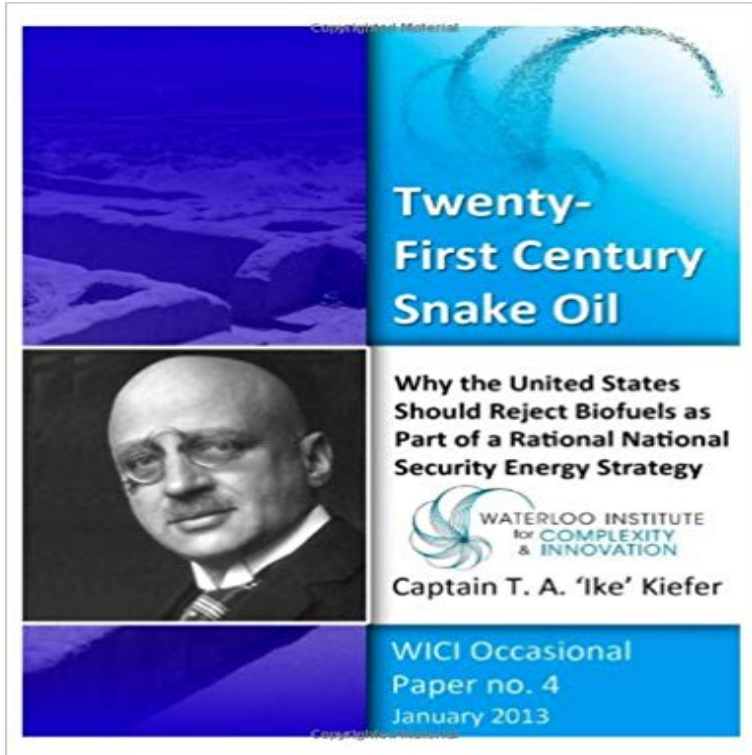


# Twenty-First Century Snake Oil: Why the United States Should Reject Biofuels as Part of a Rational National Security Energy Strategy



Biofuels are today's quintessential example of something that sounds good in theory but proves counterproductive in practice. The US Military has been funding biofuel research, buying test and demonstration quantities of biofuels, and is now funding construction of new bio-refineries with the stated objectives of helping to commercialize production, increase the domestic fuel supply, reduce dependence upon foreign oil, and reduce fuel costs associated with oil price fluctuations. The military's role is part of a larger federal government energy strategy pursued by consecutive Presidential Administrations to migrate the US economy away from fossil fuels toward domestically produced biomass-based fuels that are purported to be perpetually renewable, easier on the environment, and enhancing to national security. Current military and national energy policy and strategy need to be informed by a better understanding of the physical limitations and negative consequences of large-scale biofuels cultivation and consumption that are only now starting to receive due attention. This paper presents a physical evaluation of key characteristics of liquid transportation fuels across the domains of physics, chemistry, biology, and economics, and highlights the deficiencies that preclude biomass from becoming a primary energy source and biofuels from replacing petroleum as a national-scale transportation fuel. These factors include fatal petroleum-dependence, poor energy return on investment (EROI), low energy density, abysmal power density, huge water footprint, demonstrable food competition regardless of feedstock, increased environmental damage, promotion of land confiscation and human rights violations, and the supreme irony of increased lifecycle greenhouse gas (GHG) emissions. This paper argues that biofuels do more to harm the causes of national and global

security than to help them.

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