Social Justice in U.S. Energy Policy: Where Justice Isn't Always Just

Daphne Wilson, *Xavier University*

Justice is something we strive for in all facets of society, yet we seem to never quite grasp it. U.S. energy policy is no different. As it stands now, Americans are forced to choose between a policy that is economically just or environmentally just, but never the combination of the two. A completely just energy policy is one that satisfies both types of justice; it would provide clean and reliable energy to everyone while not playing a disproportionate cost burden on the poor. Through examining the histories, policies, and economic implications of several energy sources, I argue that the historical and contrived narratives about nuclear power and renewable energy have forced us into this predicament. Green energy policies (like solar or wind) often result in regressive policies and a transfer of wealth from the poor to the wealthy. Historically, nuclear power has been abandoned and marked as unclean, despite it emitting no carbon. Environmental justice tactics have been employed to kill nuclear power and promote renewable energy sources. However, this perceived environmental achievement actually leaves millions of Americans poorer than before. This paper aims to analyze the best path to an environmentally and socially just U.S. energy policy.

As more and more carbon is dumped into our atmosphere, the demand for cleaner energy becomes more and more apparent. Justice in energy policies can be broken up into two components: environmental justice and economic justice. An environmentally just policy is one that best serves the environment and combats climate change. Policies that reduce carbon emissions and support green energy sources can be considered *environmentally* just, but not necessarily economically just. In contrast, economically just energy policies support, or at least do not harm, the poorest members of society. These policies do not create a regressive transfer of wealth, nor do they put a disproportionate degree of economic stress on low income households. However, economically just policies have little to no environmental responsibility. Often, as scholars have noted, the goals of these various policies are in conflict with one another. Economically just policies generally rely on dirty energy sources, which produce pollution and more harm to the environment. On the other hand, environmentally just policies place the burden upon the most vulnerable populations. Energy policies need to help mitigate, or at least not contribute to, climate change as well as not force more people into or exasperate poverty.

Fossil fuels may be equitable for the common person, but they destroy the planet. Green energy sources, like solar or wind, help reduce carbon emissions which helps climate change, but they tend to result in regressive energy policies. In the current state of affairs, we are left with choosing between further demise of the planet or pushing poor people further into poverty. However, there is no legitimate reason we should find ourselves in this predicament as there are carbon-free energy sources that can be just as, if not more, equitable than the dirty sources.

Nuclear power is one of the cleanest energy sources with a high enough baseload to accommodate a large amount of people. Yet it is generally viewed negatively by most groups that advocate for economic and environmental justice. Further, it is seldom mentioned in the clean energy conversation. Renewables sources, on the other hand, are praised for their carbon reducing abilities, but almost always lead to regressive policies. We should not be forced to choose between an energy policy that harms the environment and one that harms the most economically vulnerable in our society. A nuclear based energy policy would be the most economically and environmentally just way to provide for our society's energy needs.

The reason the United States finds itself choosing between the lesser of two evils is not because of science, but because of contrived narratives. Our policies are based on narratives perpetuated by certain actors controlling public perception. Explaining how these narratives developed can help us understand why one path was chosen over another. Further, examining how these narratives came to be allows us to better understand the underlying fears, misconceptions, and assumptions about energy sources. Until those are addressed, the US cannot hope to set a different path for energy policy that is more conducive to environmental and social justice.

Literature Review

When determining a clean energy portfolio, the two most viable options are renewable energy sources and nuclear power. Historically, nuclear power has been labeled as unclean and unsafe, while renewables have been embraced as clean, beneficial, and good for the environment. Despite nuclear power's zero carbon emissions, ability to provide cheap power to many households, and its large capacity, politicians, driven by biased environmental groups, generally steer away from it. Our energy policies reflect the diverging narratives of these energy sources in a variety of ways. The narrative for renewables is they are clean and virtuous climate savers. On the other hand, the narrative for nuclear is that it is dangerous and dirty. Applying the concept of environmental justice to energy policy raises the questions about the dominant narratives. Do Americans need to choose between environmentally just energy policies or socially just policies, or can we find a happy middle ground that satisfies both areas of justice?

Social vs. Environmental Justice

When looking at energy policy an important question arises: should energy policy focus on protecting the environment or the poor? This philosophical component forces us to consider our priorities. This can be considered a question of justice, but we first must differentiate between environmental justice and social justice. The two are not entirely removed from one another, but there is certainly tension between them, especially when it comes to energy policies.

The environmental justice movement started as an extension of the civil rights movement by focusing on how people of color were adversely and disproportionately impacted by environmental policies (Sze and London, 2008). When boiled down,

environmental justice is just a plea for equality (Ikeme 2003), which means it should connect nicely with social justice. However, one scholar, David N. Pellow, suggests that environmental justice is not as simple as we first thought. He says, "environmental inequalities are not always simply imposed unilaterally by one class of people on another," (Pellow, 2000). Rather, there are multiple players and factors when it comes to environmental injustices. One of these factors is the struggle over resource scarcity. In this struggle, resources are inevitably distributed unevenly, giving one group greater access and the ability to deprive another group of that same access. When it comes to energy, the wealthy are able to access expensive renewable energy sources, and thus are able to deprive the poor of cheap, clean energy. Thus, environmental injustices are not inherent, they are *formed* and subsequently reinforced through policies promoted by the wealthy.

While an offshoot of social justice, the environmental justice movement has brought up a series of unique questions about how policies should be written and about what rights they should protect. Eileen Maura McGurty recounts how the environmental justice movement started in Warren County, NC because of a waste facility location dispute. Explaining the tension between environmental justice and social justice, she says, "The ideological clashes between 'those who seek environmental quality' and 'those who seek social justice' emerged as a concrete conflict over the exclusive membership and staff of major environmental organizations and the regressive impacts of certain environmental policies," (McGurty, 1997). These ideological clashes are still present in U.S. energy policies today. Robert D. Bullard defines environmental justice as "embrac[ing] the principle that all people and communities are entitled to equal protection of environmental and public health laws and regulations," (Bullard, 1996). In that regard, social and environmental justice are aligned. However, the transition to environmentally just policies often result in socially unjust policies, which entirely defeats the purpose.

Renewable energy sources are a prime example of the disconnect between environmental and social justices. When a community starts to implement renewable energy, it is committing to moving away from dirty energy sources, like coal, for a cleaner alternative. Since coal plants are often situated in poor or minority communities (Israel, 2012), moving away from that energy source is an obvious way to lead towards more environmentally just policies. However, renewable energy sources are expensive and usually result in a regressive transfer of wealth, so those poor communities end up experiencing economic injustices at the hand of environmental justice.

From a social justice perspective, economic injustices are just as egregious as environmental injustices. Yet, U.S. energy polices seem to only focus on remedying one of those injustices at a time. Poor communities are forced to choose between environmental equality or economic equality when it comes to energy.

Since climate change is such an impending issue, perhaps we can abandon our moral obligation to protect the poor as long as the planet is saved by those policies. With the present state of affairs, there seems to be a tension between environmental and social justice. However, the two are not mutually exclusive. Throughout the

literature, the idea of exceptionalism comes up several times. Exceptionalism suggests that the human experience is more important than altering lifestyles to preserve natural resources. Human exceptionalism and the environmental movement seem to constantly be battling one another. The belief that humans are somehow above or in control of nature has shaped environmental and energy policies (Parkins & Haluza-DeLay). Likewise, American exceptionalism makes it difficult for us to let go of fossil fuels and move to cleaner alternatives. America has prospered immensely in times when energy is cheap, which has been made possible thanks to fossil fuels. This has created a positive association between dirty energy and American exceptionalism which has made it harder to move towards clean alternatives (Askland 2013).

The literature has seldom addressed the issue of tradeoff. This might be because that tradeoff is not required, but an implicit assumption that has been instilled through the narratives. The literature either acknowledges how energy policies can help climate change or it acknowledges how regressive policies can be; it does not acknowledge that both issues need to be tackled simultaneously.

Nuclear Narratives

Public opinion about nuclear power and renewable energy do not stem from a genuine scientific understanding or preference. Rather, there are deeply rooted historical narratives that have been carefully constructed that make the public feel a certain way about each energy source. Delving into these narratives is an important way to understand why policies are the way they are today.

Public opinions about nuclear power and renewable energy sources are undeniably different from one another. Renewable energy has been embraced, celebrated, and hailed as the solution to climate change (Wustenhagen et al.). Nuclear power, on the other hand, is associated with accidents, mutations, and destruction. These two starkly contrasting public opinions do not necessarily derive from natural inclination. Rather, the current public opinion stems historic narratives that were carefully constructed in order to achieve certain outcomes and policy decisions.

Nuclear power was not always so negatively regarded. In fact, it was once revered as the technology of the future, and there was great optimism in the energy source (Weart 1988). Now the nuclear narrative is similar to risk perception narratives. Scientific information or real facts have little salience when it comes to public opinion about nuclear power (Parkins & Haluza-DeLay). Rather, the risk narrative has driven public opinion for years. Paul Slovic and Ellen Peters explain that strong emotions, like fear or anger, play an important role in developing risk perception. Specifically, fear arises when a person feels uncertain or like a situation is out of her control. Because of that fear and uncertainty, the person comes to perceive a situation as riskier than if she was more certain. Slovic and Peters further the argument by saying, "feelings of dread were the major determiner of public perceptions and acceptance of risk," (Slovic & Peters, 2006). This connection between fear and risk perception explains why the public is afraid of nuclear power plant radiation, but accepts radiation from medical X-rays. Narratives centered around risk and fear

instill a visceral, and sometimes unfounded, response in the public. Narratives about child kidnapping, for example, appeal to our fears and emotions, so the public's risk perception is blown way out of proportion.

As previously stated, nuclear power has not always been as dreaded as it is now. William A. Gamson and Andre Modigliani (1989) explain that the shift in public opinion about nuclear power is largely thanks to a shift in discourse and narratives about nuclear power. The discourse about nuclear power, or any issue, is comprised of metaphors, catchphrases, images, moral appeals, and other symbolic devices. Those elements are combined and presented to the public as interpretive packages. There are multiple, conflicting packages, each competing to dominate public discourse and opinion. These packages are usually delivered to us by the media, but Gamson and Modigliani say, "However dependent the audience may be on media discourse, they actively use it to construct meaning and are not simply a passive object on which the media work their magic," (10). Gamson and Modigliani wrote in 1989 and trace nuclear power narratives through three time periods: Hiroshima through the 1960s; the 1970s to Three Mile Island (TMI); and TMI to Chernobyl (Gamson and Modigliani, 1989).

The first era, Hiroshima through the 1960s, reflects Weart's optimism for the power source. This time period highlighted the idea of nuclear power's duality. While the world came to know nuclear power through Hiroshima, it was not initially shunned as it is now. Rather, the public understood that nuclear power had both potentials for good and evil. American writer, Dwight Macdonald, even said, "The official platitude about Atomic Fission is that it can be a Force for Good (production) or a Force for Evil (war), and that the problem is simply how to use its Good rather than its Bad potentialities," (Gamson and Modigliani). The public understood the separation between nuclear weapons and nuclear power thanks to the dominant narrative at the time. Politicians, activists, and the media all framed the issue as a clear choice between atoms for peace and atoms for war, so it was hard for anyone to be against nuclear power. In his 1953 "Atoms for Peace" speech to the United Nations, President Eisenhower suggested opening American nuclear technology up to the rest of the world in the hopes of developing global, peaceful uses of nuclear energy (Gamson and Modigliani). The idea of a world leader suggesting something like that now is unimaginable and absurd. Yet, in 1953, nuclear power's narrative emphasized its positive potentials.

In Gamson and Modigliani's second time period, the 1970s to TMI, the narrative shifts from focusing on the duality of nuclear power to focusing on the potential dangers. In the late 1960s, there was increased awareness about radiation dangers when some milk samples were found to contain Strontium 90, a radioactive isotope produced by nuclear fission (Gamson & Modigliani; Environmental Protection Agency). Despite the fact that this radiation came from nuclear weapons testing, and had nothing to do with nuclear reactors, it led to a crisis of confidence and increased risk perception. Antinuclear activists rose during this time period and began offering their own interpretive packages, which came to dominate public discourse; the narrative neglected the potential benefits of nuclear power and started harping on

the public's fears. Instead of distinguishing nuclear weapons from nuclear power, the narrative lumped the two in together. President Carter preached for nuclear proliferation, the containment of the spread of nuclear technology. He even turned against nuclear reactors in case their produced plutonium would be used for weapons (Gamson and Modigliani). The focus on the dangers of radiation created two sources of negative perception that still persist today: the fear of transmutation and a crisis of confidence (Slovic et al., 1991). Further, different antinuclear groups took control of the dominate narrative and twisted it to focus on what they considered important. Ralph Nader and the Sierra Club began their vehement crusade against nuclear power (Kasperson et al., 1980) by offering connecting nuclear power to corporations and offering an interpretive package centered around populism (Gamson & Modigliani). The media latched onto these packages and further pushed the dangerous nuclear narrative to the forefront.

In Gamson and Modigliani's third time period, TMI to Chernobyl, the negative narrative about nuclear power continues, but there is an increased focus on public accountability. Here, the narrative promotes the idea that the nuclear industry willingly and knowingly deceived the public about the risks of the energy source. Moreover, there is little media coverage about energy independence or cost effectiveness, only placing blame on the industry (Gamson & Modigliani). The blame game can be traced back to Nader's anti-corporate packaging of nuclear power and is evident in the crisis of confidence. There was a breakdown of trust in scientific, governmental, and industrial management of nuclear power. People did not distrust nuclear power as much as they distrusted the people and institutions that controlled it (Slovic et al.)

The realities of nuclear power have not changed over the years. If anything, the technologies have become more safe and sophisticated, yet public perceptions of the energy source have only gotten worse throughout the years. Stanley Rothman and S. Robert Lichter found that despite the majority of the scientific community believes that nuclear power plants are safe, media outlets inaccurately report scientists' views. As a result, leadership groups' views correlate with that unreliable reporting (Rothman & Lichter 1987). The accepted narrative about nuclear power has shifted over time, but the fundamental facts have remained the same.

The Renewable Energy Narrative

The narrative for renewable energy sources has generally been dominated by positive imagery, and it follows that of a conservationist narrative. This is because renewables have been hailed as virtuous and critical to human survival. When debating how to reduce a country's carbon footprint, renewables are inevitably brought up as the saving grace. This is a clear contrast from nuclear power's narrative, which is dominated with images or destruction and accidents.

The way renewables are presented to the public is vastly different compared to how nuclear is presented. Rhetoric around renewables employs the assumption of consensus, both to the threat of impending climate change and to the crucial need for

renewables to combat said climate change (Barry et al.). Thus, renewables are framed as the obvious solution to a horrible problem, which then makes them celebrated in society (Wustenhagen et al.). This kind of savior framing makes it so the public does not actually have to know that much about renewables before accepting them (Bang et al. 2000). Further, this "common sense" framing creates a narrative of inclusivity, which makes it harder for any one person to "opt out" of his energy or climate obligations (Curran, 2012; Barry et al.). Renewables' narrative has enabled people to overwhelmingly want this energy source without much actual scientific understanding (Greenberg 2009).

When exploring the renewable energy narrative, it is important to remember that it is deeply connected to the conservationist narrative. This can be seen in two instances. First, the conservation movement is generally perceived positively, and it is considered a solution to a problem. By framing the issue as a solution, the same way renewables are, conservationists maintain political clout and optimistic public opinions. Secondly, the targeted audiences of the narratives are the same. Conservation organizations have influence over policies because their methods are so effective. Not only are their methods effective, but their members are affluent and upper-middle class. This means they have the time, education, organizational skills, and resources to commit to the movement (Harry et al. 1969). Similarly, only upper-middle class individuals can purchase renewables, so the conservation and renewables narratives are focused to those income groups. Regardless of this high entry cost to participate in conservationism and renewable energy, the overall public opinion is positive thanks to the strong narratives.

How an issue is framed and presented to the public entirely effects how the public perceives said issue. Nuclear power has been packaged as risky, scary, and ready to turn against man at any second. As a result, the energy source has been essentially stopped in its track through policies. Renewables, on the other hand, have been packaged as the planet's saving grace, and those who do not get on board must hate the environment. Scientific facts and understanding hold little water on either side of this debate because the public only cares about the framing of the narratives.

Policy and Economic Implications

When it comes to energy, there is always some form of government policy or regulation. However, there are a multitude of policies that each produce different economic outcomes. Often, these economic outcomes undermine social justice; energy policies have regressive outcomes or result in a transfer of wealth from the poor to the rich. An important point in considering justice in energy policy is that people have access to cheap and reliable energy. Regressive energy policies can lead to fuel poverty. A person is considered fuel poor when she spends more than 10% of her monthly income on energy services (Teller-Elsberg et al. 2016). Unfortunately, green energy policies tend to be regressive. This is the case for several reasons. Take residential solar panels for example: solar panel installation is an enormous upfront cost that most people cannot afford. Not only are they expensive, but once a house is

using solar panels, it is, in theory, generating its own power. Thus, the house is effectively off the utility's electricity grid. This is problematic for two reasons. First, the utility still generates the same amount of electricity, so its costs do not change. That results in rate hikes for those not using solar panels, which are the people who cannot afford them in the first place. Secondly, most households with solar panels can reap the benefits of net metering. When a net metering customer generates surplus power and feed electricity to the grid, the utility is compelled to buy that power at the full retail price. However, solar energy users still need to supplement their power supply with their utility. So not only do solar users benefit from selling their excess power to the grid, they still use the power from the grid (*IER* 2013).

The United States is not the only country facing the issue of regressive energy policy. When looking at Ireland's energy policies, Niall Farrell and Sean Lyons (2015) found that both flat rate policies and incremental block policies shift wealth regressively. This means that Ireland and the U.S. need to find a new policy (or energy source altogether) that does not result in a regressive wealth transfer.

It is not only energy policies themselves that are problematic. In an attempt to combat climate change, policy makers are implementing energy efficiency standards. While this is an admirable idea to help the planet, these standards often only worsen the situation for poor people. In fact, Mallika Chawla and Michael G. Pollitt (2013) found that energy efficiency standards in the United Kingdom are eight times higher, relatively, for the lowest income decile group than the highest decile. Furthermore, government subsidies tend to actually benefit the wealthy. Everyone, rich or poor, pays into the electricity grid, but the wealth is transferred regressively in forms of tax breaks and other government incentives. Efficiency standard policies have several shortcomings: incomplete information, direct subsidies to fossil fuels, insufficient research and development, and adoption externalities (Kristrӧm and Kiran, 2014). One of the reasons for these shortcomings is the United States' desire to be energy independent. However, rather than making policy objectives clear or being patient, policymakers produce rushed, ill-thought, and sloppy energy policies that result in regressive wealth transfer.

Green policies not only help the rich get richer, but they can also have a positive impact on a country's GDP (Roula 2016). In countries that utilize renewable energy sources, there tends to be an equilibrium relationship between GDP per capita, total renewable energy consumption, and employment. However, just like regressive policies help the rich, that equilibrium relationship is disproportionately helping the wealthy as well. That means that the poor are getting left behind in yet another way.

Research Question and Design

Despite all the scientific and economic knowledge available, the public and lawmakers have effectively rejected nuclear power with no regard to its low environmental impact and high generation capabilities. In contrast, the public has readily accepted renewable energy with very few questions asked. I hypothesize that this discrepancy in public opinion is a result of contrived narratives perpetuated by

certain actors controlling public perception. In order to better analyze and understand this, I will use California as a case study. I will examine and compare the timelines of California's last remaining nuclear power plant, Diablo Canyon, and the Ivanpah Solar Power Facility, which is the world's largest solar plant and is located in the Mojave Desert. In addition to developmental milestones, I will look at any protests for either project, any public or Congressional hearings, environmental groups' support or opposition, public statements regarding the projects, and media coverage. I hypothesize that Diablo Canyon's timeline will be fraught with roadblocks, negativity, and opposition. I expect to find significantly more opposition and protests compared to Ivanpah as well as more negative responses from environmental groups and public officials. Further, I expect the media coverage on Diablo Canyon to be more negative than that of Ivanpah. Finally, I expect the Diablo Canyon timeline to still show a significant amount of opposition remaining even after the project is completed. As for the Ivanpah timeline, I hypothesize that the timeline will illustrate a much smoother process teeming with public and environmental groups' acceptance. I expect it to be more expedited than Diablo Canyon with more support from environmental groups and public officials alike. I actually expect there to be very little mass media coverage since renewable energy is generally supported by the public. I also do not expect Ivanpah's timeline to extend significantly past the project's completion.

California hails itself as an environmentally friendly, green state. California activists and environmental groups even played a substantial role in the anti-nuclear movement. The state has readily accepted renewable energy and green standards all while closing five nuclear power plants, the most recent being San Onofre in 2013. Despite California's reputation for climate advocacy, the state's carbon emissions rose 3.2 percent between 2011 and 2015 (US Energy Information Administration, 2018). California's relationship with energy is the perfect result of the contrived energy narrative. The state, perhaps unfairly, is upheld as a climate champion because of its renewable energy use. The reality of the situation, the increased carbon emissions, and the increasing wealth inequality are completely ignored in favor of the pro-renewable energy narrative that has been touted and enforced for so long.

Diablo Canyon Timeline

The California utility, Pacific Gas and Electric (PG&E) announced plans to build five nuclear reactors on February 27, 1963. Twenty-two years later, those planned reactors became Diablo Canyon, and they finally came online. The path from plan to practice was not clear cut or linear for Diablo Canyon. Like many other nuclear power plants before it, there were many obstacles and protests before completion.

Initially, the Sierra Club posed itself as an ally to the Diablo Canyon project. In fact, in 1966, the group actually voted to endorse the project, thereby demonstrating the consensus of the benefits of nuclear power. Despite the initial support, the Sierra Club quickly began its opposition campaign. Leadership in group recanted its support and started getting other members on board with its opposition efforts.

In addition to being an important component to California's clean energy portfolio, Diablo Canyon also played an important part in sparking activism. In fact, several groups formed with the specific intention to oppose Diablo Canyon. In May of 1969, David Brower resigned from the Sierra Club to start Friends of the Earth. Mothers for Peace joined the fight in September of 1973, and even filed for intervenor status in November of the same year. In May of 1977, 70 statewide activists formed the Abalone Alliance to protest Diablo Canyon. These groups proved effective in the fight against Diablo Canyon, organizing protests, talking to legislators, and worsening the public's attitudes towards Diablo Canyon and nuclear power. On June 30, 1979, the Abalone Alliance organized a rally that attracted 40,000 people near the site, including Governor Brown. This demonstrates the effectiveness of opposition groups and legislators alike. Mothers for Peace took to the courts in their fight against the plant. By June of 1984, the group had filed 1,300 cases of misleading or false information. The group also submitted an appeal to reconsider giving Diablo Canyon an operating license, but the court ultimately refused to stop the reactor. To this day, Friends of the Earth is still opposing Diablo Canyon.

Fifty-five years after its proposal, Diablo Canyon is still being opposed. In fact, in January of 2018, state regulators approved a plan to shut Diablo Canyon down. This is major victory for anti-nuclear activists, and it is a major blow to clean energy in California. Diablo Canyon currently produces 9% of California's electricity, and it produces enough power for 3 million people. California legislators have given into the decades of anti-nuclear rhetoric and neglected the science behind Diablo Canyon's contribution.

Ivanpah Timeline

Ivanpah solar farm came online in January of 2014. Unlike Diablo Canyon, Ivanpah came online only eight years after its proposal from BrightSource Energy. Granted, building a nuclear power plant does indeed take more time and planning, but a solar project like Ivanpah has the advantage of not battling decades of negative narratives and opposition.

Throughout its planning and development, Ivanpah experienced some opposition like Diablo Canyon. In fact, Sierra Club filed for intervenor status against the project in March 2009. However, the amount and magnitude of opposition to Ivanpah, even from the Sierra Club, was significantly less than that of Diablo Canyon. No new groups formed to oppose Ivanpah, and there were no major protests surrounding the project. From its start, Ivanpah had public and legislators' support. President Obama even hailed Ivanpah as a positive step during a radio address in 2010. Diablo Canyon had governors showing up at protests, Ivanpah had the President singing its praises.

Part of what makes Ivanpah's support especially surprising is its negative environmental and ecological impact. The desert tortoise is native to the Mojave Desert, the same place Ivanpah is built. BrightSource spent $56 million to try and move all the tortoises since they are classified as a threatened species. Unfortunately, BrightSource was unable to remove all of them, and many were killed from being crushed under car tires, construction casualties, and other accidents. Then in May of

2016, a fire broke out at the plant. The plant is a massive concertation of solar panels, so it is susceptible to fires. Regardless, incidents like this cause further ecological damage and prevent the plant from generating the power it needs to. Fires are not the only cause of Ivanpah's problems with generation. The project costed $2.2 billion, but all the generated electricity has been more expensive than traditional solar farms or natural gas plants. Yet, the plant is still generally accepted by the public.

Criticism surrounding renewable energy projects like Ivanpah come solely from within the community and industry. The general public ignores scientific facts and data when it comes to maintain support renewable energy. Nuclear power, on the other hand, generates criticism from inside and outside the industry. The contrived narrative places renewables in significantly better light than nuclear power, so the public takes that narrative and runs with it.

Conclusion

California has the unique role as one of the biggest promoters and killers of clean energy. The state has invested in renewable energy and readily adopted such policies into its portfolio. While California has contributed to renewable energy, it has also substantially contributed to the demise of nuclear power. Seldom are nuclear power and renewable energy sources considered equals in the clean energy discussion. Clearly California did not regard the two as equals since the state promoted one, while effectively killing the other.

California's energy portfolio is hardly the cause of the contrived and skewed narrative. Rather, it is a mere consequence of that narrative. Nuclear power has constantly faced increased scrutiny and opposition. This is not the result of scientific truth or data, but it is the result of an intentionally crafted narrative aimed to promote renewables at nuclear power's expense. Nuclear power's generating capacity and contribution to climate change mitigation is often ignored, which is exactly what is happening in California with Diablo Canyon and Ivanpah.

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