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THE RENEWABLE FUTURE: PROTECTING WORKERS IN A GREEN ECONOMY

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Introduction

The transition from fossil fuel energy sources to renewable energy sources is widely regarded as a virtual certainty in the coming decades. Since electricity generation from fossil fuels accounts for approximately 40% of the nation's carbon emissions, the fossil fuel industry will be a primary focus of

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decarbonization efforts.² The economy has already begun this transition as market forces have slowly, but increasingly, moved away from the coal industry toward wind, solar, natural gas, and nuclear energy sources. While industry executives will likely face few consequences outside of lost profit, workers in these dying industries will be forced into unemployment with few economic opportunities and minimal training in other industries. As income inequality worsens alongside increasing effects of climate change, both disproportionately impacting low-income, marginalized communities, an all-encompassing solution is necessary to combat this perfect storm of societal ills.

The renewable energy sector, as it currently exists, does not possess the capacity or potential to properly address a complete economic shift of this magnitude. Jobs currently held in this sector are primarily non-union, low wage positions in affluent areas of the country. There has, so far, been minimal effort to re-train fossil fuel industry workers to have the skillset necessary to work in renewable energy. Legislators must ensure that the clean energy industry is subject to strict regulatory measures that protect workers' health and safety, job security, and competitive wages in order for the transition to a green economy to prevail. This paper will explore the intersections between the labor movement and

² See *Electricity Explained: Electricity and the Environment--Basics*, U.S. ENERGY INFO. ADMIN., http://www.eia.doe.gov/energyexplained/index.cfm?page=electricity_environment (Nov. 22, 2023) ("Power plants that burn fossil fuels and materials made from fossil fuels ... are the sources of about 40% of the total U.S. carbon dioxide ... emissions.").

the environmental movement and the potential for strengthening worker protections as our economy shifts to renewable energy.

I. Historical Narrative of Conflict Between Labor and Climate

The labor and environmental movements in the United States have always had a sordid relationship, primarily stemming from the tensions between ecological concerns and the need for jobs. However, there is also a noticeable class divide between those who identify as labor activists and environmentalists, in addition to the existing cultural and generational differences. Both movements have, at times, alienated the interests and needs of the other. Labor activists and unions have committed significant time and money to the preservation of dying fossil fuel industries, while environmentalists have historically overlooked the disproportionate impacts and needs of the working class and marginalized communities. In recent years, there has been a growing demand for a united coalition to advocate for both worker and environmental protections, which is evidenced by recent legislation like the Green New Deal.³ However, each movement must embrace compromise and comradery in order for a nationwide coalition to prevail.

The American economic system incentivizes unending economic growth, but this insatiability has consequences that are becoming more difficult to ignore as

³ Recognizing the duty of the Federal Government to create a Green New Deal, H.R. 109, 116th Cong. § 1 (2019).

we approach an almost inevitable climate crisis.⁴ Because of this mindset of endless expansion, a majority of people in the United States believe that there is an intrinsic trade-off between the preservation of jobs and protection of the environment.⁵ Historically, that perception has been correct. Nearly every period of significant economic growth in the U.S. has come at the expense of the environment. In addition to more obvious impacts of industrialization, like air and water pollution, it has been found that the industrial revolution kick-started the current trend of rising global temperatures.⁶ After approximately a century of unregulated pollutant emissions, the critical effects of industrialization became too great to ignore. In the 1950's and 60's, the environmental movement began to grow rapidly in response to a number of deaths and illnesses that resulted from incidences of severe smog and acid rain, as well as the increasingly poor air quality in urban areas.⁷

In response to pressure from environmentalists, Congress passed the Clean Air Act in 1970, followed by the Clean Water Act in 1972.⁸ AFL-CIO, the largest labor union in the U.S., supported both bills and believed they would aid in the fight

⁴ *The Climate Crisis – A Race We Can Win*, UNITED NATIONS, <https://www.un.org/en/un75/climate-crisis-race-we-can-win>. (last visited Feb. 27, 2024).

⁵ Erik Kojola, *Labor-Environment Relations: An Enduring Conflict or Transformative Alliance?*, ISA FORUM, Dec. 11, 2015, <https://isaforum2016.wordpress.com/2015/12/11/labor-environment-relations/>.

⁶ Nerilie J. Abram et al., *Early onset of industrial-era warming across the oceans and continents*, NATURE, Aug. 24, 2016, at 411–418.

⁷ *Water and Air Pollution*, HISTORY, <https://www.history.com/topics/natural-disasters-and-environment/water-and-air-pollution>, (Mar. 30, 2020).

⁸ *Id.*

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for safer workplace standards.⁹ However, within organized labor at large, there has been significant pushback to the enforcement of certain portions of these statutes, evidenced most recently in the Keystone XL pipeline controversy.¹⁰ It is important to note that both movements consist of a network of smaller organizations and factions divided primarily along ideological lines, many of which have differing, but generally connected, goals and ideas about achieving those goals. Neither movement is monolithic. While nationally prominent labor unions have often supported environmental protection policies, there has also been dissent among state and local union groups.¹¹

Some theorists have argued that organized labor and the environmental movement are inherently at odds with one another.¹² Prominent in the 1980's, and based on the domestic conditions of the decade, this theory emphasizes the following main tenets: the rising political tensions between two segments of American society: a declining industrial working class mobilizing for class-based or "materialist" struggles; and a "new middle class" focused on non-economic

⁹ *Green Labor: Protecting the Environment for All*, UNIVERSITY OF MARYLAND LIBRARIES, <https://exhibitions.lib.umd.edu/unions/political/environment#:~:text=Green%20Labor%3A%20Protecting%20the%20Environment%20for%20All&text=This%20program%20created%20jobs%20for,contamination%20of%20the%20surrounding%20communities>.

¹⁰ Rod Nickel, *TC Energy cuts jobs as Keystone pipeline nixed, but markets start to move on*, REUTERS (Jan. 21, 2021), <https://www.reuters.com/article/us-usa-biden-keystone/tc-energy-cuts-jobs-as-keystone-pipeline-nixed-but-markets-start-to-move-on-idUSKBN29Q1T8>.

¹¹ Jean-Baptiste Velut, *A Brief History of the Relations between the U.S. Labor and Environmental Movements*, REVUE FRANÇAISE D ETUDES AMÉRICAINES, <https://www.cairn.info/revue-francaise-d-etudes-americaines-2011-3-page-59.htm>, at 61.

¹² *Id.* at 62.

issues like environmental protection, identity politics or pacifism. According to this theory, the labor movement stands as the last avatar of a declining social reality at odds with new loci of political mobilization arising partly from a new understanding of the notion of “environment.”¹³

Other theorists, however, view these two movements as inevitable allies. These optimistic theories are based predominantly upon the idea that labor and environmental groups are notably more likely to succeed in achieving policy and legislative goals by pooling the resources of both movements, which will encourage cooperation among the groups as the need for climate and worker-friendly legislation becomes increasingly more necessary.¹⁴

When the modern environmental movement initially began to overlap with the labor movement in the mid-1960’s, there was an encouraging pattern of support and mutual advocacy between the groups. A number of prominent labor unions, namely the United Steelworkers and United Auto Workers, expressed support for the National Environmental Policy Act (1969), the Clean Air Act (1970) and the Clean Water Act (1972), while environmentalists widely supported the Occupational Safety and Health Act desired by the labor movement.¹⁵ There was a natural alignment of values on these issues, and it was easy for the groups to

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.* at 63.

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cooperate when combatting a common enemy, such as Shell Oil during the 1973 strike by the Oil, Chemical and Atomic Workers'.¹⁶ However, this unspoken alliance quickly drifted apart as the economic recession of the early 1970's took hold and tensions were heightened between the groups. In large part, this was due to corporate propaganda, which suggested to the American people that environmental regulation was to blame for a loss in corporate profit, and therefore, a loss in jobs.¹⁷ Many prominent political figures exacerbated fears of such a trade-off, using fear politics and workers' job insecurity to create division between the movements. Media coverage that presented the two groups as adversaries reinforced much of this alleged conflict.¹⁸ The combination of corporate propaganda and biased media has always affected the societal perception of these movements.¹⁹

During this same time in the 1970's, the Trans-Alaska Pipeline controversy served as a widely-known and immensely divisive issue, much like the Dakota Access Pipeline controversy for the current generation of activists.²⁰ Proponents of the pipeline believed the Trans-Alaska Pipeline could be a source of jobs in an

¹⁶ Steve Early, *In 3,800-Worker Strike, the Ghost of Tony Mazzocchi Still Haunts Big Oil*, IN THESE TIMES (Feb. 5, 2015), <https://inthesetimes.com/article/tony-mazzocchi-oil-strike>.

¹⁷ Velut, *supra* note 11, at 64.

¹⁸ Kojola, *supra* note 5.

¹⁹ *Id.*

²⁰ *The Environmental Movement and the Oil Industry*, PBS, <https://www.pbs.org/wgbh/americanexperience/features/pipeline-environmental-movement-and-oil-industry/>, (Last visited Feb. 27, 2024).

otherwise economically-depressed area.²¹ Environmental activists rallied together to oppose the pipeline, using the newly passed NEPA to challenge construction in court.²² The publicity surrounding the controversy and the involvement of several politicians led to an even more significant rift between the groups. Although there was some level of cooperation in the 1980's, primarily built around Reagan's deregulation attempts affecting workplace health and safety, the decade largely continued the pattern of conflict between labor and environmentalists.²³

Following years of conflicting priorities, the 1990's produced another common enemy for labor and environmental activists: globalization. As President Bush, and later President Clinton, considered the impacts of entering and amending the North American Free Trade Agreement (NAFTA), unions nationwide voiced concerns about the likelihood of job loss and dismantling worker protections, predicting that multinational corporations would attempt to cut production costs by outsourcing.²⁴ Similarly, environmental activists feared that nations involved in free trade agreements would eliminate environmental regulations to persuade corporations and investors to conduct business in those nations without any environmental constraints.²⁵

²¹ PETER A. COATES, *THE TRANS-ALASKA PIPELINE CONTROVERSY: TECHNOLOGY, CONSERVATION, AND THE FRONTIER*, 228 (1991).

²² PBS, *supra* note 20.

²³ Velut, *supra* note 11, at 66.

²⁴ *Id.*

²⁵ *Id.*

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As a coalition of activists, the two movements were able to induce the inclusion of a number of NAFTA provisions aimed at ensuring the preservation and acknowledgement of environmental and worker protections by all parties to the agreement.²⁶ This win for the alliance was no small feat, as no previous trade agreement had formally addressed the concerns of either movement, and still today, the U.S. is one of very few countries to consider such concerns in the making of free trade agreements.²⁷ This so-called “green-blue coalition” continued the fight against globalization throughout the 90’s in efforts to oppose the World Trade Organization and beyond.

While this brief history does not suggest that a transition to a united coalition of activists will be easy, it does demonstrate the opportunity for cooperation and a number of overlapping goals. Both movements have notably achieved success more frequently when they appear united. As economic inequality grows and climate change worsens, we will all be forced to confront the root causes of these societal ills. Corporate and fossil fuel industry interests have dominated the legislative decisions of Congress for decades, which is one of many overlapping causes of climate change and wealth inequality. The labor and environmental movements must choose to unite in combatting their common enemies.

²⁶ David Gantz, *Labor Rights and Environmental Protection under NAFTA and Other U.S. Free Trade Agreements*, 42 U. MIAMI INTER-AM. L. REV. 297, 308 (2011).

²⁷ *Id.* at 298.

II. Potential for Job Creation Through Climate Mitigation: A Just Transition

The term “just transition” has been used in a number of ways over the last few decades, but it has two primary meanings. The first usage focuses on the protection of vulnerable communities that may otherwise bear a disproportionate burden during and after the transition to a green economy.²⁸ The second and most common usage “calls for protecting workers and communities who depend on high-carbon industries from bearing an undue burden of the costs of decarbonization.”²⁹ The latter definition of “just transition” will be the primary focus of this paper, though it is undeniable that there are obvious environmental justice implications involved in both applications.

The transition to a low carbon society appears to be inevitable in the coming decades, in light of the domestic and international efforts to meet certain carbon reduction goals.³⁰ Despite President Trump’s opposition to environmental regulation, many states, cities, and corporations have committed to reducing carbon emissions.³¹ Experts seem to agree that the renewable energy sector will continue to grow significantly and will increasingly replace the nation’s reliance on the fossil fuel industry. However, the renewable energy industry has not yet proven to be

²⁸ Ann M. Eisenberg, *Just Transitions*, 92 S. CAL. L. REV. 273, 275 (2019).

²⁹ *Id.*

³⁰ Nigel Topping, *The Irreversible Rise of the Clean Economy in 2017* GREENBIZ (Feb. 7, 2017), <https://www.greenbiz.com/article/irreversible-rise-clean-economy-2017>.

³¹ Camila Domonoske, *Mayors, Companies Vow To Act On Climate, Even As U.S. Leaves Paris Accord*, NPR (June 5, 2017), <http://www.npr.org/sections/thetwo-way/2017/06/05/531603731/mayors-companies-vow-to-act-on-climate-even-as-u-s-leaves-paris-accord>.

notably less exploitive of workers and marginalized communities than the fossil fuel industry, which has dampened enthusiasm for many labor activists.³² Despite environmentalists' claims that environmental regulation is a net positive for all people, which is certainly true in many ways, the threat of job loss, or even simply *good* job loss, is a very real and daunting threat for the communities that depend on wages from fossil fuel employers.³³

A. Climate Change and Economic Inequality

There is still some debate about the necessity of a “just transition” plan as we convert to a green economy. Critics argue that the fossil fuel industry is dying at the hands of market-driven forces, and other failing industries have not been given the same consideration as the economy changes.³⁴ However, the causes and effects of climate change and economic inequality are inextricably linked, and, therefore, any solution to combat either of these concerns will require an acknowledgment of both. Any attempt to mitigate climate change without addressing inequality is doomed to fail. As leading theorist J. Mijin Cha explains³⁵:

³² Eisenberg, *supra* note 28, at 282.

³³ *Id.* at 283.

³⁴ *Id.* at 285 (comparing job loss in the fossil fuel sector to employees at Blockbuster losing employment due a shift in market forces).

³⁵ J. Mijin Cha is an environmental studies professor at the University of California, Santa Cruz. She is on the Faculty Advisory Board at the UCSC Center for Labor and Community and serves a fellow at the Cornell University Climate Jobs Institute. <https://mijincha.com/about-me/>

Without transitioning fossil fuel communities and workers, climate change advocates will continue a pattern of exploitation and exacerbate existing inequalities that will ultimately hinder efforts to abate the worst impact of climate change.³⁶

Further, “work or work-related human activity” is the main cause of climate change, so the emphasis on transitioning to work in clean energy must be central to any climate change solution.³⁷

Fossil fuel employers typically prevent diversified economic activity within communities which rely heavily upon the fossil fuel industry³⁸ Many Kentucky counties in Appalachia, dominated by coal mining corporations, have actively obstructed development and investment that may bring other industries to the area due to the powerful influence of industry executives.³⁹ Workers in these regions are effectively forced to work in industries that exploit them and their communities; this exploitation has only worsened as rates of unionized coal mines have decreased by more than 50% in the past two decades.⁴⁰ This historical exploitation creates a responsibility to protect these workers from similar conditions as we make the

³⁶ J. Mijin Cha, *A Just Transition: Why Transitioning Workers into A New Clean Energy Economy Should Be at the Center of Climate Change Policies*, 29 *FORDHAM ENVTL. L. REV.* 196, 198 (2017).

³⁷ *Id.*

³⁸ *Id.* at 199.

³⁹ *Id.*

⁴⁰ See U.S. ENERGY INFO. ADMIN., ANNUAL COAL REPORT (2022), <https://www.eia.gov/coal/annual/>; U.S. ENERGY INFO. ADMIN., ANNUAL COAL REPORT (2002), <https://www.eia.gov/coal/annual/archive/05842002.pdf>.

transition to a clean energy economy. While coal mines have increasingly lost profit and even operated at a net loss, coal executives have continuously increased their pay while decreasing wages, safety measures, and job quality for mine workers.⁴¹ The nature of income inequality is impossible to separate from the disparate impacts of climate change, and there is no greater example of this than Appalachia.

B. The Renewable Energy Sector

The renewable energy industry, while growing, is still fairly limited in its potential for job creation.⁴² The jobs that do currently exist in the sector generally fall within two sectors: utility-scale wind and solar work and roof-top solar panel installation. While utility-scale clean energy work typically involves union labor, high wages, and good benefits, the residential rooftop solar installation industry has significantly lower rates of unionization than the highly-unionized fossil fuel industry.⁴³ These jobs also have much lower wages and little job security when compared to positions in the oil and gas world.⁴⁴ Unfortunately, renewable energy jobs are particularly susceptible to outsourcing, and employers in the industry are

⁴¹ Cha, *supra* note 35, at 201.

⁴² J. Mijin Cha, *Labor Leading on Climate: A Policy Platform to Address Rising Inequality and Rising Sea Levels in New York State*, 34 PACE ENVTL. L. REV. 423, 447 (2017).

⁴³ Kate Aronoff, *Making Green Jobs Good Jobs*, IN THESE TIMES (Jan. 24, 2024), <https://inthesetimes.com/article/making-green-jobs-good-jobs>.

⁴⁴ *Id.*

very opposed to unionization, making it much harder for workers to establish any collective bargaining power.⁴⁵

Additionally, a majority of the existing jobs in the renewable energy sector exist primarily in high-income, predominately white communities. Low-income and minority communities spend more of their income on energy services and utilities and rarely benefit from clean energy sources.⁴⁶ In order to ensure that clean energy jobs are available for individuals in marginalized communities, legislators must commit to transitioning the energy supply in those communities to renewable energy sources, allowing the communities themselves to use and benefit from such sources.⁴⁷ Tribal advocates have also voiced the desire to preserve wind and solar projects on tribal land for the use of the reservation. As of 2018, tribal land had the potential to make up 5% of the total national solar power generating capacity and 8.8% of wind power generating capacity.⁴⁸ Ensuring that tribes are able to benefit both economically, through stable employment, and environmentally, through the personal use of wind and solar power for tribal families and homes, is a priority of the environmental justice movement.⁴⁹

⁴⁵ Cha, *supra* note 41, at 445.

⁴⁶ Uma Outka, *Environmental Justice Issues in Sustainable Development: Environmental Justice in the Renewable Energy Transition*, 19 J. ENV'T & SUSTAINABILITY L. 60, 93 (2012).

⁴⁷ *Id.*

⁴⁸ *Native American tribes pushing into renewable energy development across the U.S.*, INST. FOR ENERGY ECON. AND FIN. ANALYSIS, <https://ieefa.org/native-american-tribes-pushing-into-renewable-energy-development-across-the-u-s/> [<https://perma.cc/MMT8-6FEH>].

⁴⁹ Outka, *supra* note 45, at 96–98.

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There has been some positive movement on this front in the recent infrastructure legislation proposed by the Biden administration in March 2021. This legislation has signaled a commitment to the expansion of the clean energy sector, with the goal to use clean energy to power 100% of America's energy sector by 2035.⁵⁰ As of 2020, the renewable energy sector powered around 20% of the nation.⁵¹ However, although the administration has verbally affirmed the need for good-paying union jobs to be included in this transition, the current legislation does not offer much to ensure that workers in the renewable energy sector are protected. Some legislators have indicated a desire to attach certain worker protection provisions to the tax credits often used to fund wind and solar projects.⁵² The PRO Act, or the Protecting the Right to Organize Act, passed by the House of Representatives on March 9, 2021, also has the potential to remove many of the major hurdles to unionization that currently exist within the renewable energy sector.⁵³ Neither piece of legislation has been passed by the Senate or signed into law, but the introduction of the bills signal a national commitment to the future of clean energy.

C. Necessary Components of a Transition Plan

⁵⁰ Ella Nilsen, *Why major unions are wary of the move to wind and solar jobs*, VOX (Jan. 24, 2024), <https://www.vox.com/22301534/major-unions-worried-about-wind-solar-jobs>.

⁵¹ *Id.*

⁵² *Id.*

⁵³ Ella Nilsen, *The House just passed a sweeping and bipartisan bill to boost unions*, VOX (Mar. 9, 2021, 8:55 PM), <https://www.vox.com/22319838/house-passes-pro-act-unions>.

A truly united labor-environment coalition, which is ultimately necessary to ensure a complete and equitable transition to a decarbonized economy, requires that [group 1] and [group 2] rest on equal footing. Therefore, the creation of quality union jobs must be equally as important as carbon reduction and other environmental goals.⁵⁴ Many experts in both labor and environmental policy have presented roadmaps and plans to make a transition that is considerate of both groups. AFL-CIO has presented a number of policy proposals on this front, “include[ing] 70 percent wage replacement and 80 percent health benefit replacement for up to three years, as well as ‘bridge to retirement’ funding for workers who are near retirement. A ‘just transition’ program should also include re-training and education funds for workers who would like to shift to other sectors.”⁵⁵ Other policy analysts have presented full-length legislative proposals, including the funds necessary to support and protect workers as a part of a larger public investment plan to reduce reliance on fossil fuels and other carbon-emitting energy sources.⁵⁶

A job loss assistance program to aid industry workers facing unemployment would not be the first of its kind. The government has instituted several programs to aid workers displaced due to shifts in U.S. trade policy and defense-related

⁵⁴ Cha, *supra* note 41, at 445.

⁵⁵ *Id.* at 446.

⁵⁶ Robert Pollin & Brian Callaci, *A Just Transition for U.S. Fossil Fuel Industry Workers*, AM. PROSPECT, Summer 2016 Issue No. 3 (July 6, 2016), <https://prospect.org/environment/just-transition-u.s.-fossil-fuel-industry-workers/>.

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policy, although they were only minimally effective.⁵⁷ Programs of this kind predominantly focus on supplementing workers' incomes for a certain period of time, without addressing larger concerns of future employment, training, or retirement.⁵⁸ Studies focused on these aforementioned programs demonstrate that a transition to a green economy must commit to investing holistically in the protection of workers, rather than temporarily providing income assistance.⁵⁹

There has also been some success on a regional level at securing local and state funding for just transition programs. The Town of Tonawanda, a suburb of Buffalo, NY, was a town almost entirely economically dependent on a local coal-fired power plant, which was the biggest polluter in the county.⁶⁰ However, the community also had significantly higher than average rates of cancer and illness, at least in part because of the plant's emissions.⁶¹ The Huntley coal plant was closed in 2015 due to the increasing unprofitability of coal. In the years leading up to this final closure, the company had downsized significantly, so members of the community were largely aware of what was to come.⁶² Throughout this process, the community was economically devastated, with a job loss of 60% of the plant's

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Tonawanda, New York, United States: The Closure of the Huntley Generating Station and Community-led Efforts for a Prosperous Future*, WORLD RES. INST., <https://www.wri.org/just-transitions/tonawanda-new-york>, (last visited Feb. 27, 2024).

⁶¹ *A "cancer crisis" in Tonawanda?*, INVESTIGATIVE POST, <https://www.investigativepost.org/2013/02/12/health-review-finds/>.

⁶² *Supra* note 60.

workforce and a loss of 6.2 million in tax revenue for the town.⁶³ In response to this community hardship, an alliance of labor unions from numerous occupations, the Clean Air Coalition of Western NY, and Sierra Club formed and were prepared to organize the community to fight for a just transition.⁶⁴ The alliance was able to successfully lobby for \$30 million in funding for community assistance to aid the workers and families affected by the closure, which has since been increased to \$56 million.⁶⁵ The community organizers involved in this victory, with the help of “Just Transition Fund,” were also able to help secure severance packages or other employment for all union workers at the plant and hold the company accountable for a proper clean-up of the plant site.⁶⁶

The Hopi and Navajo nations’ battle for a just transition program during and after the closure of the Mohave Generating Station is another example of the necessity of an equitable transition plan.⁶⁷ The Mohave Generating Station began operating in Nevada, along the Arizona border, in 1971 and was at one time the largest source of sulfur dioxide emissions in the west.⁶⁸ The Hopi and Navajo tribes were central to the operation of the plant, jointly owning the coal mine that supplied coal to the plant and providing water to the plant from an aquifer under their tribal

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Clean Air Helps Create a \$45 million New York State fund for Coal Community Transition*, JUST TRANSITION FUND, <https://www.justtransitionfund.org/stakeholders/clean-air-coalitions-of-western-new-york>.

⁶⁷ Alan Ramo & Deborah Behles, *Transitioning A Community Away from Fossil-Fuel Generation to A Green Economy: An Approach Using State Utility Commission Authority*, 15 MINN. J.L. SCI. & TECH. 505, 509 (2014).

⁶⁸ *Id.*

land.⁶⁹ However, the existence of the plant both economically stimulated and environmentally depressed both tribes. The operation of the coal mine and plant severely polluted the aquifer below the tribal lands, which was used as drinking water, supply water for livestock and crops, and for cultural offerings.⁷⁰ This pollution had an even more drastic effect as droughts in the area worsened and water became more scarce. When the plant ultimately closed in 2005, a group of tribal activists and environmentalists formed the Just Transition Coalition and demanded that the California Public Utilities Commission (CPUC) create a just transition fund for the tribe.⁷¹ The solution proposed by the Just Transition Coalition was the first of its kind and has the potential to be a roadmap for other communities.

D. Local, State, and Federal Policy Action

There is significant potential for government policy action to address the problems and needs presented above. The individual case studies discussed exemplify the need for creativity and flexibility throughout the transition to a renewable energy economy. All positions and perspectives, including those of labor and environmental activists, must be considered in order to reach an equitable solution. The Mohave plant closure is only one example of such a case, but it is an

⁶⁹ *Id.* at 510–11.

⁷⁰ *Id.* at 515–16.

⁷¹ *Id.* at 518–19.

excellent guide for other local and state legislators and commissioners in making similar decisions.

The Just Transition Coalition proposed a novel source of funding to create a just transition program to aid the affected tribes, along with the utility consumers, with a transition to renewable resources. The Coalition presented a plan before the CPUC to use the revenue from the Mohave plant's unused acid rain allowances to fund the program, as the closed plant would no longer need those allowances to account for sulfur dioxide emissions.⁷² For context, Congress enacted the Acid Rain Program in 1990. This scheme allowed companies to buy and sell allowances, permitting them to release one ton of sulfur dioxide for every one allowance.⁷³ The Coalition argued that the corporation owning the Mohave plant should not be entitled to profit from the sale of the unused allowances at the expense of the surrounding communities and that the tribes at risk of suffering grave harm from the closure should benefit from such revenue.⁷⁴

Fortunately, the CPUC was willing to hear and consider the Coalition's proposal and was committed to finding an equitable solution. California's constitution gives broad powers to the CPUC to regulate public utilities, and its

⁷² *Id.* at 519.

⁷³ Juha Siikamaki, et al., *The U.S. Environmental Protection Agency's Acid Rain Program*, RESOURCES FOR THE FUTURE, at 2 <https://www.rff.org/publications/issue-briefs/the-us-environmental-protection-agencys-acid-rain-program/> (last visited May 29, 2024).

⁷⁴ Ramo, *supra* note 66, at 521.

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authority can only be limited directly by the state legislature.⁷⁵ The CPUC relied upon case law stating that it has authority to “exercise equitable jurisdiction as an incident to its express duties,” as well as authority to take action not expressly designated in the Public Utilities Act when “necessary and convenient in the supervision and regulation of California public utilities.”⁷⁶ CPUC’s decision was further justified by California’s Renewable Portfolio Standards (RPS) and the federal Clean Air Act, both of which incentivize renewable energy generation and conservation.⁷⁷ Ultimately, the CPUC decided to use the funds to develop renewable energy technologies for the use and benefit of the tribes and surrounding consumers.

Many states will not have case law or statutory authority allowing the disbursement of funds from these types of emission trading programs to communities or consumers. However, many state utility commissions have broad authority to regulate public utilities, and the Acid Rain Program, which regulates both sulfur dioxide and nitrogen oxide, is certainly not the only cap-and-trade program of its kind.⁷⁸ At least 23 U.S. states have participated in cap-and-trade programs to reduce greenhouse gas emissions⁷⁹, and 21 states, in addition to

⁷⁵ Pac. Tel. & Tel. Co. v. Pub. Utilities Comm'n, 401 P.2d 353 (1965).

⁷⁶ Wise v. Pac. Gas & Elec. Co., 77 Cal. App. 4th 287, 299 (1999).

⁷⁷ Ramo, *supra* note 66, at 524-525.

⁷⁸ *Acid Rain Program*, U.S. ENV'T PROT. AGENCY, <https://www.epa.gov/acidrain/acid-rain-program> (last visited Feb. 27, 2024).

⁷⁹ *Regional Cap and Trade Programs*, WORLD RES. INST. (Feb. 16, 2011), <https://www.wri.org/data/regional-cap-and-trade-programs>.

California, also have RPS requirements.⁸⁰ In 2009, 10 Northeastern states established the Regional Greenhouse Gas Initiative (RGGI) which capped the total carbon dioxide emissions from power plants in member states.⁸¹ Emissions in member states have been cut in half since RGGI was enacted, and the program has generated nearly \$3 billion in economic value from the sale and trade of emission allowances.⁸² As programs of this kind become more common, and as coal-fired power plants increasingly lose profitability, states will have the opportunity to use revenue generated from cap-and-trade programs to fund just transition programs for affected communities.

The use of emission allowances and cap-and-trade programs to fund the transition to renewable energy is only one of several proposed policy solutions across the country. Recent proposed legislation in Illinois, coined as an equity-based approach, intends to grant expanded subsidies and tax credits for “noncarbon-emitting electricity sources”.⁸³ Many of the expected components of a just transition plan are included in this legislation, such as “employment assistance, career services, full-tuition scholarships for Illinois institutions and trade schools,

⁸⁰ *Climate Change 101: State Action*, PEW CENTER ON GLOBAL CLIMATE CHANGE, https://www.pewtrusts.org//media/legacy/uploadedfiles/wwwpewtrustsorg/reports/global_warming/pewclimate101stateactionpdf.pdf.

⁸¹ *Market-Based State Policy*, CTR. FOR CLIMATE AND ENERGY SOL., <https://www.c2es.org/content/market-based-state-policy/>.

⁸² *Id.*

⁸³ Grace Barbic & Jerry Nowicki, *Union-Backed Coalition Outlines Broad New Energy Plan*, WGLT (Mar. 30, 2021, 1:40 PM), <https://www.wgl.t.org/post/union-backed-coalition-outlines-broad-new-energy-plan#stream/0>.

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financial planning services and some insurance benefits.”⁸⁴ Public utility ratepayers are expected to bear the brunt of the legislation’s funding through increased utility rates, but the plan includes a specific rate relief program for low-income community members.⁸⁵

Numerous other proposals include similar uses of tax credits and subsidies to incentivize the construction and maintenance of renewable energy generators. Most recently, in a surprising proposal from the United Mine Workers of America (UMWA), the nation’s largest coal miners’ union signaled its support for a just transition to renewable energy.⁸⁶ UMWA’s plan would create new jobs in the Appalachian region by the use of tax credits to subsidize solar panel and wind turbine creation.⁸⁷ The plan also calls for the further development of carbon capture technologies that would allow certain mines to remain open after adopting and implementing the technology. The Biden administration’s proposed infrastructure plan already includes funding for carbon capture technology, therefore, making it a potentially viable resource in the future.⁸⁸

Although local and state policymakers have made significant progress on both carbon reduction goals and just transition/worker protection goals over the last

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Miners’ Union Backs Shift from Coal in Exchange for Jobs*, ASSOCIATED PRESS, <https://apnews.com/article/government-and-politics-business-environment-and-nature-1ee4ba04f4f49246b19d1e025bec3586>.

⁸⁷ *Id.*

⁸⁸ *Id.*

two decades, federal policy action has generally fallen behind.⁸⁹ As mentioned above, Congress has enacted employment assistance programs in the past for unemployed workers in certain failing or changing industries. However, there has been no such direct action to benefit workers impacted by the faltering coal industry. These workers have been disproportionately reliant on federal health programs and other federal benefits to provide healthcare and basic necessities for them and their families. Despite this reliance, Congress has not responded with any type of direct wage assistance program for unemployed miners.⁹⁰

While state remedial measures are certainly helpful for many affected communities, federal action is a necessity to ensure a truly just and equitable transition. The Environmental Defense Fund (EDF) provides several reasons why federal legislation is the most effective means of transitioning to a green economy.⁹¹ Creating a federal just transition program would allow for a central, accessible resource hub, ensuring coordination among government agencies and other entities.⁹² It would also allow for an expansion of partnerships and workforce programs, like the Appalachian Regional Commission, between the federal

⁸⁹ Cha, *supra* note 41, at 424.

⁹⁰ Mason Adams & Dustin Bleizeffer, *Coal Communities Increasingly Rely on Federal Health Programs*, ENERGY NEWS NETWORK (JUN. 30, 2020), <https://energynews.us/2020/06/30/coal-communities-increasingly-rely-on-federal-health-programs/>.

⁹¹ Jake Higdon, *Federal Labor Policies are Critical for Ensuring a Fair Energy Transition*, ENVIRONMENTAL DEFENSE FUND (Mar. 16, 2021), <https://blogs.edf.org/climate411/2021/03/16/federal-labor-policies-are-critical-for-ensuring-a-fair-energy-transition/>.

⁹² *Id.*

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government and specific state and local economies.⁹³ Arguably, the most important consideration is the need for federal worker protections as our economy makes a transition of this magnitude. Labor standards must be heightened and preserved at the federal level to ensure that workers are not exploited in the renewable energy sector as they have been in the fossil fuel industry.⁹⁴

The recently proposed Climate Leadership and Environmental Action for our Nation's (CLEAN) Future Act includes a number of the recommended components of a just transition plan. A crucial part of the legislation involves the study and research of the full scope of worker displacement resulting from the transition to a green economy.⁹⁵ Coal miners, though they are at the forefront of the movement, are not the only workers who will inevitably be displaced throughout this transition. The transportation sector, oil and gas sector, and many other industries, including the clerical and administrative support positions associated with those industries, could be critically impacted.⁹⁶ The CLEAN legislation also embraces some of the EDF recommendations, with a plan to significantly expand the Appalachian Regional Commission and other economic development programs to meet community needs.⁹⁷ Although the CLEAN Act is far from being enacted,

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ Jillian Neuberger & Devashree Saha, *What a Federal Just Transition Strategy Should Look Like*, UTILITY DIVE (Apr. 5, 2021), <https://www.utilitydive.com/news/just-federal-transition-strategy-from-coal-carbon-emissions-should-look-like/597646/>.

⁹⁶ *Id.*

⁹⁷ *Id.*

the proposal should indicate a possibility of future federal policy action on this front.

Conclusion

Environmentalists and labor activists would agree that a just transition is the ultimate goal as our economy shifts away from the fossil fuel industry. The primary contention between the two groups relates to the timing of such a transition and the components of a transition plan. Importantly, it has been repeatedly demonstrated throughout history that workers and environmentalists are notably more successful as a collective unit of activists. The two groups have been able to unite, on many occasions, to combat a common enemy, and climate change and wealth inequality are already being recognized as common enemies of both movements. Several above examples, particularly the Mohave plant case study, exemplify both the ability of policymakers to consider multiple positions and perspectives and the need for creativity and flexibility as decisions are made.

Although the climate crisis is urgent and requires immediate action, the transition to a completely renewable economy cannot be rushed. The renewable energy sector does not currently have the capacity or revolutionary potential to become a strong, stable industry for workers. Low wages, a lack of unionization, and minimal worker protections have persisted throughout the renewable industry

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as a result of corporate lobbying and threats of outsourcing. The industry must be completely transformed to ensure that workers transitioning from other sectors and the surrounding communities are not exploited by “green” companies in the same way that they have been exploited by the fossil fuel and other industries. Without the guarantee of worker protections, workers and union members will understandably be wary of supporting a transition of this magnitude.

A majority of just transition plans proposed by unions, environmentalists, and policy analysts include, at minimum, wage replacement guarantees, re-training programs, retirement and pension plans, and continued health benefits in congruence with the development of renewable energy sources for the use and benefit of affected communities. Local and state governments and agencies have a wide variety of options at their discretion to create just transition programs at a regional level, and many have been able to do exactly that. However, legislation must be enacted on a national scale in order to truly address the scope of this transition. Any federal legislation proposed on this front must thoroughly and holistically address community needs and the magnitude of worker displacement that will be inevitable as the transition occurs. The economy and society as a whole are already transitioning towards a green economy. Policymakers must embrace the revolutionary potential of a just transition and use it as an opportunity to transform the lives of workers and communities harmed by the industries of the past.