

Opposition to Renewable Energy in the U.S.

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Opposition to Renewable Energy in the U.S.

Renewable energy is growing in response to public support, “green” legislation, and technological innovation. A 2018 national survey found 72% of respondents think that increased use of renewable energy should have a higher priority than increased exploration and drilling for oil (Hamilton, 2018). This is a problem for coal and oil companies, which view fossil fuel regulations and renewable energy promotion as threats (Krane, 2016). In response, these companies and their allies are fighting back through disinformation campaigns and lobbying (EPI, 2014). To fight clean energy legislation, fossil fuel interests generate skewed reports that exaggerate their undesirable impacts, and support groups that spread such disinformation through grassroots networks (EPI, 2014). Such a front group masks its intentions by labeling itself a “think tank” or “institute,” often claiming to advocate for a “free market.” The groups gain public support through appeals to emotion and by warning of personal and economic losses.

Opponents of renewable energy are fighting efforts to promote it. Renewable energy systems and markets have matured over the past 30 years, yet total renewable energy still accounts for only a third of total installed electricity capacity (Dhabi, 2019). Fossil fuels dominate energy production worldwide. Coal remains the largest global source of electricity generation with a 38% market share but global stores of oil and coal are being depleting at alarming rates and heavy dependence on them generates by-products harmful to humans and the environment (IEA, 2019). Renewable energy is critically important to addressing global warming and exhaustion of fossil fuels. Success in this effort will require understanding how fossil fuel interests and their allies resist conversion to renewable energy.

Opponents of renewable energy include climate change deniers, utility trade associations, industry groups, and fossil-fuel tied front organizations. They publicize and sometimes exaggerate the economic and costs of renewable energy. Most engage in public relations, but some stage protests.

Review of Research

According to Bidwell (2016), public attitudes towards renewable energy are highly dependent on information exposure; “public opposition to technology is based on a lack of quality information.” He adds that “providing information to the public can influence both the substance and quality of attitudes.” Expanding this concept to renewables, spreading disinformation aids fossil-fuel-tied organizations’ agenda to negatively influence public perception of renewable energy and to influence legislation. Public positions on clean energy are also affected by emotion. According to Cass (2009), renewable energy proposals can “disrupt or threaten place attachments and identities” and provoke questions about distributional fairness. Opponents of renewable energy gain public support by targeting emotions and using the specter of personal loss and economic repercussions to convince people to oppose renewables.

O’Connor, Bord, and Fisher (1999) found that knowledge about the causes of global warming did predict people’s behavioral intentions; individuals who are misinformed about the causes of climate change are unlikely to support policies or take the right actions to reduce the burning of fossil fuels. Dunlap et al. (2001), found that social and economic ideology, as well as political ideology, matter in shaping support for the environmental movement. Opponents of renewable energy, such as front groups funded by the fossil fuel industry, target conservatives

rather than a general audience to advance anti-clean energy legislation since alignment of political views almost guarantees support.

According to Dietz et al. (2007), support for greenhouse gas (GHG) mitigation policies is “driven more by deeply held values and general beliefs conditioned on a rough estimate of how much burden a measure would place on their household, rather than with a strict rational choice calculus.” He asserts that “individuals may rely on their trust in institutions when making decisions regarding scientific issues about which they do not have considerable knowledge.” Renewable energy opponents often rely on information from misleading reports and articles by fossil-fuel-funded conservative institutions presenting themselves as unbiased and credible. According to Dietz et al. (1989), in the policy system both scientific expertise and public opinion are resources and they are often used to oppose each other. Clean energy policies are presented as damaging by opponents of renewables by using scientific and economic reports to dispute the validity of the policies and provide counter information. In discussing various types of attacks on renewable energy policies, Elsner and Kasper (2015) state that “a main component in the strategy to stop the growth of renewable energy is to fund front groups, who then attack clean energy policies ... these groups serve a fundamental role in these assaults by adding a supposed independent, anti-clean energy voice to energy policy debates.” Front groups aiding the anti-clean energy agenda are crucial for fossil fuel interests to influence policy makers to repeal clean energy legislation.

Social and Emotional Ploys to Manipulate Opinion

Fossil fuel interests claim that policies to address climate change are ineffective, hoping to change public and law-makers opinions on clean energy policies. West Virginia Coal

Association (WVCA), a coal industry group, cites continued increase in carbon emissions as proof that renewables are failing; “despite the closure of 40% of the nation’s coal fleet since 2010, U.S. carbon emissions rose 3.4% in 2018.” (WVCA, Oct 2019). Americans for Prosperity (AFP), a self-proclaimed conservative advocacy funded by fossil fuel interest groups, asserted that a carbon tax wouldn’t be effective as an environmental policy; “even if we adopt a carbon tax, it will produce an extremely negligible effect on any projected temperature change. Given the complexity and significant natural variability of our climate system, even if you eliminated all carbon emission in the United States, it would still have a minimal impact on climate” (AFP, Aug 2018). The Heritage Foundation is a self-named “think tank” that promotes conservative public policies. They label fuel standards as ineffective and irrelevant; “even if fuel economy standards reduced carbon dioxide as much as the Obama administration purported they would, the averted warming would be at most a thousandth of a degree Celsius by the year 2100” (Loris, 2018).

Opponents of renewables assert that fossil fuel reliance is essential to America’s future and that phasing them out would be detrimental. A Facebook post by WVCA supporters called for an end of attacks on fossil fuels stating “let’s stop demonizing the fuels that are the foundation of our standard of living. These are the fuels that drive our economy, that are industrializing nations, and pulling millions of out of poverty every year. Coal is here to stay” (WVCA, Sept 2019). In an article targeted at lowering emissions of coal, America’s Power, a national trade association which advocates on behalf of coal-fueled electricity, stated in a press release that “the nation’s fleet of coal-fueled power plants is essential for maintaining a diverse portfolio of electricity resources; providing fuel security; assuring grid reliability and resilience; and producing affordable electricity, especially when other electricity sources are not reliable or

are too expensive” (America’s Power, Aug 2019). The Heartland Institute emphasized the future of fossil fuels is crucial to the country’s success stating “to have the world’s leading oil, gas, and coal industry all in one economy would restore the American economy to world leadership and would reinvigorate the American Dream” (Heartland Institute, 2018). The Heartland Institute stressed that the implications of eliminating fossil fuels would be catastrophic; “millions of American families will see their living standards, health, welfare, and life spans decline precipitously, for no climate or environmental benefit whatsoever” (Heartland Institute, 2018).

Opponents of renewable energy routinely deceive people by claiming they are unbiased “free market” advocacy and research groups while being funded by the fossil fuel industry. In a leaked confidential memo, the Heartland Institute was exposed as having fossil fuel funding from the Koch Foundation and others, counter to their stated mission of publishing unbiased research; “other contributions will be pursued for this work, especially from corporations whose interests are threatened by climate policies” (DeMelle, 2012). The institute was also found to have plans that advanced social programs for the anti-clean energy agenda; “we are pursuing a proposal to produce a global warming curriculum for K-12 schools which will focus on providing curriculum that shows that the topic of climate change is controversial and uncertain – two key points that are effective at dissuading teachers from teaching science” (DeMelle, 2012). Based on publicly available tax documents, Beacon Hill Institute (BHI) was confirmed to have fossil fuel interest group funding, discrediting their self-proclaimed assertion of being an impartial research organization (Desmog, 2019). In response to BHI’s flawed study of the Clean Power Plan (CPP), Laurie Johnson of the Natural Resources Defense Council (NRDC) wrote a blog post pointing out that the study does not actually analyze the CPP but instead “applies a back-of-

the-envelope calculation to an economy wide carbon tax analysis.” BHI responded to her defending its studies but did not deny that they failed to address the CPP (Tuerck, 2015).

Renewables as an Economic Burden

Opponents of renewable energy emphasize the economic repercussions of clean energy, portraying it as detrimental to the American economy. This helps them lobby legislators. In an article aimed at debunking carbon tax “myths,” AFP stated “a carbon tax would hurt the economy: high energy input industries would lose their competitive edge in the global market due to higher costs, the tax would increase the costs of goods and services as all businesses would face higher energy, material, and transportation costs” (AFP, 2018). In an article reviewing the effects of the Corporate Average Fuel Economy standards (CAFE), the Heritage Foundation warned of the economic repercussions of the regulation; “the CAFE standards’ trivial moderation of warming would lead to a benefit equal to 0.0065 percent of world GDP in 2100. Any benefit in the same order of magnitude as this undiscounted, distant gain to gross domestic product (GDP) would be more than offset by the massive losses the strict CAFE standards are already imposing on U.S. consumers each year” (Furth & Kreutzer, 2016). The organization implicated that the standards decreased America’s competitiveness in the global market; “CAFE standards may also have redistributed corporate profits to foreign automakers and away from Ford, General Motors (GM), and Chrysler (the Big Three), because foreign-headquartered firms tend to specialize in vehicles that are favored under the new standards” (Furth & Kreutzer, 2016). According to a report on the CPP by the National Economic Research Associates (NERA), a conservative economic consulting firm; “for the overall economy, losses to U.S.

consumers would range from \$64 billion to \$79 billion on a present value basis over the same time period” (NERA, 2015).

Fossil fuel interests claim clean energy would be economically detrimental to the average American. AFP contends that “a \$25 per ton carbon tax would cost a family of four \$1,900 per year, increase gas prices by 50 cents per gallon, and cost the economy more than 1 million jobs” (Rodriguez, 2018). In a statement about the renewable fuel standard, a regulation meant to decrease emissions, AFP stated that “this move [preserving the renewable fuel standard] would undo some of Trump’s success at the expense of taxpayers and consumers” (AFP, 2018). In a fuel economy standard report by the Heritage Foundation, an insider analysis estimates “the Obama fuel economy mandates increased new car prices \$6,800 more than the pre-2009 baseline trend, and eliminating the more aggressive standards would save 2025 car buyers at least \$7,200 per vehicle” (Furth & Kreutzer, 2016). The Heritage Foundation warned that the increasing prices due to the regulations “is likely to force millions of households out of the new-car market altogether” (Furth & Kreutzer, 2016).

Advocates of fossil fuels claim clean energy policies are unfair to American consumers and give inequitable favoritism to those who support such policies. The Edison Electric Institute (EEI) is a utility trade association that represents all U.S. investor-owned electric companies (EEI, 2019). They seek repeal of net metering laws that help make solar panels cost effective, contending they are unfair to non-solar households: “net-metered customers effectively avoid paying [grid infrastructure] costs” (EEI, 2016). AFP presents itself as a conservative advocacy but it is funded by fossil fuel interest groups. AFP criticizes renewables, calling tax breaks unfair to taxpayers: “renewable energy received over 65% of the total tax-related support ... but provides only 12.8% of the energy Americans used” (AFP, 2019). AFP criticized carbon taxes as

discriminatory to lower income households asserting that “the tax would disproportionately harm the poor who already devote a high percentage of their income towards energy costs” (AFP, 2018). AFP also targeted fuel efficiency mandates as unfair calling them “a type of highly regressive regulation” and stating “by raising the cost of automobiles in the United States, they disproportionately hurt the least fortunate. These increased costs effectively preclude millions of Americans from owning a car” (AFP, 2018).

Selective Use of Information to Manipulate Opinion

Opponents of renewable energy use false or misleading reports to demonize “green” policies in order to gain support of rollbacks of clean energy legislation. AFP attack carbon taxes using reach-around arguments to demonstrate its downfalls; “a carbon tax may increase pollution. With additional costs on American businesses, more will seek to produce in countries with even lighter environmental regulations” (AFP, 2018). In a Heartland Institute report detailing a proposal to repeal the Clean Power Plan, they invalidate credible climate research; “researchers concluded the climate models used to estimate future temperatures were predicting too much warming” (Heartland Institute, 2018). They also argue the CPP is based on “an erroneous interpretation of the Clean Air Act” therefore it has no legal authority (Ferrara, 2018). In a proposal to a prominent conservative foundation, BHI requested money to pursue biased economic research to support rollbacks of clean energy policies; “earned media and legislative efforts to repeal or diminish the Regional Greenhouse Gas Initiative will be determinants of success” (SPN, 2013). The American Legislative Exchange Council (ALEC), an organization that connects conservative lawmakers with corporate lobbyists and generates model legislation to benefit its members, have approved language to weaken Renewable Energy

Standard laws and net metering. In a 2013 annual meeting policy report, ALEC highlighted that after their adoption of the Electricity Freedom Act policy, “approximately 15 states across the country introduced legislation to reform, freeze, or repeal their state’s renewable energy mandate” (ALEC, 2013).

Opponents of renewable energy use misleading arguments to dissuade voters from clean energy policies. In an article relating fuel standards to car affordability, the Heritage Foundation published misleading assertions to condemn the standards; “increased fuel efficiency often leads to more driving, which cancels out some of the reduced carbon dioxide emissions” (Loris, 2018). Furthermore, they explained that “when consumers are forced to buy more fuel-efficient vehicles, the cost per mile falls (since their cars use less gas) and they drive more. This offsets part of the fuel economy gains and adds congestion and road repair costs” (Furth and Kreutzer, 2016). The Heartland Institute uses oversimplified language to categorize the identification of CO₂ as a pollutant to be ludicrous; “carbon dioxide is essential to the survival of all life on the planet. Without carbon dioxide in the atmosphere, plants would die. Without plants, there would be no food for animals, including humans. This is why it is nonsensical to call carbon dioxide ‘pollution’” (Heartland Institute, 2018). In an article demonstrating higher energy prices from coal retirements America’s Power cited published research from the DOE’s National Energy Technology Laboratory (NETL), stating “NETL found that during the 2020-2024 winter seasons, the expected cost of electricity would increase by almost 11% (\$9 billion) ... on the other hand, if neither announced nor at-risk coal units were retired, demand during extreme weather would lead to a cost increase of only 2.5% (\$2 billion)” (America’s Power, 2020). America’s Power cites government regulation as unfair; “the more than \$100 billion in financial support in the form of federal tax incentives and other subsidies enjoyed by the renewable industry has

succeeded in artificially lowering the cost of renewable energy development and served to distort energy markets” (America’s Power, Sept 2019).

Opponents of renewable energy attempt to discredit the results and conclusions of reports and analyses showing renewable energy benefits by targeting methodologies and using biased models. In a report on the economic effects of EPA rules, the BHI used an outdated economic model, the State Tax Analysis Modeling Program (STAMP), to generate misleading data about the costs of environmental regulation (BHI, 2015). The Institute on Taxation and Economic Policy stated in a report directed at the flaws in economic modeling systems; “STAMP’s methodological shortcomings are reflected in its unreliable results as well as contradictions by academic researchers and state revenue offices” (ITEC, 2014). In a report on the impacts of the CPP, NERA attacked the validity of the EPA’s data; “the EPA has understated its own cost estimates in its comparison of costs to projected benefits of the CPP” (NERA, 2015). NERA went on to contend that the actual spending levels projected by the EPA are billions of dollars higher than reported (NERA, 2015). They also contend that the EPA made misleading public statements about the benefits of the CPP. NERA disputed a press release stating that the CPP would decrease pollution and provide health benefits for the American people; “none of the 3,600 deaths, 90,000 asthma attacks, and 300,000 sick days reported as CPP benefits is associated with climate changes” (NERA, 2015). America’s Power disputed the validity of the methodology of an Applied Economics Clinic report which claimed renewable generation could replace coal generation at a lower cost; “this naïve approach assumes that Indiana’s annual power demand is akin to a bucket that can be filled however and whenever we choose.” They go on to say that the study “can lead to meaningless conclusions based on impossible results” (America’s Power, Dec 2019). America’s power also addressed economic studies which

condemn fossil fuels, stating “it has become popular to claim that renewable power can replace electricity generation from coal-fueled power plants while lowering costs to consumers however, studies that make this claim tend to use dubious economic assumptions (America’s Power, Dec 2019).

Fossil Fuel’s Damage Can Be Mitigated

Fossil fuel interests emphasize technologies to make fossil fuels “clean” in order to further their agenda and reduce the likelihood of renewables overtaking their foothold in the market. In a statement about the future of fossil fuel technologies, the EEI stated “many member companies have participated at different levels in projects designed to develop and demonstrate different components of CCS, including the U.S. DOE Clean Coal Power Initiative” (EEI). Coal industry groups such as the WVCA make renewables appear unnecessary by exaggerating coal’s importance and by claiming carbon capture and storage can make coal clean (Bezdek, 2017). In an article targeted at lowering emissions of coal, America’s Power (ACCCE) emphasized that investments in emission control technologies “has helped reduce emissions of traditional air pollutants by more than 90 percent per kilowatt-hour of electricity generated” (America’s Power, Aug 2019).

Conclusion

Some of the arguments made by opponents of alternative energy development are sound. For example, the un-subsidized cost of electricity from most renewable energy systems is likely higher than for fossil fuel fired plants, largely because renewable energy systems are in their infancy compared to the fossil fuel industry (who undoubtedly enjoyed that same government

assistance when they were new). However, much of the resistance to alternative energy development is either outright deceptive or at least selective reporting that appears to be aimed at preserving at all costs an unsustainable but currently profitable way of life.

It seems that it will take a new generation of world leaders with truly holistic viewpoints to allow societies and technology to transition smoothly and effectively from a primarily fossil fuel-based economy to one that relies much more heavily on renewable, sustainable energy sources. Little evidence exists that the fossil fuel and alternative energy industries can or will work together to bring about this transition.

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