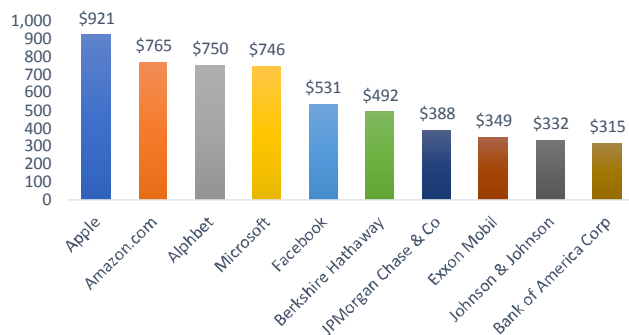


## End Of Big Oil?

### Don't Write off Big Oil Yet, But the Industry's Best Years May Be Behind Us

BY PERRY SIOSHANSI

Big oil, while still big and still profitable, is not as big or as profitable as it used to be. Moreover, it is increasingly big oil-and-gas, or in the words of Patrick Pouyanne, Total's CEO, gradually turning into big gas-and-oil as the significance of natural gas continues to rise relative to oil. In the meantime, continued pressure to move towards a low carbon future is forcing some oil majors to diversify by investing in renewables – with Total, Shell and BP leading the way. Add the expected rapid rise of electric vehicles (EVs) and, more broadly, electrified transportation in the coming years, and big oil's long-term prospects begin to look even less rosy. This, in fact, is not just a likely scenario but in fact the most probable scenario gradually unfolding across the globe.



Top 10: Most valuable companies by market capitalization, \$b, May 2018

Total has got the message and is – at least according to its public statements – contemplating a future where more of the global energy demand will be electric with an increasing share supplied from renewable resources and gas. Total is not only interested in renewables, it has already entered the electricity sector. Pouyanne also acknowledges the rise of EVs – he drives one.

Not all oil majors, in particular the American giants ExxonMobil, Chevron and ConocoPhillips, are ready to concede that oil's supremacy as a source of energy may be near its peak, potentially followed by a period of stagnant growth and eventual decline. Major oil exporting countries including Saudi Arabia and its national oil company, Saudi Aramco, are in total denial – they prefer to stick their heads in the proverbial sand, distracted by the daily turmoil of the global oil markets, constantly rising or falling prices and the uncertain geopolitical developments – which can be highly distracting.

In the case of Exxon, the biggest of the global listed oil majors, the official pronouncement is that all is well, and it is business as usual. In fact, Darren

Woods, Exxon's new CEO, who replaced Rex Tillerson – the former U.S. Secretary of State who was famously fired via a Tweet by Donald Trump – is not only convinced that business-as-usual is here to stay, but he is betting on more of the same for the indefinite future.

Under pressure to turn the giant company around, in March 2018 he unveiled an ambitious plan to spend \$230 billion to increase oil production by an additional 1 million barrels a day. Investors were apparently not overwhelmed by the grand strategy. Even while oil prices have risen 60% in the past year, Exxon's shares are up a mere 5% – trailing many of its smaller rivals.

There are other signs that Exxon's best days may be in the past. The company became the world's largest publicly traded company in 1975 and it remained among the most profitable for over 3 decades. Now, the \$350 billion company is #8 in market value, roughly half as big as Apple (see adjacent chart). In 2016, Exxon lost its coveted triple-A rating, a cherished distinction it had enjoyed since 1930.

It is hard to imagine how Mr. Woods – or for that matter anyone else – can return the giant company to its former glory days. The problem is not that Exxon is not performing well but rather that investors have better options. Mark Stoeckle, the CEO of Adams Funds, a major Exxon shareholder, puts Exxon's problem this way, as reported in an article in The Wall Street Journal (14 Jul 2018):

“Most investors like Exxon, but they like other companies even better.”

Commenting on Exxon's planned massive investment strategy, Stoeckle was quoted in the same WSJ article saying: “The market is not willing to reward Exxon today in hopes that it will bring good returns tomorrow.”

Expanding oil production, especially if it is contingent on high and rising oil prices, may not be a good strategy for Exxon or any oil company. Electric vehicles (EVs), many are convinced, could make internal combustion engines (ICs) obsolete within a decade if not sooner. And once the critical tipping point is reached – where EVs are less expensive to buy, perform better and cost far less to operate and maintain – then few would want to buy yesterday's technology regardless of petrol prices.

Running an oil company, never easy, has become even more perilous and certainly riskier. The industry is likely to face increased pressures from multiple fronts in the coming years – most likely from those who wish

#### Perry Sioshansi

writes widely on the energy industry and heads Menlo Energy Economics. He may be reached at [fpsioshansi@aol.com](mailto:fpsioshansi@aol.com)

to reduce global carbon emissions but also from the potential rise of electrified transportation – the most critical determinant of global oil demand.

Ireland is the world's first nation to divest completely from fossil fuels. Its parliament passed a bill compelling the €8.9 billion (US\$10 b) Ireland Strategic Investment Fund (ISIF) to withdraw all money invested in oil, gas and coal. While miniscule in scale, the move is nevertheless an important milestone.

Ireland's Fossil Fuel Divestment Bill passed in mid-July requires ISIF to offload direct investments in fossil fuel undertakings – estimated to hold around €318 million (\$370 m) invested in 150 companies – within 5 years while forbidding any future investments in the fossil fuel industry.

The law defines “fossil fuel undertakings” as those “whose business is engaged ... in the exploration for or extraction or refinement of a fossil fuel where such activity accounts for 20% or more of the turnover of that undertaking.” Indirect investment in fossil fuels is also ruled out, unless there is no more than 15% of an asset invested in a fossil fuel undertaking.

Ireland follows Costa Rica, which has also vowed to “abolish fossil fuels” from its economy – without much clarity or on how this is to be accomplished or when.

Similar moves are spreading elsewhere. For example, New York City's Mayor Bill de Blasio announced in Jan 2018 that the city would divest its \$189 billion pension fund from fossil fuel holdings – estimated to hold roughly \$5 billion in such investments.

Congratulating the move, Bill McKibben, the leader of 350.org – a global movement that is trying to keep global CO<sub>2</sub> concentrations under 350 parts per million – said, “This (bill) will make Ireland the first country to commit to divest (public money) from the fossil fuel industry.”

Thomas Pringle, a member of the Irish parliament and the sponsor of the bill, first introduced in 2016, was less upbeat. He said, “With this bill we are leading the way at state level ... but we are lagging seriously behind on our EU and international climate commitments.”

Others, including Norway's sovereign wealth fund, have also made commitments to reduce and eventually divest of investments in fossil fuel companies. Fossil fuels will increasingly be squeezed from all sides.

Already, carbon-heavy sources of oil such as those from Alberta's tar sands have turned into environmental liabilities that few oil majors wish to be associated with. And if more companies and countries follow the example of Ireland, which is planning to divest from fossil fuel investments, big oil's future prospects will only get grimmer.

Don't write off big oil yet. At the same time, don't expect the consistent demand growth or high profitability either. If you are seeking high growth and profits, look elsewhere for better options.

### Transforming Energy Markets

Proceedings of the 41st IAEE International Conference,  
Groningen, Netherlands, June 10 - 13, 2018

Single Volume \$130.00 - members; \$180.00 - non-members

This CD-ROM includes articles on the following topics:

- Decarbonization of the Energy Sector and Carbon Pricing
- Revisiting the Role of Coal Fired Power Generation
- The Energy from Sugar Can Biomass in Brazil
- Challenges of the Review of the Local Content Policy For the Oil and Gas Industry in Brazil
- Subsidies and Costs in the CA Solar Market
- Grey Prediction Theory for Clean Energy Matrix in China
- Study on Taiwan Energy Security Risk Index
- Supply Driven Inventory Routing Problem
- Hidden Dimensions of Energy Poverty
- Central vs Decentral Infrastructure Supply
- The Potential of Landfill Gas Utilization for Energy Production In the Region of South East Europe
- Study on Green Renovation
- Review of Market Surveys on Consumer Behavior of Purchasing
- The Spreading of Fuel Cell Vehicles
- Air Quality Co Benefit of Climate Mitigation in 30 Provinces of China
- Quantifying the Cost of Uncertainty About the Belgian Nuclear Phase Out
- Optimal Investment Decisions for Renewable Power Concepts
- Energy and CO<sub>2</sub> Taxation in EU Member States
- Market Power in a Hydro Thermal System Under Uncertainty
- Causal Impact of the EUs Large Combustion Plants Directive
- Cost Efficiency Assessment of European Res Support Schemes
- Energy Access and the Sustainable Development Goals
- Electricity Market Design and the Green Agenda
- Scenarios for a Lower Carbon World
- Impact of Environmental Targets on Regulatory Decisions: A Laboratory Experiment

Payment must be made in U.S. dollars with checks drawn on U.S. banks. Complete the form below and mail together with your check to:

Order Department

IAEE

28790 Chagrin Blvd., Suite 350

Cleveland, OH 44122, USA

Name \_\_\_\_\_

Address \_\_\_\_\_

City, State \_\_\_\_\_

Mail Code and Country \_\_\_\_\_

Please send me \_\_\_\_\_ copies @ \$130 each (member rate) \$180 each (nonmember rate).

Total Enclosed \$ \_\_\_\_\_ Check must be in U.S. dollars and drawn on a U.S. bank, payable to IAEE.