

Why *the* Oil and Gas Industry Ain't Going Away

BY J. ROBINSON WEST

*But these purveyors of
the “devil’s excrement”
will need to be reinvented.*

Oil has been a source of controversy and bitter re-
crimination for over a hundred years, from trust-
busters to climate activists.

Then as now, however, it has transformed the
world, fueling the phenomenal economic growth
of the last century. It is black gold on a stupendous
scale, but at a high cost as well. We should expect
that oil, and now natural gas, will remain critical to
fueling the world for the foreseeable future.

Oil has certain unique qualities. It is the most efficient means of stor-
ing and transporting energy. Since the 1970s, however, it has also become
recognized as a significant source of atmospheric carbon dioxide, along
with coal, natural gas, agriculture, and certain industries such as steel and
cement. Electricity, the proposed alternative to oil, is cheap and clean to
produce when generated from renewable sources such as wind and solar,
but difficult and expensive to store, particularly at scale. The conundrum
of the energy transition away from oil and gas is intermittency, what hap-
pens when the wind doesn't blow or the sun doesn't shine. Most proposed
solutions have been poorly executed, will take years and cost trillions, and
face huge supply chain challenges.

For the last fifty years, oil has been vilified. It is a grudge purchase to
consumers, and their politicians. Oil companies, among the most capital-
intensive industries, are seen as predatory, unscrupulous, and greedy,

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even as they provide an essential service. Their rates of return, however, are far lower than those of technology and pharmaceutical companies, which never seems to be mentioned.

In the last fifty years, the oil industry has demonstrated an ability to transform itself. Oil is an ugly, polluting business if poorly managed. The large players are now extremely sensitive to environmental and reputational liability and have cleaned up their act. The 2010 Macondo spill in the Gulf of Mexico demonstrates the enormous cost and reputational damage when they fail to do so.

The industry has demonstrated remarkable resourcefulness. It had an existential challenge in the 1970s when the oil-producing countries in the Middle East nationalized the resources held by the international industry. The companies successfully scrambled to transform their multi-billion-dollar portfolios, developing the North Sea, Alaska, Gulf of Mexico, Brazil, and West Africa. Later, U.S. production, seen as mature and declining, was radically reversed, making it the world's largest producer. All this involved high technology and engineering on a huge scale, an appetite for risk, and trillions in investment. With diversified sources of oil, the global economy is more stable and less vulnerable to oil shocks than it was fifty years ago.

A new industry was invented. In the 1970s, natural gas, less dense than oil, could only be used locally or transported by pipeline. It is critical in power generation—often backing out dirty coal—as well as chemical manufacturing including plastics and pharmaceuticals. A new technology, the super-cooling and liquefaction of natural gas and its transportation in specialized tankers (LNG), has transformed energy markets, particularly for resource-constrained consumers in Europe and Asia.

The oil and gas companies face a new existential challenge in finding solutions to the energy transition to reduce carbon emissions. If they don't, they will lose their license to operate from the public. Critics want to eliminate oil and gas production and consumption, blaming it for global warming, although coal is a much larger source of carbon dioxide.

Yet despite predictions by critics, oil production and consumption have yet to peak, and demand in the global South is surging. The industry must play a massive and constructive role in maintaining production while reducing carbon. Either the fuels used must be made cleaner, or carbon eliminated in the production process. The answers are not obvious and will cost trillions. A tax on carbon would accelerate the transition, but it is politically difficult. Oil companies, however, are far more heavily capitalized, technically advanced, with a greater risk appetite than electric power-generating utilities, the other key player. The next fifty years will tell the success or failure of the search for solutions.

Over its history, one critical aspect of the oil industry is largely unchanged, where it was and is the “devil's excrement.” Oil and gas is the largest extractive industry, generating huge windfalls for the resource owners, often governments. Politicians who control those funds do not need taxes to operate their governments, and hence can dispense with the consent of the governed to authorize taxes through elections. The result is often autocracies with

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staggering fraud and corruption. Rare is the honest petrostate. Russia, Venezuela, and Iran are, if anything, worse now than they were in 1974, and the world is less stable.

Until there are realistic solutions capable of operating at scale and economically, oil and gas will continue to be an essential element of the global economy. It has demonstrated an ability to reinvent itself and is being challenged to do so again. Stay tuned. ◆