

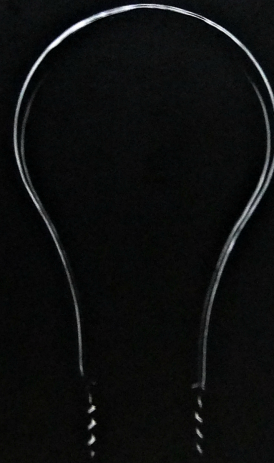
BOOK REVIEW

In *The End of Energy*, Michael J. Graetz takes readers on a journey from the fossilized remains of prehistoric zooplankton and algae to the massive oil deposits of the Ghawar Field in Saudi Arabia. Professor Graetz, employing lively prose, explains the trek of the oil throughout America with intellectual stops along the way to discuss various laws and acts that affect the flow and prices of this valuable commodity to all American consumers.

By CHARLES D. FERGUSON

The End of Energy

The Unmaking of America's Environment,
Security, and Independence



Michael J. Graetz

America has been very fortunate when it comes to possessing many resources especially relatively abundant supplies of fossil fuels. These fuels have helped tremendously in driving the United States to become the world's largest national economy. While Americans comprise about five percent of the global population, they consume about 25 percent of the world's energy. Much of this massive consumption is due to the inefficient use of energy as compared to other leading industrialized nations. Americans have a long way to go to catch up to Europe and Japan's efficiency awareness and practices.

But the United States is a sprawling land with more than 300 million people, many of them in suburbs and rural areas spending increasingly large amounts of time in their cars, minivans, and SUVs, which are often getting less than 25 miles per gallon. Although China recently surpassed the United States as the world's largest emitter of carbon dioxide, a significant greenhouse gas, Americans on a per capita basis emit four to five times the amount of CO₂ as the Chinese. But because Americans have had such a cornucopia of cheap fossil fuels, they went for decades without

feeling substantial concern or economic pain. That all changed in the early 1970s starting with President Richard Nixon's price controls, which were soon followed by the 1973 Arab Oil Embargo.

While readers when they first pick up *The End of Energy* might expect Michael Graetz to begin with the Arab Oil Embargo, he instead takes them on a journey starting with "the fossilized remains of prehistoric zooplankton and algae," which were transformed through heating over millennia to form the massive oil deposits residing in "the Ghawar Field in Saudi Arabia." He then leads the reader across the Arabian peninsula to a pipeline along the Persian Gulf to the terminal at Ras Tanura, "which processes 10 percent of the global output of crude." From there, the oil makes its way via tanker to multiple spots along the globe. For the American reader, Professor Graetz, employing lively prose, explains the meandering trek of the oil throughout America with intellectual stops along the way to discuss various laws and acts that affect the flow and prices of this valuable commodity to all American consumers.

The start in Saudi Arabia might have signaled to readers that the author will next turn to the Arab Oil Embargo, but here again Professor Graetz spends profitable pages plumbing the largely adverse consequences of Nixon's controls on energy prices. The struggle to decontrol the price of oil and natural gas lasted well into the 1980s. The author assesses that "Nixon was far from the only U.S. politician to elevate short-term political expediency over sound economic and energy policies." In an enlightening exposition, Graetz explains how every president since Nixon has called for a national energy policy, but every one dishearteningly failed in their endeavors. In particular, every president warned about increasing addiction to oil and wanted the United States to reduce its dependence on imported oil. But this dependence has grown such that today about two-thirds of U.S. petroleum is imported. (However, the leading supplier is Canada, not Saudi Arabia, as some may think. The oil from Canada has huge environmental consequences because it derives largely from tar sands.) But because oil is a fungible commodity, increased demand in one country will have substantial ripple effects and at times even tsunami-like effects on global markets. Hundreds of billions of dollars have left America's shores to pay for foreign oil.

Graetz dispels the notion that the United States can or should become energy independent despite the repeated rhetoric from many politicians on both the Right and Left for doing so. While this message may play well with voters who can monitor the ups and downs (most recently, mostly ups) of gasoline prices, the United States still pays far less for gasoline than most consumers around the globe. One reason is due to politicians' allergic reaction to levying more taxes. The federal tax on gasoline has barely budged in decades. Like all the chapters in the book, the chapters on regulation, carbon taxes, and cap-and-trade are masterful in their clarity and sobering in their analyses that fees on greenhouse gas emissions confront numerous economic and political hurdles.

It is too easy and simply wrong to cast blame on one political party or one president for America's failed attempts at forming an effective energy policy. Even politicians that want to shift the United States to a low

carbon economy are conflicted. If they perceive the tradeoff as raising costs on consumers, that is, voters, they are extremely reluctant to take that action. Politicians are not voted out for lowering fuel costs. They can also feel pressure from special constituencies. For example, congressmen from coal states want to keep coal mining jobs and those politicians from corn producing states have tended to be strong supports of corn-based ethanol despite its little efficacy in reducing dependence on foreign oil.

These are political risks. And as Professor Graetz underscores "the barriers to sensible policy are largely political—and they are potent." He has no easy answers for how America can stop muddling through on dealing with energy and the environment because this is an exemplar for a wicked problem, one that is difficult to solve because of the interlinked dynamics of entrenched energy technologies, social and political pressures, and economic interdependencies. For an excellent guide to how America has gotten into this predicament and how Americans and their leaders can begin to find a way out, I recommend reading this insightful book. ■

The End of Energy - The Unmaking of America's Environment, Security, and Independence (MIT Press, 2011).

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