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RECLAIMING ENERGY EFFICIENCY IN AN AGE OF PETROLEUM EXCLUSION

Monika U. Ehrman*

The principal tasks of the chief executive officers of publicly-traded exploration and production companies is to guide senior management and the company through various operational, regulatory, and financial challenges, all the while mitigating risk and providing shareholders with an expected return on their investment. Executives face declining reserves, increased funding and development costs, and some shareholder and public opposition to oil and gas development or hydraulic fracturing based on climate change or negative environmental externalities. Although these oil and gas companies are familiar with technical and financial challenges, public opposition to extractive industries is a newer barrier to entry and development.

This barrier appears in the form of lawsuits like that filed in January 2018 by the New York City government against BP, Chevron, ConocoPhillips, ExxonMobil, and Royal Dutch Shell. The City alleges that the companies, together, produced eleven percent “of all of global-warming gases through the oil and gas products they have sold over the years. . . . [and] also charges that the companies and the industry . . . have known for some time about the consequences”¹ This New York City lawsuit follows those filed in California, which argue that these large exploration and production companies had knowledge of

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1. Chris Mooney & Dino Grandoni, *New York City Sues Shell, ExxonMobil and Other Oil Companies Over Climate Change*, WASH. POST (Jan. 10, 2018), https://www.washingtonpost.com/news/energy-environment/wp/2018/01/10/new-york-city-sues-shell-exxonmobil-and-other-oil-majors-over-climate-change/?utm_term=.39e464f0c1ea [<https://perma.cc/N8MB-BWZW>].

the impact of oil and gas production on climate.² For oil and gas companies, these lawsuits and investigations are massive forms of litigation and regulatory risk. Additional anti-petroleum and anti-extraction-industry efforts include the Keep it in the Ground movement and the Fossil Free movement. Although these efforts center on the urgent, and existent, driver of climate change, they focus on supply-side actions and often lack a meaningful consideration of demand-side reductions, which include energy efficiency and energy conservation.³

Energy efficiency and energy conservation are often classified as “energy resources,” along with hydrocarbons and renewable energy sources. Generally, “energy efficiency entails the use of a “technology that requires less energy to perform the same function”⁴ For example, replacing “incandescent light bulbs with . . . compact fluorescent light (CFL) bulbs reduces energy use, but still produces the same quantity of light”⁵ Similarly, “energy conservation includes “any behavior that results in the use of less energy.”⁶ Physical actions such as turning off lights in a room when leaving and recycling materials are examples of energy conservation.⁷ Energy efficiency, in particular, was a critical component to energy savings during the oil price shocks throughout the 1970s. For example, in 1975, Congress enacted the Corporate Average Fuel Economy (CAFE) standards⁸ following the Arab Oil Embargo in

2. Chris Megerian, *Bay Area Cities Sue Major Oil Companies Over Climate Change*, L.A. TIMES (Sep. 20, 2017, 12:06 PM), <http://www.latimes.com/politics/essential/la-pol-ca-essential-politics-updates-climate-1505933864-htmstory.html> [https://perma.cc/E9PH-6LHV]. The author notes that the California federal court lawsuit, *City of Oakland v. BP P.L.C. et al.*, was dismissed on Jun. 25, 2018. https://www.eenews.net/assets/2018/06/26/document_cw_02.pdf.

3. See Jeff Brady, *‘Keep it in the Ground’ Activists Optimistic Despite Oil Boom*, NPR (Mar. 16, 2018, 5:00 AM), <https://www.npr.org/2018/03/16/589908135/keep-it-in-the-ground-activists-optimistic-despite-oil-boom> [https://perma.cc/R2MZ-GA3N].

4. *Use of Energy in the U.S. Explained: Energy Efficiency and Conservation - Basics*, U.S. ENERGY INFO. ADMIN. (Mar. 7, 2018), https://www.eia.gov/energyexplained/index.cfm?page=about_energy_efficiency [https://perma.cc/6EPF-CCVX].

5. *Use of Energy in the U.S. Explained: Energy Efficiency and Conservation - Basics*, U.S. ENERGY INFO. ADMIN. (Mar. 7, 2018), https://www.eia.gov/energyexplained/index.cfm?page=about_energy_efficiency [https://perma.cc/6EPF-CCVX].

6. *Id.*

7. *Id.*

8. *Corporate Average Fuel Economy: CAFE*, NAT’L HIGHWAY TRAFFIC SAFETY ADMIN. <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy> [https://perma.cc/W88Q-JCWA].

1973-1974. These standards purposed to reduce energy consumption by increasing the fuel efficiency of cars and light trucks produced for sale in the U.S.⁹ Likewise, the Energy Star program, the U.S. Environmental Protection Agency's (EPA) voluntary program, now managed by the EPA and the Department of Energy, is a popular program used by businesses and individuals to save money by making decisions based on energy efficiency and a reduction in climate-harming emissions.¹⁰ Although these two examples are both highly effective and relatively cost-efficient to implement, further innovations in energy efficiency have been slow-going by those opposed to hydrocarbon development. Rather, these groups have instead called for moratoria and bans on petroleum production, along with a near-term (sometimes immediate and impracticable) switch to renewable energy sources.

This article, adapted from the University of Arkansas School of Law symposium, *The Role of Private Environmental Governance* (October 27, 2017), reviews, in brief, the need to implement energy efficiency within the domestic demand-side sector and possible strategies to increase energy efficiency while working towards reduced greenhouse gas emissions.

After the first oil price shock in 1973, the United States administration was ready to tackle efficiency. Largely ignored throughout the advent of the age of post-World War II petroleum, it became an issue of paramount importance in 1973-1974 after the Organization of Arab Petroleum Exporting Countries announced an oil embargo against countries supportive of Israel during the Yom Kippur War.¹¹ The United States, which had supplied arms to Israel, was one of those boycotted nations.¹² Within months, the price of global crude

9. *Id.*

10. EPA & U.S. Dep't. of Energy, Memorandum of Understanding on Improving the Energy Efficiency of Products and Buildings (Sept. 30, 2009), https://www.energy.gov/sites/prod/files/2013/12/f5/epa_doe_mou.pdf [<https://perma.cc/J7TS-W8UC>].

11. Greg Myre, *The 1973 Arab Oil Embargo: The Old Rules No Longer Apply*, NPR (Oct. 16, 2013, 12:15 PM), <https://www.npr.org/sections/parallels/2013/10/15/234771573/the-1973-arab-oil-embargo-the-old-rules-no-longer-apply> [<http://perma.cc/8SUW-9LY9>].

12. *Id.*

oil catapulted from \$3 per barrel to \$12 per barrel.¹³ Concurrent with price increases, volume decreased. Quite simply, the United States was running out of oil. The infamous lines of cars around gas stations grew as the price further increased over the year. To ensure the United States did not suffer consequences as dire as those during this first oil price shock, the government enacted these first CAFE efficiency measures. The Strategic Petroleum Reserves were also created, not as an efficiency measure, but rather to shore up domestic supplies.

Further efficiency efforts include the aforementioned Energy Star rating system, which incentivizes efficiency, and the Leadership in Energy and Environmental Design (LEED) rating system, which “is the most widely used green building rating system in the world.”¹⁴ Although the Energy Star and LEED systems were not created during the historic oil price shocks, their genesis arose from the tumultuous events of the 1970s. Arthur H. Rosenfeld, often referred to as the “father of energy efficiency,”¹⁵ was responsible, in part, for the focus on efficiency. In November 1973, the nuclear and particle physicist at the University of California, Berkeley walked the hallways of his laboratory floor, astounded by how many lights were left on, especially during a crisis of energy supply.¹⁶ After calculating the volume of oil-equivalent energy wasted, he decided that action could be taken to increase efficiency and conservation.¹⁷ His actions, and guidance, shaped California and national energy efficiency efforts.

Those opposed to petroleum development and use often forget its dispersion and use in a myriad of industries and applications, in addition to its reliability and low cost. It is not until that hydrocarbon resource is removed or limited that consumers recall its importance. There is little doubt that

13. Terry Macalister, *Background: What Caused the 1970s Oil Price Shock?*, GUARDIAN (Mar. 3, 2011, 11:26 PM), <https://www.theguardian.com/environment/2011/mar/03/1970s-oil-price-shock> [<https://perma.cc/FJ9B-VAS2>].

14. *LEED is Green Building*, U.S. GREEN BUILDING COUNCIL, <https://new.usgbc.org/leed> [<https://perma.cc/ZJ8V-66HQ>].

15. Kate Galbraith, *Arthur Rosenfeld, Zealous Champion of Energy Efficiency, Dies at 90*, N.Y. TIMES (Jan. 27, 2017), <https://www.nytimes.com/2017/01/27/science/arthur-rosenfeld-dead-energy-efficiency.html> [<https://perma.cc/L8QP-F3E8>].

16. *Id.*

17. *Id.*

petroleum will one day be replaced with another energy source, perhaps one that is low carbon or zero carbon based. But that day is not yet here. In the meantime, instead of focusing on supply-side economics, those opposed to petroleum extraction and use should learn the weary lessons from the oil price shocks and begin to refocus their efforts on demand and consumption.