

Can the Clash of Civilizations Produce Alternate Energy Sources?

BY GERALD E. MARSH

With the war in Iraq and the muddle of the Middle East, the time is ripe for the U.S. to reduce its dependence on oil from the Persian Gulf—but where can the country turn for new sources of energy?

IN THE SUMMER of 1993, Samuel Huntington published an article in *Foreign Affairs* that introduced an apt phrase into the lexicon of futurologists: "The Clash of Civilizations." Huntington maintained that the fundamental source of conflict in this century would be cultural rather than economic or ideological. While the clash that is developing between the Muslim world and the West is indeed cultural, it is driven by the economics of energy and, in particular, oil.

The use of oil is widespread in industry and will be irreplaceable in the transportation sector for decades. It also will be in short supply soon, according to Claude Mandil, executive director of the International Energy Agency, who warns that "the world's energy economy is on a pathway that is plainly not sustainable," and is one that will lead from "crisis to crisis." The IEA predicts that many of the oil fields

the U.S. and Europe depend on will peak in the next five to seven years—and this includes those of Russia, the U.S., Mexico, and Norway. It is estimated that world energy demand will increase at least 50% by 2030. To meet this demand, the Organization of the Petroleum Exporting Countries (OPEC), where most of the world's remaining readily accessible oil is found, practically will have to double its production. Most of that increase must come from Saudi Arabia, Iran, and Iraq.

"Peak oil" theorists assert that there will be growing conflict over the remaining oil resources and a high probability of a worldwide economic collapse. Such claims, however, show a misunderstanding of the meaning of "oil reserves." These reserves depend on price and are not a direct measure of the amount of oil physically available in the ground. There is plenty of oil, perhaps as much as the 7.2 trillion

barrels estimated by ExxonMobil, but these reserves cannot be brought to market as cheaply as oil from the Persian Gulf, and the economics of oil dictate that cheaper oil will be used first. Moreover, these sources cannot begin production immediately; there is a ramp-up period of years. If the phasing in of such reserves does not match the decline of current oil fields, rising prices and conflict over resources are inevitable.

The members of OPEC recently agreed to cut production to show their determination to defend \$60 per barrel as a minimum international price. This is high enough to allow a good profit to be made on oil from shale or tar sands, of which North America has enormous quantities. However, the Saudis know full well that it is unlikely anyone will invest the many billions of dollars needed to produce enough oil from these sources to threaten OPEC dom-

