

COMMENTS

From the Ruhr Valley to Ramp Hollow: Lessons for America from Germany’s Just Energy Transition

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I. INTRODUCTION

Germany’s last hard coal mine in the Ruhr Valley, Prosper-Haniel, closed in December of 2018.¹ When the coal industry in the Ruhr Valley was at its peak in the 1950s, nearly two hundred mines employed more than half a million miners.² Germany’s decision to transition out of coal mining was essentially an economic one. Since the end of World War II, German policymakers could foresee that domestic coal would not remain viable in the global market and began a steady draw down of the industry.³ Though Germany’s decision was market based, a proactive democratic

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1. Katherine Webb-Hehn, *Appalachia is Transitioning from Coal. Here’s What it Could Learn from Germany*, ENV’T HEALTH NEWS (Oct. 16, 2019), <https://www.ehn.org/appalachia-sustainable-transition-from-coal-2640974149/boon-and-burden>.

2. *Id.*

3. See 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 ENV’T L. REV. 196, 211 (2017).

socialist government, through strong tripartite cooperation among industry, labor, and government, transformed what was once a region that relied significantly on extractive industry into a prosperous area of diverse opportunities.⁴ Through the use of short-term policies designed to protect workers from the most devastating immediate effects of the transition and the use of long-term policies designed to transform the economy in the Ruhr Valley, Germany avoided the economic fallout occurring in Appalachia as the coal industry there contracts.⁵

In the coal mining areas of Appalachia, progress away from an economy centered almost singularly on coal production has been harder to realize. The just transition movement has failed in Appalachia, if it was attempted at all, because American industrial policy has been captured by corporate interests hellbent on squeezing blood from the stone. Any attempt at a just transition by well-meaning non-governmental organizations has failed because of the erosion of labor power in the past fifty years, lack of political will to address the root causes of poverty in the region, and government recalcitrance and ineptitude at addressing the decline of the coal industry and the needs of workers and communities. These workers and communities will continue to bear the brunt of the decline as mining becomes less economically viable, unless society acts to change the current paradigm. It is important to note the Appalachian economy was engineered to be dependent on extractive industry—this situation did not spring up organically.⁶ As Ann Eisenberg has observed, “[t]he rest of society has alternately encouraged, acquiesced in, or benefited from this hazardous, economically depleting way of life.”⁷ The industrialization of America would not have been possible without designating Central Appalachia as an “internal colony” or “sacrifice zone,” exploited to fuel the industrialization and progress of the past two centuries.⁸ Coal extracted from Central Appalachia fueled the American Industrial Revolution and the progress of the past two centuries.⁹ Now, the rest of American society has a duty to help those who were subjugated and whose land was pillaged in the name of development.

This Comment argues that, despite this history, it is not too late to help the mining communities of Central Appalachia. If the lofty ideas of

4. *See id.* at 212.

5. *See id.*

6. *See* Ann M. Eisenberg, *Just Transitions*, 92 S. CAL. L. REV. 273, 301 (2019) [hereinafter Eisenberg, *Just Transitions*].

7. *Id.*

8. *See id.* at 301.

9. STEVEN STOLL, RAMP HOLLOW: THE ORDEAL OF APPALACHIA 34 (2017).

environmental justice, sustainable development, and distributive justice are put into action, workers could be protected from the worst outcomes, economic hardship in Central Appalachia could be reversed, and communities there could transition out of a focus on a single industry into a more equitable economy. This Comment argues that any previous attempts to enact a just transition failed because they did not go far enough and did not meaningfully involve the community that regulators or policymakers sought to help. To have a successful just transition, government, labor, and capital must work together toward a future that protects the workers and communities that were sacrificed for the greater good of industrial society. Action must be swift and decisive to address the problems in Appalachia, and more generally to reverse the effects of climate change, to decarbonize our economy, and to transform our society from one of destruction to one of revitalization.

Part II of this Comment introduces what is meant by a just transition and how the concept fits into notions of distributive equity and environmental justice. Part III considers how Germany was able to transition out of hard coal mining and begin moving away from a fossil fuel-dependent economy while protecting workers and revitalizing former mining communities. Part IV describes the arc of the coal industry in America, the struggles of workers and government to create an industry beneficial for all, and the failure to actualize a just transition out of a coal dominated economy in Central Appalachia. This part also discusses various attempts at regulatory transition, at addressing Appalachian poverty, and at actualizing a just transition away from coal. Part V considers what could be done in the future to ensure a just transition and the protection of workers and communities as the United States faces the need to revolutionize its energy sector, infrastructure, and economy.

II. A TRANSITION IS INEVITABLE, IT SHOULD BE JUST

Judson Abraham, in his comparison of attempts at a just transition in Germany and Appalachia, argued that “[m]ilitant workers with a strong degree of democratic input into their industries’ operations are best positioned to fight for just transitions.”¹⁰ Proponents of labor environmentalism push for sustainable development as a crucial aspect of labor struggles for power.¹¹ Tony Mazzocchi, a labor official of the Oil,

10. Judson Abraham, *Just Transitions for the Miners: Labor Environmentalism in the Ruhr and Appalachia Coalfields*, 39 NEW POL. SCI. 218, 219 (2017).

11. *See id.* at 222.

Chemical, and Atomic Workers International Union in the 1970s and 1980s, first coined the term just transition. He called it a “Superfund for Workers.”¹² Jeremy Brecher defines just transition as “the protection of workers and communities from the effects of socially and environmentally necessary economic change,” typically a shift away from fossil fuels.¹³ Ann Eisenberg, in her foundational article on the subject, considered two conceptions of just transition: one standing for the idea that the transition to a decarbonized economy should ensure fairness for vulnerable populations, and the other for the idea that workers and communities who have depended on polluting industries should not bear the highest costs as society attempts to decarbonize.¹⁴ Eisenberg considers the definition more focused on labor protections to be more useful in overcoming obstacles to climate reform.¹⁵ Just transitions necessarily involve plans for reemployment of workers, guarantees of economic security, and plans for development and investment to replace what is lost.¹⁶ In essence, “workers alone should not bear their economic loss if society is to benefit from policies that result in them losing their livelihoods. Rather, the loss should be distributed equitably among everyone.”¹⁷

By framing the concept of a just transition not solely as an environmental movement but also a labor movement, environmentalists could address and reverse the persistent notion that environmental protection is a zero-sum game where there are winners and losers.¹⁸ It might seem expedient and logical to place polluting and dangerous industries in rural areas with low populations—to dismiss rural environmental and distributive injustice as more reasonable than the alternative, but the willingness to sacrifice one population in a rural area for the greater good elsewhere is an unjust utilitarian calculus.¹⁹ Rather than write off a section of rural America as an internal colony or sacrifice zone, the rest of society, which has benefitted from the exploitation of those who have been disadvantaged, should bear some of the harm. By aligning a just transition to the needs of workers, the opportunity for a

12. *Id.*; Eisenberg, *Just Transitions*, *supra* note 6, at 285.

13. Jeremy Brecher, *Jobs Beyond Coal: A Manual for Communities, Workers, and Environmentalists*, LABOR NETWORK FOR SUSTAINABILITY, http://report.labor4sustainability.org/coal_2012.pdf.

14. Eisenberg, *Just Transitions*, *supra* note 6, at 275.

15. *Id.* at 276.

16. *See* Brecher, *supra* note 13.

17. Ann M. Eisenberg, *Distributive Justice and Rural America*, 61 B.C. L. REV. 189, 218 (2020) [hereinafter Eisenberg, *Distributive Justice*].

18. *See* Eisenberg, *Just Transitions*, *supra* note 6, at 276.

19. *See* Eisenberg, *Distributive Justice*, *supra* note 17, at 223-24.

coalition between environmentalists and labor activists could redound to the benefit of both groups.²⁰ With targeted unemployment benefits, fully funded pensions, education and retraining, and relocation support, those who have been dependent on fossil fuel extraction could move into new employment with minimal disruption in their life and economic security.²¹ The just transition is fundamentally an equitable principle, calling forth the concepts of estoppel and unclean hands.²² The notion is that “society should not profit substantially from its hazardous industries only to abandon the workers in those industries, and nor should it encourage fossil fuel development only to abruptly take the opposite stance.”²³

If a just transition is to be realized, labor and environmental groups must find common cause. Rather than resigning themselves to the antagonistic jobs-versus-environment dichotomy, the groups should focus on their shared interests. Workplace safety and health, preservation of human needs, distributive and environmental justice, and checks on corporate activity could serve to unite the two interest groups into a Blue-Green Alliance. “[T]he work of environmental justice would be well served by expanding the discussion of its aims to more fully anticipate and address the negative externalities that environmental protection imposes on vulnerable communities.”²⁴ A just transition would not only benefit those who would be displaced by the decarbonization of the economy, but it could also increase political stability and reduce political polarization more than the current neo-liberal framework.²⁵ Part of the alienation and isolation from the political process that inheres to life in the mountains could be reversed if the government were seen as a positive force in the lives of the workers who have become disenchanted with a government that many see as unrepresentative of their concerns or interests.²⁶

The roots of the environmental movement were once inextricably linked with social movements. In one precursor to modern environmentalism, the wilderness movement of the 1930s, “the environment” was not conceptualized only as the natural world, but as the

20. See Eisenberg, *Just Transitions*, *supra* note 6, at 277.

21. See Cha, *supra* note 3, at 208.

22. See Eisenberg, *Just Transitions*, *supra* note 6, at 278.

23. See *id.* at 278.

24. Brigham Daniels, Michalyn Steele, & Lisa Grow Sun, *Just Environmentalism*, 37 *YALE L. & POL’Y REV.* 1, 8 (2018).

25. See Eisenberg, *Distributive Justice*, *supra* note 17, at 220.

26. See *id.*

built and industrial worlds as well.²⁷ This notion, that the environment worth preserving is not only the unspoiled wilderness, but the environment that people interact with on a daily basis, and a concern with the protection of vulnerable populations saw a resurgence in the environmental justice movement of the 1980s.²⁸ This modern environmental justice movement concerns itself chiefly with “how the environmental costs of economic expansion have been externalized to, and concentrated on, the socially disadvantaged.”²⁹

Central to the concept of environmental justice is the notion of distributive justice, which suggests that the “burdens and benefits of ‘social cooperation’ should be distributed according to some principle of justice.”³⁰ At the heart of distributive justice is what Peter Wenz calls “an uncontroversial principle: justice increases when the benefits and burdens of social cooperation are born equally, except when moral considerations or other values justify greater inequality.”³¹ According to philosopher John Rawls, inequity in the distribution of goods (including influence and power) are acceptable only when they benefit the disadvantaged.³² In the move toward a decarbonized economy, those enacting such a change should think deeply about where the benefits and burdens of this monumental shift are distributed. Ideally, these would be distributed equally. One must also consider how benefits and burdens have been distributed historically; however, as those historical distributions, being far from ideal, may need to be reversed.

III. FROM COAL TO RENEWABLES: THE GERMAN *ENERGIEWENDE* AS AN INCOMPLETE PROJECT

The Industrial Guild Mining, Chemical, Industry (IG BCE), a German union with a stronghold in the Ruhr Valley, has fared far better at protecting its members as that nation transitions out of coal mining than

27. *Id.* Benton MacKay, one founder of the wilderness movement “saw the struggles of factory workers and wilderness advocates as two parts of a movement with very large goals: to make the whole human environment, from the workplace to the untouched woods, welcoming and stimulating, a good place to be alive. He thought this required extensive and intensive public planning of cities, transport networks, and regions. For him, wilderness was one essential note in a larger composition of landscapes and living-places.” *Id.*

28. *See* Daniels et al., *supra* note 24, at 11-12.

29. *Id.* at 13.

30. *See id.* at 44.

31. *Id.* (quoting Peter S. Wenz, *Does Environmentalism Promote Injustice for the Poor?*, in ENVIRONMENTAL JUSTICE AND ENVIRONMENTALISM: THE SOCIAL JUSTICE CHALLENGE TO THE ENVIRONMENTAL MOVEMENT 57, 58 (Ronald Sandler & Phaedra C. Pezzullo eds., 2007)).

32. *See id.*; JOHN RAWLS, A THEORY OF JUSTICE 167-168 (1971).

the United Mine Workers of America (UMWA).³³ At crucial moments, the rank-and-file members of the IG BCE were able to force policymakers to accept democratic input from workers in industrial planning decisions.³⁴ Judson Abraham has argued that the German transition was successful because the German method to set industrial policy is “neo-corporatist.”³⁵ Abraham defines neo-corporatism to involve strong center left parties, well organized unions, highly centralized collective bargaining systems, participation of unions in setting economic and industrial policy, state support of union activity, and cooperation between unions and employers in pursuit of mutual interests.³⁶ Because of these strengths, the German miners were able to forge a just path out of underground mining through worker militancy, which allowed them democratic input into industrial planning.³⁷

In 1952, lawmakers in West Germany passed the Works Constitution Act.³⁸ The Act formally recognized codetermination and established work councils to act as workplace representatives for employees to negotiate with employers.³⁹ This early iteration of the law, however, froze out unions from negotiations. A series of wildcat strikes in the late 1960s and early 1970s immediately preceded a 1972 Amendment of the Works Constitution Act, which gave unions a more equal role in negotiations.⁴⁰ Further strikes and labor actions in the early 1990s resulted in greater codetermination rights for workers and unions, especially in the expansion of workers councils’ abilities to help form their companies’ environmental policies.⁴¹

Since the late 1990s, the IG BCE accepted that some sort of industrial transition out of coal was inevitable and acquiesced to it so long as the government supported the miners, and the transition was gradual.⁴² In 1998, Gerhard Schroder’s Social Democratic Party/Green Party coalition

33. See Abraham, *supra* note 10, at 219.

34. *Id.*

35. *Id.* at 220.

36. *Id.*

37. See *id.* at 228.

38. Betriebsverfassungsgesetz [BetrVG] [Works Constitution Act], Oct. 11, 1952, BUNDESGESETZBLATT, Teil I [BGBl I] at 681 (Ger.).

39. Betriebsverfassungsgesetz [BetrVG] [Works Constitution Act], Oct. 11, 1952, BGBl I at 681, § 1 (Ger.).

40. Betriebsverfassungsgesetz [BetrVG] [Works Constitution Act], Jan. 18, 1972, BUNDESGESETZBLATT, Teil I [BGBl I] at 13 (Ger.).

41. See Jan Askildsen, Uwe Jijahn, & Stephan Smith, *Works Councils and Environmental Investment: Theory and Evidence from German Panel Data 4-6* (CESifo Working Paper, No. 785, 2002); Abraham, *supra* note 10, at 231.

42. See Abraham, *supra* note 10, at 228.

came into power and set ambitious goals to develop green infrastructure and a draw down Germany's carbon output. The German Energy Ministry committed to reducing carbon dioxide emissions by forty percent in 2020 and by eighty percent in 2050.⁴³ Beginning in the early seventies, the government began subsidizing early retirements for laid off coal miners.⁴⁴ Since then, the German government has expended hundreds of millions of Euros to ensure a smooth and gradual transition out of coal mining.⁴⁵ In 2007, the German government made a provision for about ninety percent of the aging workforce of the Ruhr Valley coal industry to take early retirement,⁴⁶ and receive a monthly stipend until their pensions kicked in.⁴⁷ For the 3,000 or so miners under the age of fifty who had worked in the industry less than twenty-five years, the government provided retraining and help with job placement.⁴⁸ The drawdown of the industry, thus, was much more calculated than it has been in Appalachia.

Another factor that has worked in favor of Germany's ability to enact a just transition in Ruhr Valley coal mines is the pseudo-nationalization of the industry. Workers' ability to present as a single-minded unit and their political will to engage in strikes and protests throughout the 1960s resulted in the consolidation of the coal industry in West Germany into the *Ruhrkohle Aktiengesellschaft* (RAG) in 1968.⁴⁹ A 1968 Coal Adjustment Law required all the coal companies operating in the Ruhr Valley to consolidate into one large company in order to receive public subsidies. To remain economically viable, the German coal industry had to become a single pseudo-nationalized organization.⁵⁰ This made government and labor interaction with the coal industry much more straightforward. Because of the consolidation, labor and industrial policymakers could deal with a single centralized company rather than the numerous smaller ones that previously operated in the Ruhr. Further, because of the lack of competition and the receipt of government subsidies, the RAG did not need to worry about competition from other companies, at least within

43. *Id.* at 224 (citing Staffan Jacobsson & Volkmar Lauber, *The Politics and Policy of Energy System Transformation: Explaining the German Diffusion of Renewable Energy Technology*, 34 ENERGY POL'Y 269 (2006)).

44. *Id.* at 232.

45. *Id.*

46. Jerome Small, *Germany's 'Just Transition' from Coal is a Lie*, REDFLAG (July 13, 2020), <https://redflag.org.au/node/7265>.

47. Abraham, *supra* note 10, at 229.

48. Small, *supra* note 46.

49. *See* Abraham, *supra* note 10, at 231.

50. Steinkohleanpassungsgesetz [SteinkAnpG] [Hard Coal Adjustment Act], May 15, 1968, BUNDESGESETZBLATT, Teil I [BGBl I] at 365 (Ger.); Abraham, *supra* note 10, at 232.

Germany. By providing subsidies to make sure that the industry did not abruptly plummet, offsetting miner earning losses, and providing worker retraining and job placement, the German government has ensured a just transition out of the industry for the miners of Ruhr Valley.

In crucial ways, however, the German transition out of hard coal mining has not lived up to its environmentalist rhetoric. Germany is far and away still the largest producer of greenhouse gases in the European Union, producing more greenhouse gases than the next two highest producing member countries combined.⁵¹ Germany extracts more soft brown lignite coal than any country in the world.⁵² That dirtier, more polluting form of coal accounts for twenty percent of energy production in Germany.⁵³ Further, though Germany has stopped mining hard coal, it has not stopped using it.⁵⁴ About twelve percent of Germany's energy needs are still fulfilled by imported black coal. Even when black coal energy production is scheduled to stop in 2038,⁵⁵ black coal importation will continue in order to fuel the German steel industry.⁵⁶ Also troubling is Germany's continued importation of coal and the externalization of problems inherent in coal extraction onto other countries where coal mining continues. Much of Germany's imported coal comes from the Cerrejón mine in Columbia. This is the largest open pit mine in Latin America and pollutes the lands and waters of the Wayúu people, the largest indigenous community in Colombia.⁵⁷ So, rather than transition out of fossil fuel use, Germany has simply continued using coal and passed off

51. See EEA GREENHOUSE GASSES—DATA VIEWER, <https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer> (last visited Jan. 25, 2022) (showing German greenhouse gas production from 2019 to be over 823 kilotons CO₂ equivalent).

52. *Id.*; Mark Tutton, *Germany Hands Over Last Black Coal, But Struggles to Curb Emissions*, CNN (Apr. 3, 2019) <https://www.cnn.com/2019/04/03/europe/germany-black-coal-intl>; Abraham, *supra* note 10, at 225.

53. Small, *supra* note 46.

54. *Id.*

55. Somini Sengupta & Melissa Eddy, *How Hard Is It to Quit Coal? For Germany, 18 Years and \$44 Billion*, N. Y. TIMES (Jan. 16, 2020), <https://www.nytimes.com/2020/01/16/climate/germany-coal-climate-change.html>; Oliver Sartor, *Just Transitions for the Coal Sector are Going Mainstream, But Policies Also Need to Strengthened [sic]*, INSTITUT DU DÉVELOPPEMENT DURABLE ET DES RELATIONS INTERNATIONALES (Mar. 5, 2019), <https://www.iddri.org/en/publications-and-events/blog-post/just-transitions-coal-sector-are-going-mainstream-policies-also>.

56. Small, *supra* note 46.

57. See *id.*; Press Release, Office of the United Nations High Commissioner for Human Rights, UN Expert Calls for Halt to Mining at Controversial Colombia Site (Sept. 28, 2020), <https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=26306&LangID=E>.

the environmental damages to other countries.⁵⁸ Rather than pay unionized German miners good wages in a heavily regulated and comparatively safe industry, it is more economical for Germany to use coal from the notorious Cerrejón mine in Colombia, from mountaintop removal operations in the United States,⁵⁹ and from open pit mines in Siberia.⁶⁰ Germany plans to entirely phase out the use of coal by 2038.⁶¹ Until then, however, the environmental destruction and human toll of coal mining has been pushed off onto distant lands while Germany continues to burn the most coal in Europe.

IV. FAILURES OF GOVERNMENT, LABOR, AND CAPITAL: ATTEMPTS TO ADDRESS POVERTY AND TRANSFORM THE ECONOMY OF APPALACHIA

Unlike the miners in Germany, current and former coal miners in Appalachia face a dire situation. This is due to the dwindling of union power,⁶² government failure to address the inevitable decline of the coal industry,⁶³ and mine operators' cynical attempt to extract as much value from their anemic companies as possible. Coal production peaked in 2008, but employment in the coal industry had been falling due to automation for decades; 151,000 miners were employed in coal mining in 1987, but less than 80,000 coal miners were employed in 2004.⁶⁴ As of December 2020, only about 42,000 workers were employed in coal mining in the United States.⁶⁵ Competition from natural gas,⁶⁶ coal produced in other regions,⁶⁷ more competitively priced renewable sources, and the COVID-

58. See Kathrin Meyer, *Violation of Democratic Rights at the Behest of Mining in Colombia*, ENERGY TRANSITION (Mar. 19, 2019), <https://energytransition.org/2019/03/democratic-rights-in-colombia/>; Small, *supra* note 46.

59. See Abraham, *supra* note 10, at 224.

60. See Small, *supra* note 46.

61. Sengupta, *supra* note 55.

62. See generally Abraham, *supra* note 10.

63. See generally Tarence Ray, *Hollowed Out: Against the Sham Revitalization of Appalachia*, BAFFLER (Sept. 2019), at 96-107, <https://thebaffler.com/salvos/hollowed-out-ray>.

64. Cha, *supra* note 3, at 200 (citing Adele C. Morris, *Build a Better Future for Coal Workers and Their Communities*, BROOKINGS INST. ED. (Apr. 16, 2016), <https://www.brookings.edu/research/build-a-better-future-for-coal-workers-and-their-communities/>).

65. *Employment, Hours, and Earnings from the Current Employment Statistics survey (All Employees, Coal Mining)*, BUREAU OF LAB. STATS. (2021), <https://data.bls.gov/timeseries/CES1021210001>.

66. See Abraham, *supra* note 10, at 226.

67. See Mason Adams & Dustin Bliezeffer, *What's Next For Coal Country?*, ENERGY NEWS NETWORK (June 23, 2020), <https://energynews.us/2020/06/23/whats-next-for-coal-country/>; Abraham, *supra* note 10, at 226.

19 pandemic have all hastened the downfall of the industry in recent years.⁶⁸ As the industry contracts, operators have made out like bandits, extracting as much value from Appalachia as they can and leaving the workers to bear the brunt of the economic fallout.⁶⁹ The government has repeatedly tried and failed to stave off the worst of the environmental destruction and poverty in Appalachia; but because the root cause of those problems, dependence on a single industry, is propped up by government incentives and subsidies, the half measures meant to address effects have not truly faced the causes of social and environmental damage.⁷⁰

It is critical to note that the extractive industry of coal mining in Appalachia did not spring up organically; it was engineered by a society that needed an internal colony to fuel an Industrial Revolution.⁷¹ As early as the 1700s, companies and large landholders were central to setting up Appalachia's economy as one centered primarily around extractive industry.⁷² Outside landowners saw the region not as one destined for development, but one to get through on the great march west, or later, one to be extracted from.⁷³ The land was too steep to be used to farm cotton or tobacco, so for a time, large landowners filed their deeds and forgot about them while a frontier society sprang up.⁷⁴ Speculators, on the discovery of the massive coal beds across the region, rushed into the highlands in the 1800s, setting out to acquire land.⁷⁵ These land speculators took advantage of the isolation and lack of formal education of the Central Appalachians, dispossessing residents who lacked information about the value of their land. Because of the massive disparity in bargaining power and knowledge about the value of coal, the land and mineral rights were virtually given away.⁷⁶ Coal companies were able to transform the local population into a workforce so tied to coal that they would be effectively trapped in the hills and hollers, unable to leave to find better prospects elsewhere.⁷⁷ Around

68. See Adams & Bliezeffer, *supra* note 67.

69. See Cha, *supra* note 3, at 201-02 (noting that the average wage for executives in the coal industry rose sixty percent from 2004 to 2006, while pay for construction jobs in mining, adjusted for inflation, has decreased over the same time).

70. See Eisenberg, *Just Transitions*, *supra* note 6, at 322.

71. See generally, STOLL, *supra* note 9; Eisenberg, *Just Transitions*, *supra* note 6, at 300-01.

72. See STOLL, *supra* note 9, at 317; Eisenberg, *Just Transitions*, *supra* note 6, at 301.

73. See STOLL, *supra* note 9, at 9-17.

74. See STOLL, *supra* note 9, at 9.

75. See Eisenberg, *Just Transitions*, *supra* note 6, at 301.

76. See STOLL, *supra* note 9, at 35 (quoting David Idleman "this great natural wealth went into the hands of syndicates for a nominal sum and [was] lost to the people.").

77. See Eisenberg, *Just Transitions*, *supra* note 6, at 301.

the turn of the century, coal companies set up company towns and camps in the shadow of the mines where the residents worked, paying scrip instead of money, and supplying every need of the coal miners and their families, thereby lowering the likelihood that the captive workforce would be able to escape the cycle of intergenerational exploitation.⁷⁸

Throughout the coal industry's existence in Central Appalachia, the American government has encouraged this internal colony's development through law and policy. No single event is more indicative of this governmental support for the exploitation of mine workers than the Battle of Blair Mountain of 1921. There, in response to ongoing struggles and violence due to organizers' attempts to unionize West Virginia coal mines, Warren G. Harding dispatched thousands of federal troops to quell the labor unrest.⁷⁹ Federal troops left almost immediately after tensions had lessened, but the damage was done. Membership in the UMWA fell by half between 1921 and 1924.⁸⁰

More recently, government subsidization of the coal industry and acquiescence to the extraction of value from the region has amounted to a ratification of the actions taken there by corporations. Just after World War II, an extensive multi-state strike spurred the Labor Department, UMWA, and mine owners to establish the Welfare and Retirement Fund, one of the strongest union health care plans of its day.⁸¹ For a time the union and mine operators cooperated in setting industrial policy.⁸² Had this continued, with government support, the mining industry could have started a gradual draw down, phasing out mining while protecting workers. In the late 1950s, however, the industry faltered due to

78. See THE WEST VIRGINIA MINE WARS: AN ANTHOLOGY 1 (David Alan Corbin ed., 1990) ("The coal company town was a complete system. In addition to owning and controlling all of the institutions in the town, coal company rule in southern West Virginia included the company doctor who delivered the babies, the mines in which children went to work, and the cemeteries where they were eventually buried."); Eisenberg, *Just Transitions*, *supra* note 6, at 301; Evan Andrews, *The Battle of Blair Mountain*, HISTORY (Aug. 25, 2016), <https://www.history.com/news/americas-largest-labor-uprising-the-battle-of-blair-mountain>.

79. Anne Marie Lofaso, *What We Owe Our Coal Miners*, 5 HARV. L. & POL'Y REV. 87, 94 (2011); W. Va. State Archives, W. Va. Div. of Culture and History, West Virginia's Mine Wars, <http://www.archive.wvculture.org/history/archives/minewars.html> (In the fallout after the uprising, "[s]pecial grand juries handed down 1,217 indictments, including 325 for murder and 24 for treason against the state[.]" eventually, all of those trials resulted in acquittal or the convicted miners were pardoned.).

80. W. Va. State Archives, W. Va. Div. of Culture and History, West Virginia's Mine Wars, <http://www.archive.wvculture.org/history/archives/minewars.html>.

81. See generally, Richard Mulcahy, *A New Deal For Coal Miners: The UMWA Welfare and Retirement Fund and the Reorganization of Health Care In Appalachia*, 2 J. OF APPALACHIAN STUD. 29 (1996).

82. See *id.*

mechanization and competition from more affordable fuel sources; this era was marked by authoritarian, undemocratic unions negotiating with the largest coal mine operators, excluding the rank-and-file union members and smaller coal companies.⁸³ In a backlash to this situation, in the late 1960s, rank and file members of the UMWA engaged in wildcat strikes to democratize the union and increase worker input into industrial policy.⁸⁴

The strikes were successful and the first democratically elected union president, Arnold Miller, assumed office in 1972.⁸⁵ The UMWA established mine safety committees, comparable to German work councils.⁸⁶ Even more crucially, in the mid-1970s, the burgeoning environmental consciousness of the public presented itself in the UMWA workers as well. Throughout the 1970s, “Arnold Miller supported West Virginia Congressman Ken Heckler’s plan to gradually phase out surface mining and provide retraining, cash allowances, and other assistance to affected miners.”⁸⁷ Heckler’s plan presented miners, operators, and government officials with an option to transition out of coal mining as early as 1967 while ensuring the protection of workers and communities. Arguably, however, Heckler’s plan was too far ahead of its time to come to fruition. “Had the UMWA’s leadership campaigned for and won the restructuring of the US mining industry at this time (be it in the form of nationalization, federal planning, or something closer to a neo-corporatist framework)” or if there had been a united effort among every party involved to produce the best possible outcome for all, policymakers and union members could have planned for a gradual transition away from coal mining in Appalachia over half a century ago.⁸⁸

Heckler’s ambitious and progressive plan, however, failed. Union power declined gradually from this high watermark as mine operators used the democratization of the union to weaken it.⁸⁹ The 1977-78 contract strike was a turning point of union power and the death knell to the hope for an early, visionary, just transition based on the cooperation between government, labor, and capital. The strike was born out of an attempt by operators to dismantle the Welfare and Retirement Fund.⁹⁰ The protracted struggle made what was already an antagonistic relationship between

83. *See id.* at 233-34.

84. *Id.* at 234.

85. *Id.*

86. *See id.*

87. *Id.* at 235.

88. *Id.* at 237.

89. *See id.* at 235.

90. *See id.*

labor and mine operators much worse. In 1969, the UMWA represented ninety-five percent of mine workers in West Virginia; today, union membership in West Virginia is closer to thirty percent.⁹¹ In 1983, across the region, sixty-two percent of miners were members of the union.⁹² In 2016, a mere eleven percent of miners were unionized.⁹³ The chance at a more equitable transition, which seemed so near during the union democratization era of the 1970s, is distant. Now, without the strength of the union behind them, many miners or former miners are at the mercy of their employer or the government to step in to address problems. These workers and communities enabled the creation of a public electrical grid and provided public benefits for which they bore the externalized costs.⁹⁴ It should be the job of the government to address these externalized costs and make right the damage that Appalachian communities are forced to bear.

The failure to actualize a just transition cannot be attributed solely to the degradation of union power. The government's failure to address the core issues that have given rise to this situation in the first place, and its inability to address the more immediately obvious problems, are at least as much to blame as the dissolution of the unions. A longstanding program designed to address poverty in the region, the Appalachian Regional Commission (ARC), has failed to address the root causes of it. Other government programs focused on revitalizing Appalachia and addressing the environmental and economic damage there, the Surface Mining Control and Reclamation Act and the Partnerships for Opportunity and Workforce and Economic Revitalization Plan, have likewise been unable to truly address economic hardship there. Less dramatic but more pervasive and longstanding, tax incentives and subsidies paid by local, state, and federal governments are indicative of ongoing acquiescence in worker exploitation. To argue that coal miners need to simply find other work and transform their economic paradigm would be to ignore the fact that this economic situation was imposed for the benefit of the rest of the country.⁹⁵

ARC, created in 1965 by the Appalachia Regional Development Act, was a foundational project of Lyndon Johnson's War on Poverty.⁹⁶ Since

91. *Id.* at 236.

92. Cha, *supra* note 3, at 202.

93. *Id.*

94. See Eisenberg, *Just Transitions*, *supra* note 6, at 304.

95. See *id.* at 303.

96. Anya Slepian, *The Biden Administration Promises to Clean Up Mine Land and Create Jobs in Appalachia. Here are Some Steps It Can Take.*, SOUTHERLY, (Jan. 19, 2021), <https://south>

1965, the ARC has invested four and a half billion dollars in infrastructure and development projects.⁹⁷ As Patrick McGinley, an environmental law professor at West Virginia University, put it, though the ARC has helped, it has failed to address “the real core issues of these coalfield states—the boom bust economic cycle and the bankruptcies of coal companies during those cycles that have gone on since the beginning of the twentieth century and continue worse than ever today.”⁹⁸ Tarence Ray argued, in his article *Hollowed Out*, that the central problem is that ARC has been focused not on simple solutions to problems, but technocratic ones, focused on shaping individuals to fit society, rather than changing society to fit the needs of individuals.⁹⁹ A particularly egregious example was the launching of an “educational satellite” in 1974.¹⁰⁰ Rather than provide better cable infrastructure, or cassettes of educational materials, the ARC launched a multimillion dollar satellite intent on cracking the “cultural isolation of Appalachia[.]”¹⁰¹ The conceit of the launch’s organizers was that the 100 or so hours of educational material that the satellite beamed down into the hollers of Central Appalachia would reverse generations of the educational needs of the people in the region being ignored. Had the organizers of that satellite launch cared to ask the people the satellite was purported to help, perhaps they could have found a more cost-effective solution like raising teacher pay, investing in underfunded school systems, or simply buying books.

An attempt to address the environmental devastation wrought by mountaintop removal and surface mining was the Surface Mining Control and Reclamation Act (SMCRA), passed in 1977.¹⁰² The law mandates that companies that receive surface mining permits after 1977 must, when mining has concluded, return the land to as close to a natural state as possible and ensure the continued economic viability of the land.¹⁰³ The law also established the Office of Surface Mining, Reclamation, and

erlymag.org/2021/01/19/the-biden-administration-promises-to-clean-up-mine-land-and-create-jobs-in-appalachia-here-are-some-steps-it-can-take/; *ARC’s History and Work in Appalachia*, APPALACHIAN REG’L COMM’N, <https://www.arc.gov/arcs-history-and-work-in-appalachia/>.

97. *ARC’s History and Work in Appalachia*, APPALACHIAN REG’L COMM’N, <https://www.arc.gov/arcs-history-and-work-in-appalachia/>.

98. Slepyan, *supra* note 96.

99. See Ray, *supra* note 63.

100. See *id.*

101. See *id.* Likely, the true purpose of the educational satellite was to act as a subsidy to communications company Fairchild Industries. The creator of the satellite saw its revenues nearly quadruple shortly after its launch. *Id.*

102. 30 U.S.C. §§ 1201-1328.

103. Slepyan, *supra* note 96; 30 U.S.C. §§ 1201-1328.

Enforcement to oversee the implementation of the law as well as the reclamation of abandoned mines.¹⁰⁴ SMCRA was based on a “cooperative federalism” model—theoretically, the federal government would establish a regulatory framework with minimum statutory standards and the states would implement the regulations.¹⁰⁵ Addressing mine reclamation has, however, rarely been the highest priority of the state agencies tasked with enacting the program, their primary purpose seeming to be the continued development of the industry, not the policing of it. The state agencies feared full implementation of the regulatory framework in their state would result in a less competitive position in comparison to other coal dependent states and were thus reticent to abide by the statute.¹⁰⁶ Even if full enforcement of SMCRA were the goal of state and federal agencies, funding problems make full implementation of the Act a challenge.¹⁰⁷

SMCRA requires companies to establish monetary bonds, money set aside to reclaim the land when mining operations are complete.¹⁰⁸ Many mining companies in recent years, however, have used tactical bankruptcies to avoid their financial obligations related to reclamation, employee benefits, backpay, and other debts.¹⁰⁹ Coal companies have used several tactics to shirk their financial obligations: by rejecting healthcare and pension obligations, passing off regulatory liability under SMCRA to successor companies or insurers, and by simply abandoning their mines.¹¹⁰ In a recent dramatic example drawing national attention, Revelation and Blackjewel filed for bankruptcy in the summer of 2019, rescinding paychecks after depositing them into miners’ bank accounts.¹¹¹ The bankruptcies put more than one thousand miners out of work in Central

104. Slepyan, *supra* note 96; 30 U.S.C. §§ 1231-1244.

105. See Patrick C. McGinley, *From Pick and Shovel to Mountaintop Removal: Environmental Injustice in the Appalachian Coalfields*, 34 ENV'T L. 21, 51 (2004).

106. See *id.* at 53-54.

107. See Slepyan, *supra* note 96.

108. 30 U.S.C. § 1259.

109. Mason Adams, *Blackjewel Left Coal Miners Without Pay. Now It Might Leave Appalachia Thousands of Acres of Land to Clean Up.*, SOUTHERLY (Aug. 25, 2019), <https://southerlymag.org/2019/08/25/blackjewel-left-coal-miners-without-pay-now-it-might-leave-appalachia-thousands-of-acres-of-land-to-clean-up/>; see generally Joshua Macey & Jackson Salovaara, *Bankruptcy as Bailout: Coal Company Insolvency and the Erosion of Federal Law*, 71 STAN L. REV. 879 (2019); Mason Adams & Dustin Bliezeffer, *What's Next For Coal Country?*, ENERGY NEWS NETWORK (June 23, 2020), <https://energynews.us/2020/06/23/whats-next-for-coal-country/>; Eisenberg, *Just Transitions*, *supra* note 6, at 328.

110. See Adams, *supra* note 109; see generally Macey & Salovaara, *supra* note 109.

111. Adams, *supra* note 109; Mihir Zaveri, *Blackjewel Coal Miners to Get Millions in Back Pay After Train Blockade*, N. Y. TIMES (Oct. 24, 2019), <https://www.nytimes.com/2019/10/24/us/blackjewel-coal-miners.html>.

Appalachia and resulted in backpay and benefit obligations for the companies to the tune of more than eleven million dollars.¹¹² When Blackjewel tried to ship out more than one million dollars' worth of coal sitting in train cars, miners in Eastern Kentucky blocked the train for two months until Blackjewel paid the miners what they had earned.¹¹³ Typically, coal companies buy surety bonds from third party insurance companies to ensure they will have the capital investment to complete reclamation when mining ends.¹¹⁴ If a mining company then files for bankruptcy or abandons the mine, the insurance company is left with the responsibility "to reclaim the mine themselves or pay the bonds to the state to cover the costs of reclamation."¹¹⁵ As more companies file for bankruptcy and abandon mines without reclaiming them, bond pools risk becoming overwhelmed by the costs of reclamation. The federal government could step in by enforcing the regulations of SMCRA more strictly or by expanding funding for reclamation projects, but as of this writing, bond pools teeter on the brink of insolvency.

In 2015, in an attempt to address the ongoing decline of the coal industry, President Barack Obama launched the Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Plan to stabilize the economy, ensure social welfare, and address environmental destruction in areas that relied on the coal industry as their main economic engine.¹¹⁶ The plan was enacted using existing funds and agencies, such as ARC, to develop grant programs to facilitate a transition out of the coal economy and to lessen the harm the transition was projected to cause.¹¹⁷ The plan proposed a nine billion dollar investment to create economic development but relatively few of the proposed projects were fully implemented under the Trump Administration.¹¹⁸ The POWER Act was never intended to be an all-encompassing New Deal or War on Poverty-

112. Adams, *supra* note 109; Zaveri, *supra* note 111.

113. Adams, *supra* note 109; Greg Phelps, *Former Blackjewel Employees End Standoff with Company*, WAVE 3 NEWS (Sept. 27, 2019), <https://www.wave3.com/2019/09/27/former-black-jewel-employees-end-standoff-with-company/>; Zaveri, *supra* note 111; Adams & Bliezeffer, *supra* note 109.

114. See Slepyan, *supra* note 96.

115. *Id.*

116. See Press Release, The White House, Office of the Press Secretary, FACT SHEET: Administration Announces New Workforce and Economic Revitalization Resources for Communities through POWER Initiative (Oct. 2015), <https://obamawhitehouse.archives.gov/the-press-office/2015/10/15/fact-sheet-administration-announces-newworkforce-and-economic>.

117. MICHAEL H. CECIRE, CONG. RSCH. SERV., R46015 THE POWER INITIATIVE: ENERGY TRANSITION AS ECONOMIC DEVELOPMENT 2 (Nov. 20, 2019) <https://sgp.fas.org/crs/misc/R46015.pdf>.

118. See Slepyan, *supra* note 96.

type program.¹¹⁹ Rather, “it was a strategic compromise that prioritized entrepreneurship, small business development, and job training; most of the money has gone to nonprofits, ‘business incubators,’ or community colleges.”¹²⁰ Many of the proposals that have received funding under the POWER Plan envision a possibility that Central Appalachia could become the next Silicon Valley.¹²¹ The so called “Silicon Holler” is likely an overly optimistic vision of a way out of economic hardship for the region. How the region, which lags far behind the rest of the country in broadband infrastructure,¹²² would be able to become a technological hub is not clear. “[Q]uick fixes—such as ‘teaching coal miners to code,’ ‘investing in microbreweries,’ or ‘having them grow hemp’—discount the complexity of this issue while also disregarding the preferences and capabilities of locals.”¹²³

Though the coal industry’s demise was already well underway, the COVID-19 pandemic has hastened its downfall.¹²⁴ In 2016, coal production in West Virginia was half of what it was in 2008.¹²⁵ Since then, the decline has accelerated due to competition from natural gas, tighter restrictions on pollution, and cheaper wind and solar energy.¹²⁶ Mining in Appalachia will likely only continue to be economically viable for metallurgical coal to be used in steel production.¹²⁷ The question central to this Comment, then, is how to help the workers of Central Appalachia as the main economic engine in that region grinds to a halt.

V. ENACTING THE JUST TRANSITION: WORKER PROTECTION IN THE DECARBONIZATION OF THE ECONOMY

Past federal efforts to deal with the problems in Appalachia have failed because they have been ineffective at addressing the root issues of intergenerational poverty, corporate land ownership, and the externalization of harm onto workers and communities.¹²⁸ If these

119. See Ray, *supra* note 63.

120. *Id.*

121. See *id.*

122. See *id.*

123. Eisenberg, *Distributive Justice*, *supra* note 17, at 249 (citing Erica Peterson, *From Coal to Code: A New Path for Laid-Off Miners in Kentucky*, NPR (May 6, 2016), <https://www.npr.org/sections/alltechconsidered/2016/05/06/477033781/from-coal-to-code-a-new-path-for-laid-off-miners-in-kentucky>).

124. See Adams & Bliezeffer, *supra* note 109.

125. *Id.*

126. See *id.*

127. See *id.*

128. See Slepian, *supra* note 96.

problems are to be addressed, corporations must be held to account for their abandonment of the communities that they have forsaken. A Blue-Green Alliance of workers and environmental activists must be forged and must present a united front to create the political will for leaders to act. Finally, and most crucially, the government must act swiftly and decisively to reverse the harm that extractive industry has caused in Central Appalachia. The main guidance must be from the public sector if a just transition is to succeed. Money cannot be granted to nonprofits to engage in feasibility studies and coding initiatives. It should be more direct—from the government to the people who need to be protected from the economic fallout of decarbonization. Some scholars have established a four-part framework to ensure a just transition, advocating that it will require: “(1) strong government support; (2) dedicated funding streams to support transition programs and efforts, including job training and creation; (3) strong, diverse coalitions; and (4) diversifying economic opportunity.”¹²⁹ Using the German just transition as a template, one can observe that the government there took a strong stance in overseeing the program. Transition efforts were fully funded for a gradual draw-down of the coal industry that would not disrupt workers’ livelihoods. Labor, government, and a semi-nationalized industry worked together to ensure equitable outcomes. Crucially, the government spent time, money, and effort to ensure that the Ruhr region was sufficiently economically diverse, so that the loss of the coal industry would not stagnate the local economy. For example, the German government designated the Ruhr as a center of culture and tourism, using now decommissioned factories as museums, venues, and public parks.¹³⁰

President Biden entered the White House with the most ambitious climate agenda of any president in history, advancing a plan that would put forth two trillion dollars to curb greenhouse gas emissions and grow the renewable energy sector.¹³¹ Biden also rejoined the Paris Accords on his first day and began to roll back more than one hundred rules put in

129. J. Mijin Cha, Madeline Wander, & Manuel Pastor, *Environmental Justice, Just Transition, and a Low-Carbon Future for California*, 50 ENV’T L. REP. 10216, 10221 (2020).

130. See Gabriel Popkin, *Germany’s Ruhr Valley Beckons with Converted Coal Mines and a Unique Industrial Heritage*, WASH. POST (Feb. 21, 2020), https://www.washingtonpost.com/lifestyle/travel/germanys-ruhr-valley-beckons-with-converted-coal-mines-and-a-unique-industrial-heritage/2020/02/20/aac02bd0-4841-11ea-bc78-8a18f7afcee7_story.html.

131. BIDEN PLAN TO BUILD A MODERN, SUSTAINABLE INFRASTRUCTURE AND AN EQUITABLE CLEAN ENERGY FUTURE, <https://joebiden.com/clean-energy/> (last visited Jan. 25, 2022); James Bruggers, *Coal Communities Across the Nation Want Biden to Fund an Economic Transition to Clean Power*, SOUTHERLY (Jan. 26, 2021), <https://southerlymag.org/2021/01/26/coal-communities-across-the-nation-want-biden-to-fund-an-economic-transition-to-clean-power/>.

place by the Trump Administration that benefited the fossil fuel industry.¹³² Biden's energy plan also committed to making environmental justice a "key consideration" in the development of a new energy economy, with the stated goal of "creating good, union, middle-class jobs in communities left behind, righting wrongs in communities that bear the brunt of pollution, and lifting up the best ideas from across our great nation[.]"¹³³ On January 27, 2021, Biden signed Executive Order 14,008 which, among many other climate related directives, establishes an "Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization."¹³⁴ The working group has the stated goals of revitalizing and investing in former coal communities, preventing and reversing environmental damage, and creating well-paying union jobs to accomplish those goals.¹³⁵ The bill also seeks the removal of all subsidies to fossil fuel production,¹³⁶ establishes a policy to revitalize infrastructure and thereby provide jobs to those in vulnerable communities and communities displaced by "economic shifts."¹³⁷

Another potential avenue for revival in the region is the Revitalizing the Economy of Coal Communities by Leveraging Local Activities and Investing More (RECLAIM) Act.¹³⁸ The RECLAIM Act, an amendment to SMCRA, would increase fees on current mining operations and invest a billion dollars over the course of five years in projects to reclaim former mine sites, clean water polluted by mines, and encourage economic development in former mining communities.¹³⁹ The bill passed the House in 2020 but floundered in the Senate due to then Senate Majority Leader Mitch McConnell's obstructionism.¹⁴⁰ The bill was reintroduced in the House in March of 2021.¹⁴¹ Now that Democrats control both houses, albeit by a slim majority, the bill might pass unless Republicans invoke the so-called "nuclear option" and attempt to block it by filibuster.¹⁴²

132. Bruggers, *supra* note 130.

133. BIDEN PLAN TO BUILD A MODERN, SUSTAINABLE INFRASTRUCTURE AND AN EQUITABLE CLEAN ENERGY FUTURE, <https://joebiden.com/clean-energy/> (last visited Jan. 25, 2022).

134. *See* Exec. Order No. 14,008, 86 Fed. Reg. 7628 (Jan. 27, 2021).

135. *See id.*

136. *Id.* at 7625.

137. *Id.* at 7626.

138. Revitalizing the Economy of Coal Communities by Leveraging Local Activities and Investing More (RECLAIM) Act of 2019, H.R. 2156, 116th Cong. (2019).

139. *See id.*; Slepyan, *supra* note 96.

140. *See* Slepyan, *supra* note 96.

141. Revitalizing the Economy of Coal Communities by Leveraging Local Activities and Investing More (RECLAIM) Act of 2021, H.R. 1733, 117th Cong. (2021).

142. *Id.*

If the RECLAIM Act passes, it will be a step in the right direction, distributing crucially needed funds to reverse the environmental destruction wrought by mining corporations in Central Appalachia. But, according to a study from the Reclaiming Appalachia Coalition—a diverse coalition of environmental groups across several states—at least 490,000 acres of mined land still require some sort of reclamation in spite of the progress made under SMCRA.¹⁴³ The cost of that reclamation could be up to six billion dollars.¹⁴⁴ Because of calculated bankruptcy proceedings by corporations like Blackjewel,¹⁴⁵ currently available bonds set aside for reclamation total only two and a half billion dollars.¹⁴⁶ The remaining costs will likely either be borne by the insurance companies left holding the bonds or by taxpayers in already cash strapped states as corporations abandon their mines.¹⁴⁷

Some experts estimate that a fully-funded just transition would cost about \$500 million a year.¹⁴⁸ While this may seem a prohibitive cost, if one considers the scale of fossil fuel subsidies, the cost of a just transition out of fossil fuels is infinitesimal by comparison.¹⁴⁹ In crafting a climate jobs agenda, special attention should be directed at former fossil fuel workers because there will be a disconnect in time, space, and skill between the job losses in coal fields and emerging opportunities for jobs in renewable energy.¹⁵⁰ Further, jobs in coal and jobs in the renewable sector require very different skill sets and thus, if a just transition is to be effective for former coal miners, they will need focused training to be competitive in emerging renewable energy jobs.¹⁵¹ One solution might be a partnership between government, an existing union, and former miners

143. RECLAIMING APPALACHIA COALITION, RESTORATION AND RENEWAL: THE NEW APPALACHIA ECONOMY 2, 8 (2020) [hereinafter RESTORATION AND RENEWAL].

144. *See id.* at 8.

145. *See Adams, supra* note 109; RESTORATION AND RENEWAL, *supra* note 143, at 10.

146. *See RESTORATION AND RENEWAL, supra* note 143, at 9.

147. *See id.* at 10.

148. *See* Robert Pollin & Brian Callaci, *A Just Transition for U.S. Fossil Fuel Industry Workers*, AM. PROSPECT (July 6, 2016), <https://prospect.org/environment/just-transition-u.s.-fossil-fuel-industry-workers/>.

149. *Compare* U.S. DEP'T OF TREASURY, UNITED STATES—PROGRESS REPORT ON FOSSIL FUEL SUBSIDIES (2015) (estimating the direct cost of US fossil fuel subsidies in 2015 to be \$4.7 billion, this being the most conservative, literal way to construe the “costs” of subsidies), *with* David Coody et al., *Global Fossil Fuel Subsidies Remain Large: An Update Based on Country-Level Estimates*, 2 (IMF, Working Paper 19/89, 2019) (estimating the total costs of US fossil fuel subsidies in 2019, defined as fuel consumption times the gap between existing and efficient prices, to be upwards of \$649 billion).

150. *See* Cha, *supra* note 3 at 205; Sidney A. Shapiro & Robert R.M. Verchick, *Inequality, Social Resilience, and the Green Economy*, 86 UMKC L. REV. 963, 984 (2018).

151. *See* Cha, *supra* note 3, at 205.

intent on finding employment in the renewable energy sector.¹⁵² For example, a partnership with the International Brotherhood of Electrical Workers (IBEW) could provide former miners with skills retraining and set them up for a job in solar installation or electrical work, more generally.¹⁵³

In February 2019, Alexandria Ocasio-Cortez introduced a Green New Deal Resolution into the House of Representatives with the support of Ed Markey in the Senate.¹⁵⁴ Hope for a Green New Deal became a rallying cry for progressives in the 2018 midterm elections and the 2020 general election.¹⁵⁵ Now that the Democratic party controls both houses of Congress and the Presidency, that rallying cry must be turned into action. The goals of the Green New Deal would redound to the benefit of depressed mining communities in Appalachia. A fully realized Green New Deal, if properly focused on protecting workers and vulnerable communities, would do a great deal to reverse the destruction of Central Appalachia.

The “New Deal” part of the Green New Deal evokes a comparison to the FDR-era New Deal.¹⁵⁶ The Resolution, like its namesake, calls for a progressive reorganization of society to provide employment, social welfare, and investment in public goods like infrastructure and a healthy environment.¹⁵⁷ Some in the legislature and elsewhere have called for a resurrection of the New Deal Civilian Conservation Corps (CCC).¹⁵⁸ President Biden’s Executive Order called for the creation of a strategy to create a “Civilian Climate Corps Initiative” by May 2021.¹⁵⁹ The Green New Deal explicitly “acknowledges that social and economic inequality are inextricably intertwined with carbon reduction.”¹⁶⁰ If a Green New Deal is to be realized, special attention should be paid to the distributional implications of such a drastic and complete realignment of the economy.

152. *See id.* at 215.

153. *See id.*

154. Recognizing the Duty of the Federal Government to Create a Green New Deal, H.R. 109, 116th Cong. (2019).

155. *See* Lisa Friedman & Glenn Thrush, *Liberal Democrats Formally Call for a ‘Green New Deal,’ Giving Substance to a Rallying Cry*, N. Y. TIMES (Feb. 7, 2019), <https://www.nytimes.com/2019/02/07/climate/green-new-deal.html>.

156. *See* Nicholas S. Bryner, *Legal Frameworks for a Green New World: Breathing Life into the Goals of the Green New Deal*, 44 VT. L. REV. 723, 725 (2020).

157. *See id.* at 725-26.

158. *See* Paul J. Baicich, *A Green New Deal Needs a 21st-Century Civilian Conservation Corps*, JACOBIN (Aug. 11, 2020), <https://www.jacobinmag.com/2020/08/fdr-green-new-deal-ccc>.

159. Exec. Order No. 14,008, 86 Fed. Reg. at 7626-27 (Jan. 27, 2021).

160. *See* Cha, et al., *supra* note 129, at 10217.

Those who have paid more for the industrialization of the economy, especially former fossil fuel workers, should be considered and protected from continued losses as a result of the colossal shift that the Green New Deal will require. Even using Germany's transition out of coal mining as an example could be problematic, as demonstrated by the fact that the German transition simply offloaded the labor and environmental problems associated with coal mining onto other countries, including Colombia and the United States.

VI. CONCLUSION

For now, the final section of this Comment is full of ideas yet to be enacted: ideas about how society should move toward equity, ideas about how to correct and reverse the damage done to vulnerable communities and to the environment. The struggle toward justice is ongoing and always incomplete. At the moment, it seems that those struggling for social justice and those struggling for a livable environment are sometimes far apart when they consider the ideal toward which they are striving. This Comment advocates for a unification of these two groups, which ought to consider where their goals intersect—at social, economic, and environmental justice—and should strive together toward its realization. “[E]nvironmental advocates and their human-needs counterparts lack the funding and resources to fight the good fight in their own areas . . . neither can afford to not join forces . . . if we are to make a just transition to a green economy.”¹⁶¹ As more policymakers and government actors consider the necessity of a just transition and a decarbonization of the economy, those ideas seem to be closer than ever to a realization. If Biden's climate plan is actualized, if the Green New Deal becomes more than series of proposals, if a law focused more directly on the problems that miners face, such as the RECLAIM Act, passes in Congress, the labor force of Central Appalachia and of the nation could be presented with a real chance to secure a just transition out of the carbon economy and into a just and equitable new paradigm.

161. Shapiro & Verchick, *supra* note 150, at 991.