realization that there are no risk-free options and that the risks can come in many forms.”

Yergin won the Pulitzer Prize for his book *The Prize: The Epic Quest for Oil, Money, and Power* (1991). *The Quest* continues and expands the story commencing with the

First Gulf War, the fall of the Berlin Wall and Soviet Union up to the present. It encompasses every conceivable effort to develop conventional and unconventional fossil fuel sources as well as renewables, nuclear power, hybrid and electric vehicles, and energy efficiency in the context of the world’s growing population, global trade and commerce, and technological innovation.

The breadth and depth of Yergin’s narrative is impressive. He vividly describes the vast amount of capital, both financial and geopolitical, which is deployed in the quest for energy both at home and abroad.

Yergin elucidates the growth of

politics and capital investments of staggering proportions. He also connects the explosion of U.S. shale gas, stemming from entrepreneurial breakthroughs in directional drilling and hydraulic fracturing, to this effort to inhibit the Russians.

The Quest is a liberal education in and of itself, providing the persevering reader with ample dollops of science, engineering, policy, economics, finance, and biography. Daniel Yergin is hopelessly in love with his subject — its scale, its risks, its inventors and entrepreneurs and their monumental achievements of innovation and discovery. His is an optimistic energy ecumenism which sees possibility in every aspect of the energy sector, old and new.

Human creativity is “at the heart of the quest, it is as much about the human spirit as it is about technology, and that is why this is a quest that will never end.” It is the essential element in the remaking of the modern world which Yergin defines by its “fundamental characteristics” of heat, light, cooling, and mobility.

Yergin calmly, patiently explains the error in the concept of “peak oil,” which assumes “that the world is near or at the point of maximum output, and that an inexorable decline has already begun, or is soon to set in,” Rather, he believes, “The world has decades of further production growth before flattening out into a plateau — perhaps sometime around mid-century — at which time a more gradual decline will begin.”

“The date of the peak has tended to move forward,” he writes. “It was supposed to arrive by Thanksgiving 2005. Then ‘the unbridgeable supply gap’ was expected to open up ‘after 2007.’ Then it would arrive in 2011. Now some say ‘there is a significant risk of a peak before 2020.’”

Yergin documents five instances

The Quest: Energy, Security, and the Remaking of the Modern World, Daniel Yergin. The Penguin Press. \$37.95.

Plus **The End of Energy: The Unmaking of America’s Environment, Security, and Independence**, Michael J. Graetz. The MIT Press. \$29.95.

the Russian energy sector and the intense efforts by western oil companies and governments to access the natural resources of former Soviet republics around the Caspian Sea and Caucasus region. This required a vast network of pipelines to undermine monopolistic tendencies emanating from Moscow with potentially dire consequences for Europe and global energy markets. This is a compelling tale of high

of the nation or world having been declared to be running out of oil. As early as 1885 the state geologist of Pennsylvania, home of the first oil boom, proclaimed that surge of supply was only a “temporary and vanishing phenomenon — one which young men will live to see come to its natural end.”

The idea of peak oil originated with an eminent earth scientist, Marion King Hubbert. In 1978 he predicted that children born in 1965 would see all the world’s oil supply gone in their lifetimes. Humanity was embarking upon “a period of non-growth.”

“By 2010, U.S. production was four times higher than Hubbert had estimated — 5.9 million barrels per day versus Hubbert’s 1971 estimate of no more than 1.5 million barrels per day — a quarter of the actual number,” notes Yergin. Hubbert simply did not account for the impact of prices, substitution, and technological innovations.

Yergin is attentive to the environmental consequences of energy production. He tells gripping stories of the Deepwater Horizon oil spill in the Gulf of Mexico and the disaster at the Fukushima Daiichi nuclear complex in Japan in 2011.

He also offers a book within a book, a 103-page explanation of the science, policy, and politics of climate change commencing with the work of 19th century scientists such as John Tyndal, Louis Agassiz and Svante Arrhenius of Sweden up to and including EPA’s current efforts at regulating carbon pursuant to *Massachusetts v. EPA* (2007). He believes the issue is here to stay in energy policy discussions.

The Quest usefully documents the progress, and obstacles, of a variety of new energy sources such as solar cells, wind, and biofuels (all of them). Their day will come, but

probably sometime beyond 2030. The book illustrates how much governments in Germany, Spain, Japan, China, and the United States massively subsidize these new sources without commenting on how sustainable these efforts are over time. It also provides an interesting description of the many industry initiatives to bring forth electric vehicles or hybrid plug-in vehicles while conceding that “the internal combustion engine is unlikely to be shunted aside easily.”

Still, the growth in world energy demand will be “greater than all the energy that the world consumed in 1970,” reflecting an expanding, prospering world economy. Some 75 to 80 percent will still be carbon-based two decades from now. Thus, Yergin asks, “Are we on the edge of a new stage in the ‘great revolution’ of energy? History demonstrates that energy transition generally takes a long time.”

“It took almost a century before oil overtook coal as the number one energy source,” writes Yergin.

Yergin endorses the drive for greater efficiency and conservation, which some call the “fifth fuel,” and continues to yield impressive results. Between 1995 and 2005 Dow Chemical reduced its energy use on a worldwide basis, per pound per product, by 25 percent with benefits to their bottom line and the environment. As the world’s capital stock turns over, there will be many opportunities to enhance this ongoing source of energy.

Michael Graetz, professor of tax law at Columbia, offers a more sobering account of the American experience with energy and environmental policy in *The End of Energy: The Unmaking of America’s Environment, Security, and Independence*.

This is also a book of ambitious scope, but it is “a story of failure” as

to “how our government’s attempts to control, decontrol, subsidize and command, legislate, and repeal over the past four decades have produced a system and economy of energy production and consumption that fails to well serve our needs or those of our environment.”

Graetz recognizes the central role of price, but the government “never demanded that Americans pay a price that reflects the full costs of the energy they consume.” He contrasts this with tobacco upon which taxes have been piled on to reduce its consumption and finance some of the costs it imposes on public budgets and society at large.

Daniel Yergin also discusses the role of price or taxes on oil versus regulation and concludes that “what for the economist is the rational solution can be for a politician a recipe for electoral disaster. . . . So regulation, despite its relative drawbacks, does have a great advantage: it does not look like a tax.”

Yergin, a card-carrying optimist, believes the world, both its energy supply and its environment, will thrive. “The globalization of demand may be shaping tomorrow’s needs,” he writes. “But it is accompanied by a globalization of innovation.” The generation of knowledge and the application of science is now “a worldwide endeavor.” The resource base of knowledge and creativity is expanding, fueling insight and ingenuity which will lead to new solutions for the benefit of humanity.

*This is a compelling
tale of high politics
and major capital
investments*



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